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Khi V. Thai Editor

Global Public Procurement Theories and Practices



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Khi V. Thai Editor

Global Public Procurement Theories and Practices



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Preface

This book is a collection of best papers that were submitted to and presented at the 7th International Public Procurement Conference (IPPC7), which was held in Bali, Indonesia, August 3–5, 2016, and hosted by the National Public Procurement Agency of the government of Indonesia and Florida Atlantic University Public Procurement Research Center. Initiated in 2004, IPPC has become one of the largest international networks of public procurement practitioners and researchers in the world, a very strong evidence of global interest in this emerging profession.

At its inception in 2004, IPPC began a tradition that no other professional conference could match: All conference papers were reviewed and best papers were selected for publication in special issues of the academic *Journal of Public Procurement* and an IPPC book. Particularly, these publications are published in time for distribution at the conferences.

This year, 156 paper proposals (an unprecedented number) and 101 full papers were submitted. Seven of those submitted papers did not meet our expected standard and were not accepted for presentation at the conference. Papers published in this book were selected from the pool of 94 qualified papers after subjection of two waves of peer reviews, within four weeks, a very short time period for members of the Scientific Committee (listed below) to review at least four papers (as each paper was reviewed by three peer reviewers). Without their professional services, it would have been impossible to impartially select excellent papers for this volume. As coeditors of this book, we would like to thank the IPPC7 Scientific Committee members for their professional services. We would like also take this opportunity to thank The National Institute of Governmental Purchasing, Inc. that provides generous financial support of the International Public Procurement Conference. We also thank the National Public Procurement Agency of the government of Indonesia for hosting the conference. It is important to note that authors of papers selected for this book should be proud of their work as their papers have survived two waves of challenging reviews, and more importantly, their papers were selected from a large pool of papers, at an acceptance rate of 14.3%. We congratulate these authors on their book chapters and the proven quality of their research.

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Chapter 1 Global Public Procurement Theories and Practices: An Introduction

Khi V. Thai

Introduction

Public procurement is continuing to evolve both conceptually and organizationally. That evolution accelerated since the 1990s as governments at all levels came under increasing pressures to "do more with less." Indeed, all governmental entities of rich and poor countries are struggling in the face of unrelenting budget constraints; government downsizing; public demand for increased transparency in public procurement; and greater concerns about efficiency, fairness and equity. Additionally, public procurement professionals have faced a constantly changing environment typified by rapidly emerging technologies, increasing product choice, environmental concerns, and the complexities of international and regional trading agreements. Further, policy makers have increasingly used public procurement as a tool to achieve socioeconomic goals (Thai 2007; Albano et al. 2013).

In this environment, public procurement has become much more complex than ever before, and public procurement officials must deal with a broad range of issues. They have been walking on a tight rope in:

- Balancing the dynamic tension between (a) competing socioeconomic objectives, and (b) national economic interests;
- and global competition as required by regional and international trade agreements;
- Satisfying the requirements of fairness, equity and transparency;
- Maintaining an overarching focus on maximizing competition; and
- Utilizing new technology to enhance procurement efficiency, including e-procurement.

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Established in 2004, the International Public Procurement Conference (IPPC) has become a unique forum for exchange of knowledge and information in public procurement among international experts in this field. Through the four previous conferences, many experts from various backgrounds shared their views and experiences on critical issues of public procurement. The fertile mixture of experiences, interests and contributions that emerged in the last six conferences represents an important basis upon which to build the 7th International Public Procurement Conference (IPPC7).

Similar to previous conferences, IPPC7, held in Bali, Indonesia, August 3-5, 2016, has the following unique characteristics. It will deepen the interdisciplinary research on public procurement. Public procurement research can be accessed from various academic fields, including law, economics, public administration, business administration, and construction management, to name a few. It is the tradition of IPPC that experts from various academic backgrounds share their views, thus crossing barriers between academic fields. This tradition continued and broadened in IPPC7. In addition, IPPC7 will strengthen the link between the practitioners and scholars in finding solutions to harmonize various objectives in public procurement. Public procurement has many objectives, including transparency, competition, efficiency, value for money, socioeconomic objectives, among others. Because these objectives sometimes conflict with each other, it is necessary to harmonize these various objectives. To cope with this challenge, it is important for practitioners and scholars to cooperate with each other. Practitioners should give explanations of actual problems in their harmonizing efforts, and scholars should make every effort to address these problems with sound theory and analysis.

In this chapter, the editor provides a conceptual framework for two major themes in this book: public procurement as a policy tool and performance-based public procurement. The remaining section of this chapter provides brief summaries of sixteen chapters. As mentioned in the book preface, through a rigorous peer review process, these chapters were selected from a pool of ninety four papers that were submitted to the seventh International Public Procurement Conference that this editor co-host.

Public Procurement as a Policy Tool

In developed as well as developing countries, disregarding their economic, social, and political environment, a sound procurement system seems to have two groups of objectives: procurement and non-procurement. The procurement objectives normally include quality, timeliness, cost (more than just the price), minimizing business, financial and technical risks, maximizing competition, and maintaining integrity. Non-procurement objectives normally include economic objective (preferring domestic or local firms), environment protection or green procurement (promoting the use of recycled goods), social objectives (assisting minority and woman-owned business concerns), and international relations (global trade agreements) objectives. It is very difficult for policy makers and public procurement professionals to make an optimum decision. Public procurement officials walk on a tight rope, as they are always facing the issue of tradeoffs between these goals.

Market Environment

Market conditions have a great influence over the public procurement system's effort to maximize competition. Moreover, the market determines whether or not socio-economic objectives of procurement are accomplished, whether or not a governmental entity can fulfill its needs; the timeliness of fulfillment; and the quality and costs of purchased goods, services and capital assets. As there are different levels of economic growth among countries in the world, market conditions are very favorable in industrialized countries, while they may be unfavorable in developing countries.

Even under a perfectly competitive condition like that in the United States, some supplies and services are required only by the government (particularly for weapons systems) and are available in the market. This is a captive market which is limited in scope and competition.

Also as markets become more and more globalized through regional and international trade agreements and treaties, the public procurement system has to be adjusted and become more complicated. Indeed, public procurement professionals face additional challenges including communication, currency exchange rates and payment, customs regulations, lead time, transportation, foreign government regulations, trade agreements, and transportation. Thus, before embarking on a foreign purchasing program, public procurement professionals must carefully assess the total cost implications and compare them to domestic costs. Public procurement professionals are torn between free trade agreements and their countries' economic development/stabilization policies when they face a hard choice between selecting domestic or foreign firms.

Legal Environment

Different from public procurement regulations and rules, the legal environment refers to a broad legal framework that governs all business activities including research and development (regulations dealing with safety and health of new products), manufacturing (safety and health regulations at workplace and pollution control), finance (regulations dealing with disclosure of information), marketing (regulations dealing with deception of advertising, disclosure of product characteristics), personnel (regulations dealing with equal opportunity for women and minorities), and contracts. Indeed, most aspects of contracts—public or private—such as contract requirements, disputes, and breach of contract are governed under the same contract law. In developing and particularly transitional countries, where legal systems are not comprehensive, government contracts may need detailed provisions.

Political Environment

In a democracy many individuals, groups, and organizations in the private sector including trade associations, professional associations, and business firms or companies (commonly known as interest groups) are actively involved in all aspects of the public procurement system. Having various interests, objectives and beliefs, interest groups are involved in the public procurement system in several ways such as lobbying legislative bodies to pass or alter procurement statutes, influencing implementation of these statutes, and influencing budget authorization and appropriations processes. Normally, a government program that is eventually adopted is a compromise among different views of interest groups, policy makers and management. In this democratic environment, there are cases of a strong coalition of policy makers, bureaucrats and interest groups in their effort to get their programs adopted. This coalition has led to the concept of the iron triangle, which is very popular in the area of defense procurement.

However, the iron triangle shifts immediately after the procurement program authorization and appropriations stages move to the procurement stage. As failure or success in winning large defense contracts has a great impact on a company, defense specialized companies compete against each other for these contracts. Public procurement professionals have choices as they face various political pressures as well as sound economic decisions. For example, should they be concerned with maintaining future business competition by keeping some relatively weak companies in business or should they let these small weak firms go out of business and leave a few defense specialized firms to compete for contracts? This issue is more common in developing countries where perfect competition hardly exists. Large firms are more willing to make a small profit margin or even to take business losses by offering best bids. After small and weak firms are out of business, they will enjoy an imperfect competitive market.

Social, Economic, and Other Environment Forces

While some countries impose social policies on their public procurement (such as a policy placing a fair proportion of government acquisitions with woman or minority-owned small business), most governmental entities—be it a developed or developing country or federal, state, and local governments—use their large procurement outlays for economic stabilization or development purposes by preferring national or local firms over firms from other countries or other geographic locations. Public procurement professionals may be in a favorable or unfavorable environment that has a great impact on their practices as they may face an imperfect competitive market.

In addition to social and economic environment, public procurement professionals are under other external pressures such as an environment protection movement, and foreign policy. *Environmental Protection Concern or Green Procurement.* Environment protection has been present in every country—developed and developing—and environmentalists have placed a great deal of pressure on public procurement professionals. This type of pressure can be seen very frequently and in every country.

Foreign Policy. Many countries have used public procurement as a foreign policy tool to achieve specific objectives. For example, in the 1980s, the Pakistani government bought 28 F-16 fighter jets, but the United States government withheld the contract because Pakistan was pursuing, against American wishes, the development of nuclear weapons. Public procurement professionals in poor and weak countries are frequently facing the problem of having to deal with foreign policy of other nations in their procurements.

Other Environmental Forces. The public procurement system is also influenced by culture and technology. In a culture where giving gifts is a common public relation practice, it is difficult to make a distinction between gifts and bribes. Moreover, rapidly advanced technology has forced public procurement to (a) adopt new procurement methods, such as the use of e-signature and purchase cards; and (b) be knowledgeable in how to procure information technology.

Tradeoffs Between Procurement Objectives

In an ideal world, a perfect public procurement decision should satisfy all procurement objectives. Unfortunately, public procurement officials have to walk on a tight rope (Thai 2009) because there are also tradeoffs between cost, quality, timeliness, risk, economy, and competition. The more objectives a public procurement system has, the more constraints public procurement officials cope with. Successful public procurement is both an art and science as it requires specific analytical skills as well as good judgments. Figure 1.1 shows the analytical skills and the judgment that public procurement practitioners need to have.

Burt Bayens, in Chap. 6, proves that a procurement preference given to smalland medium-sized enterprises (SMEs) though the use of small contracts (with small thresholds) results in inefficiency: the transaction costs (costs of bid preparation and tender evaluation, for example) of a normal open competition process are out of proportion. Figure 1.1 shows a tradeoff between a SMEs preference and efficiency: When we want to increase the participation of SMEs, we have to reduce efficiency (For a comprehensive explanation of trade-off analysis,¹ see Kerzner 2006, pp. 681–705).

¹Trade-off analysis is more complicated and more difficult in the pre-contracting stage than in the contracting stage. Indeed, in the pre-contracting stage, procurement officials have to consider all core principles and intermediate objectives. During the contracting stage, the procurement officials are concerned with three main objectives: time, cost and performance as many procurement objectives such as competition, fair, equal treatment, etc. have been achieved in the pre-contracting stage.



Fig. 1.1 Graph showing possible tradeoffs between two procurement objectives

Performance-Based Public Procurement

Performance-based public procurement has been a major concern of many government and international organizations. The most significant step in performancebased public procurement is the issuance of "Methodology for Assessing Procurement Systems (MAPS)" by the Organisation for Economic Cooperation and Development (OECD) in 2004. Interestingly enough, the U. S. General Accountability Office issued in 2005 "Framework for Assessing the Acquisition Function at Federal Agencies" (GAO 2005). These two frameworks propose key "pillars (OECD-DAC), or "cornerstones" (GAO) (Table 1.1) for assessing procurement system performance.

Although these pillars or cornerstones are not identical, all pillars or cornerstones recommended many similar indicators for procurement system assessment. Many studies on procurement indicators, and benchmarks were conducted since then. In 2014, the European Commission issued *Action Plan on Public Procurement* in 2014 which sets out a series of initiatives aimed at helping EU countries improve

OECD-DAC's four pillars (2004)	GAO's four cornerstones (2005)
Legislative and regulatory framework	Policies and processes
Institutional framework and management capacity	Organizational alignment and leadership
Procurement operations and market practices	Human capital
Integrity and transparency of the public procurement system	Knowledge and information management

Table 1.1 Performance indicators: OECD's four pillars and GAO cornerstones

the performance of both administrations and beneficiaries in applying public procurement for EU investments during the 2014–2020 programming period. The most recent studies include the World Bank's *Benchmarking Public Procurement* (2016), US Agency for International Aid's *Key Performance Indicators Strengthen Procurement in Latin America* (January (2013), Inter-American Development Bank's Comparative Analysis of Performance Between Public Procurement Systems/Processes in Select LAC Countries and Procurement under the IADB's Public Procurement Policies (2016), among other studies.

Contents of the Book

Seventeen studies or papers (hereafter called "chapters") were selected, via a rigorous peer review process, on the basis of scholarship. Thus, it is expected that they cover a variety of research issues. However, two major procurement issues have been the focuses of these chapters: public procurement preferences (four chapters), and performance-based public procurement (nine chapters). The remaining four chapters address other various current public procurement issues.

By no means do the above identified themes reflect scientifically the current trends of research interests. Actually, there are a good number of papers presented at the conference which focus on many critical procurement concerns, including procurement reforms, transparency concerns, e-procurement, and procurement approaches or techniques.

Part 1. Public Procurement as a Public Policy Tool

Part 1 of the book begins with Dovilė Šličiuvienė's "Public Procurement In Lithuania: (Dis)Balance between Profitability and Environmental Protection." Public procurement constitutes an important part of the Lithuanian economy and is a driving force for the economic and social development. It is therefore in the interest of the contracting authorities to achieve the best value for money and generate benefits through supply chain management not only for the organization but also for the society, economy and environment. However, the lowest price criterion which is now mainly used for awarding the contract not only does not guarantee the quality of purchased products but also disregards the environmentally damaging effects. Therefore, administrators should find the balance between the profit (lowest price) and the environmental protection by developing sustainability criteria that can be used in the different stages of a procurement activity.

Finding a balance between the profit (lowest price) and the environmental protection is not easy. Deirdre Halloran proposes measurement and evaluation methods for social procurement. In her chapter, "The Social Value in Social Clauses: Methods of Measuring and Evaluation in Social Procurement," the concept

of "social procurement" places social considerations at the heart of the procurement process and can be understood as the use of purchasing power to create social value. One aspect of this is the use of social clauses. These are clauses that can be included in the procurement process that allow social and environmental considerations to be included in the contract specification and can be used in the selection and award procedures. This paper examines the concept of social procurement; the use of social clauses in the UK and Ireland; the articulation, measurement, evaluation of social value; together with the forces that are driving the demand for this data. The processes for assessing such value in social procurement and social value are then categorized and analyzed. While the impetus behind social clauses is to create social value through purchasing, finding effective methods of measuring and articulating social value is a challenge for stakeholders. This paper suggests that the use of the economic regulatory model to assess the outcomes of social procurement and social clauses may not be suitable and that acknowledging the dissonance between the economic and policy objectives of procurement regulation is fundamental before an appropriate and workable mechanism to achieve those objectives can be established and developed.

Dealing with social value, public procurement policies and approaches, should not focus only on giving preferences to environment friendly products, but also should support development and diffusion of innovative solutions. In "Promoting Public Procurement of Sustainable Innovations: Approaches for Effective Market Dialogue," Katriina Alhola, Marja Salo, Riina Antikainen and Annukka Berg present sustainable innovations in Finland. According to the authors, public procurement is considered to be an important means of accelerating the development and diffusion of innovations. In Finland, the government has set an objective of 5% of all public spending to be targeted to innovative solutions, and special attention has been paid to the rapidly growing clean technology sector. However, public procurement of innovation is currently an unsystematic procurement method in Finland and the EU. One of the well-recognized barriers is the lack of market involvement and dialogue between procuring organizations, suppliers and other stakeholders in the pre-procurement phase. In this paper the authors examined the extent of market dialogue and its contribution to achieving the sustainability targets in the procurement of eco-innovations in Finland. They analyzed market dialogue in real procurement cases of sustainable innovations while also searching for other procedures for effective market dialogue in the context of public procurement of innovations. The most important contribution of market dialogue included identifying the procurer's needs, informing the market about forthcoming needs and formulating tender specifications so that they would stimulate innovative solutions. The results indicated that regular face-to-face dialogue between procurers and suppliers could lead to better information of the procurers' needs and help suppliers develop innovative solutions. In addition, online platforms can be seen as a prominent means for matchmaking between different stakeholders.

As mentioned early in the chapter, public procurement preferences are given to environment protection, minority- and woman-owned enterprises and small and medium-sized enterprises. In "Analyzing Local and SME Participation in Public Procurement: Evidence from Seven Finnish Municipalities," Timo Kivistö and Veli Matti Virolainen address another type of procurement preferences, small and medium-sized enterprises. According to the author, employment and local business participation are important values for municipalities. Government policies raise the issue of small and medium-sized enterprise (SME) participation in public procurement. Existing research uses normal procurement notices, which fail to consider the procurement of under threshold values and the procurement falling outside directives. In this chapter, the data used is based on invoice data covering all procurement transactions. The analysis shows that public organizations make up a large share of the procurement volume, and the SME share of procurement is equal to the share of SMEs in Gross National Product. Local content is greatly affected by the location of social and healthcare providers and the distance from and size difference with a larger municipality. The greatest employment effects are in social and healthcare and construction. The authors make classification, calculations and analyze the data with Gioia method. The local and total employment and tax revenue are calculated from the procurement volume.

In "Small Public Procurement Contracts: A Comparison of the French, Dutch and Belgian Legal Treatments," Bert Baeyens compares the actual (new) rules on small contracts in France, the Netherlands and Belgium, and analyzes the legal position of small contracts in EU law. According to the author, it is believed that publicity of public procurement contracts (publishing notices in official journals) and lowering all kinds of so called "barriers" will ensure a larger participation to public procurement tendering, especially for SME's (EU (2014), pp. 80, 81). This belief is for example used as justification for the limitations put forward in the EU directive 2014/24 concerning certain minimal requirements regarding for example technical capacity and economic and financial standing. However, the author proves that in small contracts, it is almost impossible for a tenderer to win back incompressible costs.

Government plays an important role in supporting research and development and helping businesses innovate. However, its effect on government departments and the way they organize themselves to undertake public procurement of innovation (PPoI) has not been widely explored. Using a case study of the UK Small Business Research Initiative, Jillian Yeow, John Rigby, and Yanchao Li, in "The Effect of a Government Target for the Procurement of Innovation: The Case of The UK's Small Business Research Initiative," examine the different ways in which departments organize themselves to undertake PPoI, and in particular the effect of a target set on departments' innovation procurement activities. They identify challenges departments encounter when faced with such requirements and the effects they might bring about, and highlight the need for clear understanding of the logic and benefits of the program, dedicated resources and clear lines of responsibility. The authors suggest that targets, when used effectively, can increase SBRI activity and hence spur PPoI within government organizations.

Part 2. Performance-Based Public Procurement

The Public Procurement and Disposal of Public Assets Authority (PPDA) were established in Uganda in 2003 to promote public interest by regulating and monitoring public procurement processes of Procuring and Disposing Entities (PDEs). As part of routine compliance monitoring, the Public Procurement and Disposal of Assets Authority (PPDA) has been conducting annual procurement audits since 2005. In 2012, PPDA conducted 329 audits in 221 procuring and disposing entities. Findings of these audits coupled with a stream of research continue to reveal poor supplier performance evidenced in terms of deviations from the contractual obligations e.g. cost, delivery time, deliveries not conforming to specifications and poor quality of products, services and works. Worse still, suppliers continue to think less of end users and shirk their contractual obligations. In "Contractual Governance Mechanisms, Dynamic Capabilities, Transactional Specific Relationships and Supplier Performance in Uganda," Desire Kansiime, Joseph M. Ntayi and Arthur Ahimbisibwe employ a cross sectional research design using a sample size of 120 Central Government Procuring and Disposing Entities (PDEs) in Kampala and 240 service providers (suppliers). Results reveal that Transaction Specific Relationship and dynamic capabilities were significant predictors of supplier performance explaining 14.9% of the variance. However, contractual governance mechanisms was not a significant predictor of supplier performance.

In "Explaining the Policy-Practice Gap in U.S. Federal Contracting: Institutional Isopraxism and Performance-Based Acquisition," Bryan F. Mansfield and Keith F. Snider state that scholars and oversight bodies have noted the existence of a gap between policy and practice in government operations. This paper explores reasons why procurement policies sometimes do not produce their intended effects. Performance-based acquisition in the US Navy provides a venue for this investigation. Analysis of a sample of contracts confirms that the gap exists and suggests some causes. Institutional theory is used as a conceptual grounding for isopraxism, which aids in understanding the gap in terms of the responses of policy-making entities and implementing agencies to their external organizational influences. It also illuminates policy alternatives which can help narrow the policy-practice gap.

In "A Price Review Framework for Maintenance, Repair and Operations Procurement Contracts in the Public Sector," Lian Kiang Tan and Shao Hung Goh investigate the procurement of maintenance, repair and operations (MRO) parts in public sector organizations. A case study is described for a public organization in Singapore, which had outsourced the procurement of MRO parts but was faced with questions related to the extent to which past price escalations were well-justified. The procurement performance for several part-families for one vehicle type was assessed on a 5-point scale. Findings suggest that better outcomes can be derived from public sector MRO procurement contracts by incorporating systematic price reviews with suppliers. An enhanced MRO price review framework with two pricing methods (fixed-price with periodic realignment and cost-plus) is presented. Such a framework can serve as a deterrent to the principal-agent problem and allows for a comparison of MRO procurement performance over time and between public sector organizations, where there has generally been a lack of attention on expenditures on such supplies.

The quality of local environment in which public officials operate can affect their incentives to behave efficiently. In the specific sector of public procurement, recent empirical studies find that the characteristics of local environment, as captured by different dimensions (such as, social capital, corruption), affect significantly the efficiency in the execution of public works, even after controlling for many other factors. Moving from this evidence, in "Institutional and Social Quality of Local Environment and Efficiency in Public Works Execution," Calogero Guccio, Domenico Lisi, and Ilde Rizzo develop a theoretical model where a debauched local environment reduces unambiguously the efficiency of the execution of public works, because purchasing officers have less incentives to pursue mandated tasks from the contracting authority. Therefore, the model establishes a rationale and clear interpretation of the empirical evidence found in the literature on public works. In the final part of the paper the authors discuss the policy implications coming from this model.

In "Strengthening the Effectiveness of Exclusion Mechanism in Public Procurement: A Comparative Legal Study between Indonesia and the Netherlands," Richo Andi Wibowo analyses whether the exclusion of corrupted economic operators has been implemented effectively in Indonesia and the Netherlands. The strategy to enhance the implementations in both countries is also elaborated upon. To do so, the author will firstly distinguish between the terms direct exclusion and referred exclusion. The latter refers to exclusion based on a blacklisting system. Furthermore, the existing critiques and responses to the exclusion mechanisms will be discussed. Conclusions are drawn which suggest that Indonesia acknowledges both direct and referred exclusions, whilst the Netherlands only recognises direct exclusion. The direct exclusion has been implemented effectively only in the Netherlands, due to the fact the administration is supplied by information from the administration's intelligence unit; something that Indonesia may consider adopting. Besides, the Netherlands may consider the concept implemented in Indonesia regarding the referred exclusion. Establishing the blacklist system may give certain advantages to the Netherlands.

Part 3. Other Public Procurement Issues

The Transatlantic Trade and Investment Partnership (TTIP) negotiations between the European Union (EU) and the United States (US) have been ongoing since 2013, including a chapter on public procurement. The EU has strong offensive interests in the liberalization of the US procurement market. However, procurement does not seem to interest the US as much, which is constrained by its strong tradition of "Buy American," as well as its federal, de-centralized organizational structure. According to Eleanor Aspey and Nicolette Butler, in "Public Procurement in TTIP: An Opportunity to Set Global Standards," will compare the likely approach of both negotiating parties to procurement in TTIP with existing procurement commitments between the EU and the US (e.g. in the World Trade Organization (WTO) Government Procurement Agreement (GPA). It will suggest that what should be sought is a true "GPA plus" agreement which could be mutually beneficial for both negotiating parties and will make specific proposals about the content of the TTIP procurement chapter in order to ensure that the agreement is pioneering, such that it may become a model for future procurement negotiations (whether bilateral or multilateral).

In "Asymmetric Information: A Case Study in Potential Public Procurement Pitfalls," Sirilaksana Khoman addresses the issue of information asymmetry, which typically occurs where one party to a transaction has more or better information than another party. This creates an imbalance of power, resulting in inefficiency, and is one of the major causes of market failure. When this concept is applied to public procurement, it is clear that opportunities for corruption are created by asymmetric information. This paper presents a case of public procurement in Thailand, namely the procurement of public buses by the Bangkok Metropolitan Transport Authority. Asymmetric information abounds, between the procuring agency, the would-be suppliers, and the anti-corruption agency and watchdog groups that include civil society. Integrity pacts have recently been advocated in the procurement process, but newly-acquired experience shows that this provision is not a stand-alone tool, and pro-active involvement by law enforcement agencies is still needed. No allegation of corruption is implied, but careful scrutiny of procurement documents suggests that conditions, selection criteria, product specifications, and other details can be used to favor certain suppliers with impunity, to the detriment of society at large. The case shows that collaboration between watchdog agencies and professionals can reduce information gaps and make anti-corruption action more effective.

The pressure to deliver more for less has steered public managers' focus towards risk mitigation, especially in relation to delivering health services which is one of the most significant items of public expenditure. In "Identifying and Mitigating the Risks of Outsourcing a Public Health Service Function," Suvituulia Taponen identifies the most significant risks related to outsourcing a public health service function and the means to mitigate these risks during the competitive tendering process. This is a single case study looking at outsourcing primary care in Finland. A combination of data from a survey and semi-structured interviews is analysed. Analytical hierarchy process is used to evaluate the risks of outsourcing options. The most significant risks are political, service quality and market risk. mitigate these risks: (i) the procurement unit should engage with market, (ii) risk management focus should primarily be on service quality risk, and, (iii) service specification and contract terms should be created through an open dialogue with the tenders in negotiated procedure.

Government procurement usually contributes a large deal to a country's economy and is therefore of great importance. With South Africa's political transformation in 1994, the construction industry was used as the model for public sector procurement reform. The industry regulates all infrastructure and currently constitutes 4% of the country's gross domestic product (GDP) with the private sector as its biggest client. The legal regulation of construction procurement in South Africa is therefore significant. Currently the South African construction procurement system is regulated by section 217 of the Constitution which requires a procurement system to be fair, equitable, transparent, competitive and cost-effective. Further to that, the Construction Industry Development Board Act and its subordinate legislation also feature prominently. In "Best Practice in South African Construction Procurement Law," Allison Anthony seeks to determine how qualification criteria for construction contractors are legally regulated in South Africa, whether it complies with the requirements of section 217 of the Constitution and what the current challenges and recommendations for further development are.

Since the late 1990s, public procurement has become been an area of research interest. One of the research issues is its professional status: Is public procurement a profession? This research question is a foundation for studying public procurement knowledge, skills, and practices. In "The What, Who, and How of Public Procurement: Job Tasks Performed and Managed by Professionals," Joshua M. Steinfeld examines task specialization in public procurement to serve as a basis for identifying the job tasks completed by the field's professionals. Sensitivity analysis is utilized to determine the job tasks public procurement practitioners actually perform and manage, along with the job descriptions of practitioners who complete these tasks, as a starting point for examining how practitioners approach completion of their work. The findings suggest there are specific job tasks in public procurement that warrant further examination based on the implications for professionalism in public procurement.

Conclusions

Thai (2007) noted the extent of commonality in public procurement knowledge and practices across developed and developing countries around the world, despite significant variations in their procurement systems. This is evident in sixteen chapters in this book. Despite variations among public procurement systems, there has been effort in improving public procurement performance. In addition, public procurement has been used as a policy tools to achieve social and economic objectives.

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Part I Public Procurement as a Public Policy Tool

Chapter 2 Public Procurement in Lithuania: (Dis)balance Between Profitability and Environmental Protection

Dovilė Šličiuvienė

Introduction

While not necessarily arising from the function of the public authority and not necessarily directly connected with the purchased products' functional objectives, the horizontal objectives, such as the conservation of natural resources, prevention of climate change, may nevertheless be advanced through public procurement. Efforts are being undertaken by public authorities to promote sustainable consumption and production by means of public procurement since it is recognised that public purchasing because of its considerable size and diversity can have a great influence in the marketplace. By adopting the integrated approach, governmental authorities can demonstrate the advantages of, for instance, environmentally friendly goods and thereby lead the whole market towards the sustainable development.

As the environmental aspect of sustainability is highly aspired for in public procurement, this article analyses whether the preferred use of the lowest price criterion (hereinafter—LPC) for an award of the public contracts by the Lithuanian contracting authorities is balanced with the environmental protection. The article argues that criterion of the most economically advantageous tender (hereinafter—MEAT) should be used more frequently in order to ensure that environmental considerations are taken into account when procuring the products, works or services. In this article public procurement which takes into account environmental considerations is referred to as "green public procurement" (hereinafter—GPP), the term which is commonly used in Lithuanian national legislation.

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The chapter is divided into three parts. The first part aims at presenting a legal review of the Lithuanian national legislation regarding the GPP.

The second part analyses the extent to which the LPC and criterion of the MEAT are applied for awarding the contracts and how that affects the contracting authorities' possibilities to acquire products with the reduced environmental impact. It is argued that the application of the LPC not only disregards the environmental impact the procured product can make but also do not guarantee the quality of the product which, in turn, means that both the functional and horizontal objectives of procurement are not implemented. Therefore, the criterion of the MEAT should be used because it provides, among other things, the opportunity to take into account environmental considerations.

The third part provides an analysis of how environmental requirements can be included in the different stages of the public procurement under the EU and Lithuanian national law so as to ensure that the procured product is not only environmentally-friendly but also helps the contracting authority to save costs.

Methodology

In the study, the theoretical research methods of systematic analysis, analysis of documents, generalisation, as well as comparative methods, have been applied. The method of document analysis was used in order to obtain the information, to qualitatively investigate scientific publications, various laws, and legal practice documents relating to public procurement and GPP in particular. The qualitative analysis of the documents is based on an intuitive understanding and summarising of the content of the documents as well as the logical conclusion. The systematic analysis method was used for the examination of the problematic areas of the application of the LPC and its effect on the use of the GPP by the Lithuanian contracting authorities. The comparative method was applied to compare the practices of the other EU Member States with regard to the application of "green" requirements in procurement. The generalisation method was used for summarising data collected and analysed as well as for defining of conclusions.

The empirical data for the study are mainly obtained from the Public Procurement Office (hereinafter—PPO) as well as from Ministry of Environment of the Republic of Lithuania.

The Regulation of GPP in the Republic of Lithuania

The Law on Public Procurement of the Republic of Lithuania (hereinafter—"the LPP") is the main piece of legislation governing implementation of public procurement. As Lithuania is the EU Member State and therefore it's national legislation has to be harmonised with the EU law, the LPP is a direct result of the respective EU legislation. 1

The Article 1 of the LPP defines that this Law establishes the procedure for public procurement, the rights, obligations and responsibility of participants in the procurement procedures, as well as the procedure for the control of public procurement and settling of disputes (Seimas of the Republic of Lithuania 1996). The LPP also contains provisions which open up the possibility to consider environmental issues in the procurement process. In this regard, the paragraph 3 of the Article 24 of the LPP is of the greatest importance. It states that in instances and in accordance with the procedure laid down by the Government or an authorised institution it is the *obligation* of the contracting authorities to specify the requirements and/or criteria of energy consumption efficiency and environmental protection into the tender documents (Seimas of the Republic of Lithuania 1996).

However, although the LPP obliges the public procurers to apply the environmentally-friendly requirements, this obligation is binding only upon certain categories of the contracting authorities, which are listed in the para. 2 of the Resolution of the Government of the Republic of Lithuania No. 1133 (2010) (hereinafter-Resolution No. 1133). According to the Resolution of the Government of the Republic of Lithuania No. 1257 (2011), these purchasing authorities, namely national authorities and other state institutions and organisations under the Government of the Republic of Lithuania, ministries and organisations under ministries, shall achieve that 25% by 2013, 30% by 2014 and 35% by 2015 of procurement by value and by number of tenders include core (mandatory) and comprehensive (advisable) environmental criteria, except in cases when there is no products, services or works which comply with the established environmental criteria, or when exceptions are approved by the legal acts of the Republic of Lithuania (Government of the Republic of Lithuania 2011). Other purchasing authorities that do not fall under the scope of the para. 2 of the Resolution No. 1133 are recommended to apply the environmental requirements to the same extent as indicated before (Government of the Republic of Lithuania 2011).

Depending on the subject matter of the contract, the requirements and/or criteria of the energy consumption efficiency and the cases in which they have to be applied are set forth in two main legal acts:

- The Order of the Minister of Energy No. 1-154 of 18th June 2015 (Ministry of Energy of the Republic of Lithuania 2015), which identifies the list of product groups, except the road vehicles, that are subject to energy efficiency requirements during public procurement and the energy efficiency requirements for such products;
- The Order of the Minister of Transport and Communications No. 3-100 of 21st February 2011 (Ministry of Transport and Communications of the Republic of

¹The full list of the legal acts of the European Union implemented by the LPP is provided in the Annex of this Law (available at https://www.e-tar.lt/portal/en/legalAct/TAR.C54AFFAA7622/eJMdGqxbgP).

Lithuania 2011), which identifies the list of requirements for energy efficiency and environmental protection when purchasing road vehicles and cases in which these requirements are to be applied.

With regard to the requirements and/or criteria of environmental protection, the essential legal document is the Order of the Minister of Environment No. D1-508 of 28th June 2011 as amended by the Order of the Minister of Environment No. D1-556 of 25 June 2014 which lists the product groups for which the environmental criteria are to be applied (it currently covers 4 product groups), approves the comprehensive environmental criteria for every product included in those lists, and lays down the rules (hereinafter—the Rules) guiding the application of environmental criteria applicable to all contracting authorities when implementing the GPP (Ministry of Environment of the Republic of Lithuania 2014).

Notably, these Rules define the GPP as a public procurement whereby the contracting authority includes into the tender documents at least the minimum environmental criteria endorsed by the Ministry of Environment in order to procure goods, services and works while considering not only their price and quality but also the reduced environmental impact throughout their life-cycle, thereby stimulating the production of environment-friendly products (Ministry of Environment of the Republic of Lithuania 2014). It further continues that GPP enables the contracting authority to acquire the product which (if compared to the product of the same function) consumes less natural resources for its production and consumption, contains fewer or none hazardous, toxic materials, is durable and can be used repeatedly (Ministry of Environment of the Republic of Lithuania 2014).

However, according to these Rules endorsed by the Order of the Minister of Environment No. D1-508, the procurement qualifies as "green" only if a product is in compliance with *all* product-related minimum environmental criteria (Ministry of Environment of the Republic of Lithuania 2014). In addition, the contracting authority, as stated in paragraph 13 of the Rules, can include additional environmental criteria established by the Ministry of Environment or the contracting authority itself (Ministry of Environment of the Republic of Lithuania 2014).

Furthermore, the Implementation Measures of GPP for the years 2013–2015 have been approved by the Order of the Minister of Environment of the Republic of Lithuania No. D1-266 of 16th April 2013. The aim of the measures is to promote GPP and make sure that the goods, services or works purchased are as environment-friendly as possible. In order to achieve this goal, the responsible institutions (the Ministry of Environment, the Environmental Protection Agency and the PPO) have to develop and apply a number of different types of instruments, such as training and communication tools, which are designed to provide environment-related information to the range of government levels and private entities and thus not only to increase environmental awareness among them but also assist purchasers in making effective procurement decisions (Ministry of Environment of the Republic of Lithunia 2013).

Finally, Lithuanian National Strategy for Sustainable Development sets an ambitious target of reaching the level of the leading EU countries in GPP application until 2020 and outlines, among other things, a variety of actions and support measures which have to be taken in order to green public procurement (Government of the Republic of Lithuania 2011). Such measures, for instance, include a regular supplement of the list of products for which the environmental criteria are to be applied or the organisation of the training for the procurement officials (Government of the Republic of Lithuania 2011).

In conclusion, there is mainly a centralised regulation of the GPP in Lithuania which impacts all government levels. The mandatory requirements are placed on the central government level while recommending the inclusion of environmental considerations into the procurement process at the local level. Monitoring of GPP is centralised by the PPO and is based on direct reporting from contracting authorities.

Lowest Price Versus Environmental Protection: (Dis)balance? (Case of Lithuania)

Under the former Procurement Directive 2004/18/EC the contracting authorities had a choice to award the contract on the basis of price alone or on the basis of the MEAT. Following the passing of the new public contracts Directive 2014/24/EU of the European Parliament and the Council on Public Procurement and Repealing Directive 2004/18/EC, authorities *must* award on the basis of MEAT thereby encouraging evaluation of the bids offering the best price-quality ratio and stimulating smart, sustainable and inclusive growth (European Parliament, and the Council 2014). As provided in the Article 67(2) of the Directive, "the most economically advantageous tender from the point of view of the contracting authority shall be identified on the basis of the price or cost, using a cost-effectiveness approach, such as life-cycle costing <...>, and may include the best price-quality ratio, which shall be assessed on the basis of criteria, including qualitative, environmental and/or social aspects, linked to the subject-matter of the public contract in question" (European Parliament, and the Council 2014, Article). Thus, the new MEAT still provides the scope for the price and cost to be considered, alongside other qualitative criteria, and enables the contracting authorities to balance desirable (although not absolutely necessary) features against price (Client Earth 2011).

The Article 39 paragraph 4 of the LPP provides that the contracting authority has an alternative to evaluate the tender either on the basis of the LPC or the MEAT (Seimas of the Republic of Lithunia 1996). Thus, as in the former directives the contracting authority's discretion to choose the criteria regarded as relevant for assessing tenders is still affirmed. PPO has developed a procurement tender evaluation guidelines (hereinafter—the Guidelines) which stipulate that the LPC should be chosen in cases where "other characteristics" or "other terms" of the offer do not have a high importance for the future use of the purchased product or the performance of the public contract (Public Procurement Office 2006). The Guidelines further indicates that the criterion of the MEAT is particularly suitable when it is important to acquire the product with the best possible quality. This criterion should be chosen in order to evaluate not only the price of the product but also the functional, aesthetic, environmental and other characteristics directly related to the object of procurement (Public Procurement Office 2006).

According to the data provided by the Public Procurement Office (2015), in 2014 the value of the contracts where the tenders were evaluated on the basis of the LPC amounted to approximately 90% of the total value of all public procurements. In sharp contrast, just 10% of the total value belongs to the procurements where the criterion of the MEAT was applied.

These figures underline that the vast majority of the contracting authorities in Lithuania with extensive experience and expertise in the area of public procurement significantly prefer to use the LPC within the evaluation of public procurement and believes that its use results in a more efficient tender for a public contract. Although the legal possibilities to increase the use of the MEAT criterion exist, it is applied fairly rare. It is especially the case for the low-value purchases.

Whether the use of a single evaluation criterion (the lowest bid price) is the most appropriate measure for the selection of the tender for a public contract, is questionable. Firstly, the lowest bid price evaluation criterion does not always really leads towards the lowest final price of a public contract. This is due to the fact that the information about the initially estimated price of a public contract is publicised² and the tender participants usually use it as the main factor for the formulation of their bidding strategy. Applicants seek to cut the bid price down as much as possible so that "the offered price is at the margin of profitability with the expectation to win the public tender" (Ochrana and Hrnčířová 2015). Secondly, the selection of this criterion does not guarantee that "an offer with the lowest bid price corresponds to the principle of economy, meaning that for the lowest incurred cost the given target of public procurement was indeed met" (Ochrana and Hrnčířová 2015). An inappropriate use of the lowest bid price criterion can lead to a waste of resources, if the offer with the lowest price, but with a very low quality of the performed work, was selected. Thus, the "price only" option allows the purchasers to ignore the best value offer, as the price of a product or service often does not reflect the best value, especially in the long term.

The National Audit Office of Lithuania (2011) indicated that 35% of municipalities, 38% of ministries and 50% of other contracting authorities not always achieve the expected result if the LPC is chosen. The public authorities state that suppliers who offer the lowest price often fail to fulfill their obligations and the service or product procured is faulty. This, in turn, leads to the loss of financial resources and additional time-consumption. However, in the view of the purchasing authorities, the application of this criterion is simpler, safer and prevents from violation of procurement procedures (National Audit Office of Lithuania 2011). The Lithuanian contracting authorities prefer to choose the LPC even in cases when the

²With regard to Lithuania, this information can be found at http://www.cvpp.lt/index.php?option= com_vptpublic&Itemid=88.
qualitative and other characteristics of the product are of great importance for the use of the product and performance of the contract. As a result, allowing purchases to be based solely on the lowest price often encourages purchases that result in significant negative externalities, including environmental degradation.

On the contrary, if the criterion of the MEAT is selected for the award of the contract and the life-cycle costing approach is used, the variety of factors (e.g. running and disposal costs, cost-effectiveness, quality, environmental impact) are considered and ranked. Theron and Dowden (2014) indicated that evaluation based on multiple criteria allows the public authorities to achieve the "five rights"-the right quantity of the right quality at the right time, from the right source at the right cost. In addition, according to Siemens (2003), environmentally-preferable products should be defined based on a comprehensive life-cycle assessment that objectively assesses the environmental effects of products and processes over their entire lifetime. However, Lithuanian public authorities rarely apply the multiple criteria (criterion of the MEAT) because the application of the LPC is simpler and faster while definition of objective criteria for the evaluation of offers on the basis of the MEAT is difficult and procurement officers usually lack the competence to apply this criterion. In addition, the Guidelines (2006) developed by the PPO with regard to the application of the MEAT are too difficult and time-consuming, as well as there is a lack of practical examples of how to identify and evaluate the cost-effectiveness of proposals (National Audit Office 2011).

Nevertheless, it is necessary to apply the MEAT criterion more widely and at the same time to limit the use of the criterion of the lowest bid price because when the assessment of tender bids is undertaken on the basis of multiple criteria, the bidders take more factors into account when preparing their offers, not the price only. As a result, the applicants can offer the slightly higher price which is compensated by a higher quality of the offered product or other desired parameter such as reduced environmental impact.

That Lithuanian contracting authorities prefer to choose the easier way and buy the products, services and works with the lowest price rather than those with a little bit higher price but reduced environmental impact can be seen from the following tables and figures where the data provided by the PPO (Public Procurement Office 2013, 2014) is summarised (Tables 2.1 and 2.2).

	2013	2014
Number of all public procurement (excl. low-value contracts)	12,505	9923
Number of all GPP (excl. low-value contracts)	871	562
Total value of all public procurement (excl. low-value contracts) (million of litas, including VAT)	13,020.9	15,644.6
Total value of all GPP (excl. low-value contracts) (million of litas, including VAT)	2591.8	1344.5

Table 2.1 Number and value of overall and GPP in Lithuania (2013–2014)

	2013	2014
Number of procurements evaluated on the basis of LPC (excl. low-value contracts)	11,793	9277
Number of procurements evaluated on the basis of MEAT (excl. low-value contracts)	712	646
Number of GPP evaluated on the basis of LPC (excl. low-value contracts)	815	513
Number of GPP evaluated on the basis of MEAT (excl. low-value contracts)	56	49

 Table 2.2
 Number of overall and GPP in Lithunia evaluated on the basis of the LPC and criterion of MEAT(2013–2014)

The statistics show that 11,793 procurements out of 12,505 were evaluated on the basis of the LPC in 2013. In 2014, this number was equal to 9277 out of 9923. The number of procurements when the tenders were evaluated on the basis of the MEAT amounted accordingly to 712 in 2013 (5.7% of an overall number of procurements, excluding low-value contracts) and 646 in 2014 (6.5% of an overall number of procurements, excluding low-value contracts).

Furthermore, the statistics indicates that in 2014 the total value and number of GPP (excluding low-value contracts) conducted by all contracting authorities, including those which must apply the environmental criteria during the tendering process, have decreased almost twice comparing to 2013 and is well below the levels set forth by the Government of the Republic of Lithuania, i.e. 25% by 2013, 30% by 2014 and 35% by 2015 (the target for 2016 is 40%). Furthermore, it is far from achieving the objective of reaching the level of the leading EU countries in GPP application. With regard to this it should be noted that in 2008 Communication "Public Procurement for a Better Environment", the European Commission has set the objective that, by the year 2010, at least 50% of all public tendering procedures should be green in the European Union, i.e. compliant with endorsed common core GPP criteria (Fig. 2.1).

The number of GPP as compared to the overall number of public procurement (excluding the low-value contracts) consisted only 7% in 2013 and 5.7% in 2014 (Fig. 2.2).

The value of GPP as compared to the overall value of public procurement (excluding the low-value contracts) was 19.9% in 2013 and 8.6% in 2014 (Fig. 2.3).

The extent to which the LPC is used for award of the public contracts supposes that the decrease of GPP in value and number is firstly influenced by the existence of the general perception that GPP costs more because the initial capital cost of the greener products is usually higher than an initial price of more environmentallydamaging substitutes. However, this is not always the case, particularly if the full-life cycle costs (purchase price, usage, disposal costs) of a contract are considered and not only the purchase price.



Number and Value of GPP in Lithuania (2013-2014)

Fig. 2.1 Number and value of GPP in Lithuania (2013–2014)



Number of GPP as Compared to Overall Number of Public Procurement

Fig. 2.2 Number of GPP as compared to overall number of public procurement

In the earlier mentioned Communication (2008), the European Commission states that there are a number of studies confirming the cost-effectiveness of GPP (unfortunately, any of those studies is not explicitly indicated there).³ What is more, the PricewaterhouseCoopers, Significant and Ecofys (2009) also concluded that GPP can lead to decreases in costs for the contracting authority instead of increases. It was

³There are also studies which conclude that GPP is cost-ineffective. See, for example, http://businessperspectives.org/journals_free/ee/2013/ee_2013_04_Lundberg.pdf.



Value of GPP as Compared to Overall Value of Public Procurement

Fig. 2.3 Value of GPP as compared to overall value of public procurement

ascertained that "[w]hen using a Life Cycle Costing (LCC) approach in calculating the financial impact of GPP, the outcome is that with an average level of GPP of 45%, the average financial impact of GPP is -1%" (PricewaterhouseCoopers, Significant and Ecofys 2009).⁴ This implies that "although the use of environmental criteria in procurement procedures can lead to higher direct purchasing costs, it can result in an average decrease of overall costs for public organisations of around 1%. The reason behind this is that higher purchasing prices of green goods are compensated by lower operating costs" (PricewaterhouseCoopers, Significant and Ecofys 2009). The other study also supported this conclusion by stating that "[1]ower life-cycle costs of GPP-compliant goods and services and increasing competition over time as GPP compliance initially gives a competitive advantage are assumed to restore the balance of the costs of goods and services purchased with GPP requirements" (Kahlenbom et al. 2010).

Undoubtedly, there also exist a number of other barriers and concerns which are directly associated with the decrease in number and value of GPP in Lithuania. *Firstly*, because of existing perception that GPP costs more and the annual budget constraints on the public authority, there is a lack of support for GPP from senior management. Visible support from high-level officials would provide "the stamp of legitimacy to green procurement, thus increasing its likelihood to success" (Thai et al. 2007). *Secondly*, there is a lack of consultation between the contracting authorities, suppliers, environmental experts and the end users. However, European public authorities, including Lithuanian, are unwilling to engage with the suppliers during the pre-procurement consultation stage because of the strict legislation regulating the preferential treatment of the suppliers. *Finally*, many purchasers within public authorities often lack the information with respect to the more

⁴The report presents the levels and impact of GPP measured in the best performing Member States (Green-7: Austria, Denmark, Finland, Germany, The Netherlands, Sweden and the United Kingdom) on average for 10 priority products groups/services in 2006/2007.

economic alternatives, also knowledge of environmental criteria and practical experience on the application of GPP. Consequently, the inefficient purchasing decisions that not only hurt the environment but also waste government resources are often made. In addition, GPP is seen as a more complex, detailed and resource intensive process which places a large burden on purchasers. This in turn leads to attention being paid to the procurement process rather than the outcome. Therefore, intensive training on legal and technical aspects of GPP implementation is necessary as only the procurement officials who are well-equipped can properly and objectively assess the extent to which the tender is environmentally-friendly.

In summary, since the contracting authority's discretion to choose the criteria regarded as relevant for assessing the tenders is still affirmed in the Lithuanian national law regulating the public procurement, purchasing authorities almost unanimously choose to apply the LPC the use of which usually leads to the procurement of goods, services or works with the negative environmental impact. What is more, the application of this criterion instead of the MEAT not only results in the acquisition of environmentally-unfriendly products but also, as ascertained by a number of studies mentioned earlier, loss of financial resources.

Inclusion of Environmental Requirements into Public Procurement Process

Public purchasers have an obligation to obtain the best value for money, which should be achieved through competition, and act fairly in the course of public procurement. Although public authorities are careful to balance primary procurement objectives (i.e. delivering goods and services necessary to accomplish government mission in a timely, economical and efficient manner (Organisation for Economic Co-operation and Development 2015) with secondary policy objectives (such as promoting sustainable green growth), this undoubtedly can be compatible and the inclusion of the green product criteria into the tendering process is one of a simpliest, clearest and straightest way in finding this balance between the financial and environmental benefits. It is noted in the General Union Environment Action Programme to 2020 that administrations at all levels can reduce their environmental impact through their purchasing decisions, particularly by including environmental considerations into the procurement process (European Parliament and the Council 2013). Futhermore, the Europe 2020 strategy of March 2010 indicates that there is a need to encourage a wider deployment of GPP in order to support "the shift towards a resourse efficient and low-carbon economy that is efficient in the way it uses all resources" (European Commission 2010). So it has been recognised that by applying an integrated approach and including environmental criteria at every stage of the procurement procedure, the contracting authorities can promote the modes of production and consumption that are more environmentally friendly and stimulate the supply and demand of "green" products (PricewaterhouseCoopers, Significant and Ecofys 2009).

Since the total amount spent through the public procurement procedures averages almost 10% of the country's Gross Domestic Product (GDP), or one third of Lithuania's national budget (Ministry of Economy of the Republic of Lithuania, Undated), the greater inclusion of environmental requirements into the procurement documents can deliver significant benefits not only for the price of procured works, services or products but also for the production and consumption of greener products, especially if the application of those requirements are focused on the sectors where there is a high public-demand intensity, also that raise the largest environmental concerns and that have been overlooked by the existing regulatory structures.

Furthermore, as Lithuania systematically invests into all purposeful activities directly aimed at the prevention, reduction and elimination of pollution or any other degradation of the environment (Eurostat, Undated),⁵ the increasing usage of GPP could significantly contribute to Lithuania's efforts with regard to environmental protection.

Inclusion of Environmental Criteria Under Lithuania's and EU Law

There are a number of ways under the Lithuanian law which provide the opportunity for the contracting authorities to incorporate environmental requirements into the procurement process. What is more, being a member of the European Union Lithuania has agreed to subject its procurement procedures to a certain degree of international regulation which establishes a number of rules and principles which must be observed in the award of the public contracts. In fact, the EU plays a major role in developing and adopting the policy framework which guides and assists the Member States in implementing procurement policies that seek to address not only economic but also environmental objectives.

In the EU, the legal framework for public procurement is defined by the provisions of the Treaty on the Functioning of the European Union (hereinafter—the Treaty), the EU Procurement Directives⁶ and by the jurisprudence of the European Court of Justice (ECJ). Although originally designed to foster competition and efficiency, now EU rules, among other things, seek to address environmental goals.

⁵Investments gave the positive results. See http://gamta.lt/files/AB20141451478063964.pdf.

⁶The legislative package consists of:

⁽a) Directive 2014/24 on Public Procurement ("Public Sector Directive"), replacing Directive 2004/18;

⁽b) Directive 2014/25 on procurement by entities operating in the water, energy, transport and postal services sectors ("Utilities Directive"), replacing Directive 2004/16; and

⁽c)New Directive 2014/23 on the award of concession contracts ("Concessions Directive").

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The Treaty

The "integration principle", stipulated in the Article 11 of the Treaty, requires environmental protection requirements to be "integrated into the definition and implementation of the Union's policies and activities, in particular with a view to promoting sustainable development" (European Union, *TFEU* 2012). The main aim of this integration is to contribute to the preservation, protection and improvement of the quality of the environment, protection of human health, prudent and rational utilisation of natural resources and promotion of measures at international level to deal with regional or worldwide environmental problems (European Union, *TFEU* 2012, Article 191). In addition, Article 3(3) of the Treaty on the European Union states that the Union "shall work for the sustainable development of the Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment? (European Union, *TEU* 2012).

Procurement Directive 2014/24/EU

It clarifies *how* the contracting authorities can contribute to the protection of the environment and the promotion of sustainable development, whilst ensuring that they can obtain the best value for money for their contracts (European Parliament, and the Council 2014, Recital (91) of Directive). The Directive contains a number of provisions that refer specifically to the incorporation of the environmental considerations into the tendering procedures. If a contracting authority wishes to include environmental requirements, it has a choice of approaches listed below.

Technical Specifications

The contracting authorities may include a minimum level of environmental performance in the technical specifications of goods, services or works being purchased (Article 42(3)a) if it contributes to the fulfilment of their use. Technical specifications may be formulated in terms of performance or functional requirements and/or by reference to European, international, national standards or equivalent, as well as to specific production process or method provided they are linked to the subject-matter of the contract, proportionate to its value and objectives, and non-discriminatory. Technical specifications shall afford equal access of economic operators to the procurement procedure and shall not have the effect of unjustified obstacles to the opening up of public procurement to competition (Article 42 (2)). In addition, characteristics required of a material, product, supply or service may also include levels of environmental and climate performance (Annex VI of Directive 2014/24/EU). Article 25(3)2 of the LPP reiterates the respective Directive's provisions and provides that without prejudice to mandatory national technical rules and to the extent that they are compatible with EU law, the technical specifications may be formulated in terms of performance or functional requirements of the subject-matter of the contract which may include environmental characteristics (Seimas of the Republic of Lithuania 1996). Importantly, as an ability to meet the technical specifications is a prerequisite for being considered a candidate for the contract, the environmental demands included therein is compulsory.

Eco-labels

Public authorities can use eco-labels [Article 43(1)], such as the European Eco-label, (multi)national eco-labels or any other label which provide with information relating to the environmental characteristics of the products and thus allow to compare the environmental performance of products of the same type. The eco-labels can be used if the requirements for them are linked to the subject-matter of the contract (Recital (75) of Directive 2014/24/EU) and meet certain standards of openness and transparency. A certain eco-label cannot be required because it would be considered discriminatory. However, the criteria used by that eco-label can be included in the tender documents. The LPP in this regard states that where a contracting authority lays down environmental characteristics in terms of performance or functional requirements it may "use the detailed specifications, or, if necessary, parts thereof, as defined by European or (multi-) national eco-labels, or by any other eco-label, provided that: those specifications are appropriate to define the characteristics of the supplies or services that are the object of the contract; the requirements for the eco-label are drawn up on the basis of scientific information; the eco-labels are adopted using a procedure in which state institutions, consumers, manufacturers, distributors, environmental organisations and other interested persons can participate" (Seimas of the Republic of Lithuania 1996). The contracting authority may also indicate that "the products and services bearing the eco-label are presumed to comply with the technical specifications laid down in the contract documents. In such a case, it must accept any other appropriate means of proof, such as a technical dossier of the manufacturer or a test report from a notified body" (Seimas of the Republic of Lithuania 1996, Article 25(6)6).

Exclusion on the Ground of Non-compliance with Environmental Legislation

According to the Article 57(4)a of the Directive, the purchasing authority may exclude from participation in procurement procedure any economic operator which has violated the applicable environmental obligations (European Parliament, and the Council 2014). A case of non-compliance with environmental legislation amounts to grave professional misconduct under the national law of Lithuania (Seimas of the Republic of Lithuania 1996, Article 33 (2)4 of the LPP) and the

economic operators may be excluded from the procurement procedures if this misconduct took place less than one year ago. However, care should be taken to ensure that decision to reject economic operator is proportionate to the offence and that the candidate is given the opportunity to "demonstrate its reliability despite the existence of a relevant ground for exclusion" (self-clean) [European Parliament, and the Council 2014, Article 57(6)].

Environmental Technical Competence

Contracting authorities can impose requirements ensuring that economic operators possess environmental technical competence necessary to fulfil the contract (Article 58(4)), e.g. have access to the technical equipment for environmental protection.

Environmental Management Systems or Standards

Public purchasers can require economic operators to demonstrate that they comply with environmental management systems or standards (Article 62(2)) which are relevant to the performance of contract in question (for service and works contracts only) and which certify that companies operate to certain levels of environmental standards and awareness. An organisation running an environmental management system may request certification under one of the two main environmental management systems in use in the EU: the "Eco-management and audit scheme" (EMAS) or the European/international standard on environmental management systems (EN/ ISO 14001) (European Commission 2011). Companies may also be able to demonstrate that they apply equivalent environmental management measures, even without certification (European Commission 2011).

With regard to environmental management systems, the Article 37(2) of the LPP states: "Should contracting authorities, in public works contracts and public service contracts require the production of certificates issued by independent bodies attesting compliance of the supplier with certain environmental management standards, they must refer in the contract documents to the EU Community Eco-Management and Audit Scheme (EMAS) or to environmental management standards based on the relevant European or international standards certified by bodies conforming to EU law or the relevant European or international standards concerning certification. The contracting authorities shall recognise equivalent certificates from bodies established in other Member States. They shall also accept other evidence of equivalent environmental management measures from the suppliers" (Seimas of the republic of Lithuania 1996).

Contract Award Criteria

The application of the contract award criteria based on environmental characteristics is another possible choice (Article 67(2)a). Award criteria enable the purchasing authority to score each tender on the basis of its satisfaction of different combinations of criteria, including those related with the environmental protection. The additional points can be awarded to the candidates that go beyond minimum requirements thereby stimulating greater sustainability. It is important to ensure, however, that the assessment which has taken place at selection stage is not duplicated at the award stage. In addition, the choice of environmental qualification and award criteria must respect the single market principles which serve to uphold competition: equal treatment, transparency, non-discrimination, proportionality, and mutual recognition (Lundberg and Marklund 2013).

It is also important to note that the pre-procurement consultation can be very useful when formulating more appropriate and ambitious award criteria related to environmental objectives. However, as it was mentioned earlier, contracting authorities are discouraged from pre-procurement consultation because of the strict legislation regulating the preferential treatment of the suppliers. Economic operators, in turn, is uncertain whether they could take part in the further procurement process if involved in the pre-procurement consultation.

Life-Cycle Costing

Contracting authorities can apply the life-cycle costing to measure and compare costs including those imputed to environmental externalities [Article 68(1)b, (3)].

Contract Performance Clauses

Environmental conditions for the performance of a public contracts can be set up provided that they are linked to the subject-matter of the contract and are indicated in the call for competition or in the procurement documents (Article 70) so as to ensure the equal treatment of tenderers and transparency (European Court of justice 2004, paras. 108–121). Unlike contract award criteria which are the basis for a comparative assessment of the quality of tenders, contract performance conditions constitute fixed objective requirements that have no impact on the assessment of tenders (Recital (104) of Directive 2014/24/EU). However, having environmental contract performance clauses is only effective if compliance with them is regularly and impartially monitored. Because of the lack of human resources, also the difficulties of verifying compliance with all requirements it is a rare practice in Lithuania.

Contracting authorities in the EEA Member States use technical specifications most often (66%) as the tender section for GPP, followed by the award criteria (45%) and the requirements for technical and/or professional ability (44%)

(Kahlenbom et al. 2010). Excluding the GPP leaders (Denmark, the Netherlands, Norway, Sweden and the UK) which use most of the sections for including "green" requirements, the majority of the Member States (including Lithuania) mainly introduce the GPP requirements in the technical specifications (67%). Those contracting authorities that "use only technical specifications do so because the minimum GPP criteria have been predefined, and they are sure they are legally valid." (Kahlenbom et al. 2010).

As concerns the predefined GPP criteria, the European Commission has developed core and comprehensive criteria for a series of product and service groups⁷ which are regularly reviewed and updated. They are designed to be inserted directly into the public tender documents and thereby help procuring authorities to "reach a good balance between environmental performance, cost considerations, market availability and ease of verification" (European Commission, Undated). As it was indicated in the study on strategic use of the public procurement, Eastern European Member States, such as Lithuania, Latvia, Estonia, explicitly name the EC GPP criteria as a basis for their own GPP criteria (Kahlenbom et al. 2010).

However, although the provisions on environmental matters were included in the new directives, these are almost all voluntary (Client Earth 2011) and their application both in law and practice is all left up to national legislators of the Member States or individual contracting authorities. It is important to note that the provisions of the Directive are applicable to procurement procedures, whose value is estimated to be not less than the thresholds laid down in the Article 4 of the Directive. In cases when the value of the contracts is below the thresholds indicated in the Directive, national procurement rules have to fill the gap. In Lithuanina, the LPP and the rules of simplified procurement procedures which must be prepared by each contracting authority play the main role in this regard. All in all, all the national rules have to observe the fundamental principles embedded in the Treaties (TFEU and TEU).

European Court of Justice

The European Court of Justice in its jurisprudence clarified that a contracting authority can include horizontal procurement criteria promoting environmental policy objectives, even if these criteria do not contribute to the direct economic advantage of the contracting authority (Client Earth 2011), provided that the criteria are linked to the subject-matter of the contract, comply with the general requirements of equal treatment, transparency and proportionality, are expressly mentioned in the contract documents or the tender notice and do not confer an unrestricted freedom of choice on the authority (European Court of Justice 2002, *Case C-513/99*, para. 64). The fact that such a criterion does not necessarily serve to

⁷The complete list of criteria is available at http://ec.europa.eu/environment/gpp/eu_gpp_criteria_ en.htm.

achieve the functional objective pursued is irrelevant (European Court of Justice 2003, *Case C-448/01*, para. 53). In addition, the Court has underscored the contracting authorities' discretion to define the criteria for determining the most economically advantageous tender and to determine the weighting of such criteria (European Court of Justice 2003, *Case C-448/01*, para. 39).

Unfortunately, there is no Lithuanian case law governing the introduction of the environmental requirements into the public procurement procedures.

In conclusion, both Lithuanian national and EU law regulating the public procurement provide a number of opportunities for the contracting authorities to include environmental considerations into the procurement procedures. Namely, if a contracting authority wishes to include environmental requirements into the procurement process, it can do so by, for example, incorporating such requirements into the technical specifications, by using the eco-labels, excluding on the ground of non-compliance with environmental obligations or by setting up environmental conditions for the performance of a public contract. In such a way, primary procurement objectives can be balanced with the protection of the environment. However, the environmental provisions are almost all voluntary. Therefore, the extent and frequency to which these provisions will be implemented depend on the governments of the Member States or individual contracting authorities.

Conclusions

The world is paying a lot of attention to sustainability issues, especially on the environment. Public authorities spend significant amount of public funds every year for acquiring products, services or works which they need for the implementation of their functions. It is already widely recognised that public authorities have to implement not only functional but also horizontal objectives, such as the protection of environment. Therefore, the contracting authorities should not contribute to the degradation of the environment and thus be a part of the problem, but, on the contrary, be a part of the solution by making the environmentally-friendly procurement decisions.

The LPP provides that the purchasing authorities can award a public contract on the basis of either the criterion of the lowest price or the criterion of the MEAT. According to the statistics provided by the Public Procurement Office of the Republic of Lithuania, the value of the contracts where the tenders were evaluated on the LPC amounted to approximately 90% of the total value of all public procurements. These figures emphasises that Lithuanian contracting authorities believes that the use of this criterion results in a more efficient tender for a public contract. On the other hand, many institutions (35% of municipalities, 38% of ministries and 50% of other contracting authorities) admit that they do not always achieve the expected result if the LPC is applied. What is more, purchases based solely on the LPC often result in significant negative externalities, including environmental degradation. The criterion of the MEAT, on the contractry, induces the inclusion of the environmental considerations into the procurement process and therefore fosters the sustainable consumption and production. However, Lithuanian public authorities rarely apply this criterion (MEAT) because it is considered to be more complex and time-consuming. Furthermore, the contracting authorities indicate that it is difficult to define the objective criteria for the evaluation of tenders. Consequently, the use of the LPC as a major criterion for awarding the public contracts results in decreasing number and value of purchases which include environmental requirements into the tendering process. This, in turn, stimulates the acquisition of products with the negative environmental impact.

Although the Government of the Republic of Lithuania indicated that 25% by 2013 and 30% by 2014 of procurement by value and number should be "green", the number of GPP as compared to the overall number of the public procurement (excluding the low-value contracts) was equal to 7% in 2013 and 5.7% in 2014. The value of GPP as compared to the overall value of the public procurement (excluding the low-value contracts) was 19.9% in 2013 and 8.6% in 2014. The volume to which the GPP is practised demonstrates the commitment of the contracting authority to consider and minimise the environmental consequences of its activities. Furthermore, it was determined that the "greener" the public procurement is, the more financial cost can be saved by the contracting authorities.

The decrease of green procurement in value and number in Lithuania can be influenced by some existing barriers and concerns, such as the perception that GPP costs more, lack of consultation with suppliers, lack of support from senior management, also the lack of knowledge and practical experience.

On the other hand, the existing situation can be improved and the primary procurement objective can be balanced with the societal goal of protecting the environment by including environmental considerations into the different stages of procurement. The EU and Lithuanian national law provide that if a contracting authority wishes to include environmental requirements, it has a choice of approaches: technical specifications; eco-labels; exclusion on the ground of non-compliance with environmental legislation; environmental technical competence; environmental management systems or standards; contract award criteria and contract performance clauses.

According to the study conducted in 2010, the contracting authorities in the EEA Member States, including Lithuania, use technical specifications more often for the purpose of including environmental requirements in procurement (Kahlenbom, Moser, Frijdal, and Essig). This is so because the minimum GPP criteria are predefined by the European Commission and therefore purchasing authorities are sure they are legally valid.

However, although provisions on environmental matters are included in the EU as well as Lithuanian legislation concerning public procurement, these are almost all voluntary and their application is left up to national legislators of the Member States or individual contracting authorities.

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Chapter 3 The Social Value in Social Clauses: Methods of Measuring and Evaluation in Social Procurement

Deirdre Halloran

Introduction

Public procurement can be defined, "as the supply chain system for the acquisition of all necessary goods, works and services by the state and its organs when acting in pursuit of public interest" (Bovis 2005a, b, p. 14). Adapting Trepte's abstracted procurement regulatory model (Trepte 2004) provides a conceptual framework for examining the underlying objectives of procurement regulation. Trepte divides public procurement regulatory goals into three categories: economic, political and international and finds that the interrelationship between these different objectives gives rise to tensions between the different systems. It is the economic and political categories that provide a framework in this paper for an examination of the tensions that are evident in the debate regarding the legitimacy and effectiveness of using the award of public contracts to pursue horizontal objectives.¹ This paper examines these tensions in order to clarify how the seemingly differing approaches of the economic and political models can coexist without detracting from the legitimacy of any horizontal policy activity. This paper proposes that there is an overemphasis on economic goals and that focusing initially on creating good outputs will be critical to the development and widespread use of Social Value measurement tools.

¹The use of public procurement as a policy objective is a long-standing and much analyzed phenomenon, which covers a range of policy areas such as support for fair labor conditions, regional development and the provision of economic opportunities for disadvantaged groups. Such objectives have been referred to as "secondary" objectives, in contrast with procurement's so-called "primary" objective of obtaining goods, works or services on the best terms. This paper uses the term horizontal objectives as advocated by Arrowsmith to highlight that these policies should in fact be considered equal.

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This chapter first examines the concept of social procurement and the legal and policy background to social clauses in the UK and Ireland are outlined. Using Trepte's abstracted procurement regulatory model (2004) as a conceptual framework, the regulation of public procurement is examined together with the pursuit of horizontal policies by means of public procurement. Next, the methods of measuring and articulating Social Value in social procurement are surveyed, along with definitions of Social Value and social evaluation concepts. An overview of evaluation frameworks is presented, focusing on social value frameworks for social procurement. Examples of evaluating social value are shown and a 2015 report by the University of Glasgow for the Scottish Government is relied on to demonstrate the need for a more comprehensive evidence base to be developed around the longer-term impact of social clauses. The paper concludes by calling for: further research into the validity of the concept of Social Value; greater clarity over vocabulary and concepts related to Social Value; and the categorization and assessment of Social Value measurement frameworks in the field of social procurement and social clauses.

Social Procurement

The concept of social procurement can be traced to the nineteenth century when governments in the UK, France and the US started to use their purchasing power to address the under-representation of marginalized groups in the workforce (McCrudden 2004). There has been a recent resurgence in interest in social procurement, catalyzed by the importance the EU has placed on public spending that achieves social and environmental goals; the 2014 Procurement Directives; and new national legislation such as the UK's Public Services (Social Value) Act 2012 and the Procurement Reform (Scotland) Act 2014.

The three new Procurement Directives were adopted by the European Parliament and the Council in the Spring of 2014 and Member States are required to implement/transpose them into national legislation by 17 April 2016.² Through the 2014 Directives, it can be said that the EU has strengthened the ability of Contracting Authorities to provide Social Value through procurement processes and have reinforced the legitimacy and importance of doing so. The Recital to the 2014 Directive states that the EU seeks, "a better integration of social and environmental consideration in the procurement procedures". Furthermore, buyers "should be allowed to use award criteria or contract performance conditions relating to the works, supplies or services, in all aspects and at any stage of their life cycle, even

²EU Public Procurement Directive 2014/24/EU on Public Procurement, Repeals Directive 2004/18/EC; Utilities Directive 2014/25/EU on Procurement by Entities Operating in The Water, Energy, Transport and Postal Services Sectors, Repeals Directive 2004/17/EC and the Concessions Directive 2014/23/EU on the Award of Concession Contracts, Which Does Not Directly Replace any Previous Directive. Paris, France: RU.

where such factors do not form part of their material substance." It also notes that, "award criteria are intended to assess the value of the tender from the point of view of the Contracting Authority," emphasizing that it is the procurer who is to choose what it identifies as being of value.

The introduction of the UK Public Services Social Value Act (2012) was an importance advance for social procurement, as it requires public authorities to have regard to economic, social and environmental well-being in connection with public services contracts. Meanwhile in Scotland, the Procurement Reform (Scotland) Bill 2014 also creates obligations on Scottish public sector contracting authorities to consider how it can, throughout the procurement process, "improve the economic, social, and environmental wellbeing of the authority's area". This has created a "new sustainable procurement duty", on contracting authorities to consider the social impact of their purchasing requirements.

Background of Social Clauses³ in the UK and Ireland: Law and Policy

A social clause (also known as a community benefit clause) is a legal requirement within a procurement contract, which stipulates that the contract must provide added Social Value (Halloran 2014). Social clauses are a mechanism for implementing horizontal policies in procurement, by creating a contractual requirement laid down by the procuring entity that all tenderers must meet. It can also be part of the award criteria that gives credit to the tenderer for the environmental or social benefits of their tenders. These contractual requirements may relate to the contract, or they may go beyond it.

If related to the contract, they may relate to consumption effects (such as pollution when a product is used); production or delivery effects (pollution in producing a product); disposal effects (such as whether it can be recycled); or workforce matters (such as the terms and conditions of workers on the contract). When unrelated to the contact they may relate to conditions intended to promote compliance with standards or requirements that are not limited to the contract work. EU law differentiates between contractual requirements that pertain to performance of the contract and are therefore permitted and all other types, which are not. However, there is some debate about how to distinguish between both types, including how to define requirements concerning the manner in which products are produced (Arrowsmith and Kunzlik 2009).

In 2002, a report by Richard Macfarlane and Mark Cook, "Achieving Community Benefits through Contracts: law, policy and practice", for the Roundtree Foundation clarified what was allowed in a procurement contract in relation to community/social benefit in the UK (Macfarlane and Cook 2002). It

³Community benefit clauses are the same as social clauses.

concluded that contrary to common perceptions, the inclusion of community/social benefits in procurement contracts can be permissible under UK public procurement policy and EU law. The report detailed how Community Benefit Clauses [CBCs] could appear in the contract's core conditions, providing they relate to the subject of the contract, and could include anything from equal opportunities and support for the disadvantaged to community initiatives and environmental targets. The approach of Richard Macfarlane and Mark Cook to CBC's has since been widely adopted in the U.K.⁴

According to Macfarlane, in the UK government and England, the policy focus at present is on 'green procurement' rather than social/community benefits, a weakness, he finds, that needs to be addressed. One advance is the introduction of the Public Services (Social Value) Act 2012 in the UK. The policy position and the commitment to using procurement to add Social Value are stronger in Scotland and Wales than in England, and there is experience of incorporating targeted recruitment and training requirements in public contracts, including government contracts. Targeted Recruitment & Training (TRT) is a type of social clause that allows contracting authorities to specify in the contract that labor used must be sourced from particular groups. TRT clauses are used to target the long term unemployed and young people but can also be used to target other vulnerable groups. In Wales, the Procurement Policy Statement includes community benefits as one of nine 'policy principles', which the Welsh public sector expected to 'apply community benefits to all public sector procurements where such benefits can be realized' and report outcomes to the Welsh Government for all contracts over £2 million. The Welsh Government's community benefits policy won the UK Civil Service Awards' Procurement Award in 2012, which recognizes good practice in public procurement (MacFarlane 2012). In Scotland, community benefit clauses have been a key strand of procurement policy and practice since 2008 (Scottish Government 2008). The Procurement Reform (Scotland) Act 2014, which received Royal Assent in June 2014, gives the expectation that CBCs will be used wherever there is an appropriate legal basis.

In Northern Ireland's "Programme for Government 2011–2015," a commitment was made to include social clauses⁵ in all public procurement contracts (Northern Ireland Executive 2012). Local councils in Northern Ireland are also encouraged to consider the inclusion of social clauses in their contracts if it represents "best value for money" and complies with the TFEU and with European Public Procurement legislation.

⁴A report credits the authors with triggering the "recent wave of interest in the potential to deliver wider social benefits through procurement." (Haringey SME Procurement Pilot 2005, 4).

⁵This is the term used by the Northern Ireland Assembly defined as: "requirements within contracts or the procurement process which allow the contract to provide added Social Value through fulfilling a particular social aim. For example, a social clause in a public contract could prioritize the need to train or give jobs to the long term unemployed in the community as part of the contracting workforce'. This definition is from www.cabinetoffice.gov.uk/third_sector/public_ services/social_clauses.aspx and as set out in the Northern Ireland Assembly (2009).

In Ireland, a Government pilot project using social clauses is currently underway (Irish Department of Public Expenditure and Reform 2014).⁶ Concurrently there are two private member Bills progressing through the Oireachtas (Irish Parliament) on social clauses, the Social Clauses in Public Bill 2013 and the Public Services and Procurement (Social Value) Bill (2015). In local government, Dublin City Council passed a motion in 2015 to allow for the inclusion of social procurement clauses in council contracts and is working on a social clause in Construction Works Policy. The New National Children's Hospital has confirmed that it will be one of the first organizations in the Ireland to include social clauses in the construction contracts for the build phase of the project (Ernst and Young 2015).

Conceptual Theory—Public Procurement Regulation

Bovis (2012) traces the intellectual paternity of public procurement regulation to the neoclassical economic approach to market integration, with a consistent dilution of the rigidity of the neo-classical influence with policy considerations. The conceptual framework that underlies this paper is a work in progress and takes as its starting point the work of Trepte. Following Trepte (2004), we can say that the regulation of procurement markets can be divided into political, economic and international objectives, which can be used as three abstracted regulatory models. Firstly, the economic model referring to the classic free market theory in which competition fuels the economy and produces economic efficiency. This model clearly assumes fair competition and reacts to market failures. Secondly, the political model reflecting the use by governments of procurement as a policy tool to achieve social or political goals. This quest by the government to use the power of purchasing regulation to further social policies may sacrifice economic efficiency and alter competition, with the aim of adding Social Value. Lastly, the international model acknowledging that governments bind themselves to a number of international trade obligations such as international treaties and trade agreements. Much like the political model, many of the government's purchasing decisions will be influenced by the desire to foster a competitive advantage in the global economy. Therefore, regulation of public procurement takes on the added dimension of protecting, fostering and proactively creating a competitive advantage for domestic sellers and buyers, both public and private (Trepte 2004). Trepte finds that it is the interrelationship between these different models and the extent to which they are complementary or in conflict which gives rise to tensions between the different

⁶The Irish Department of Public Expenditure and Reform (2014) Minister for Public Expenditure and Reform, Mr. Brendan Howlin, TD, announces establishment of Social Clauses Project Group Available at http://www.per.gov.ie/minister-for-public-expenditure-and-reform-mr-brendan-howlin-td-announces-establishment-of-social-clauses-project-group/. [Retrieved January 10, 2016].



Fig. 3.1 Trepte's public procurement regulatory theory

systems: a tension which is evident in the area of social procurement and Social Value. See Fig. 3.1.

The use of public procurement as a policy tool is not new and has covered a range of policy areas including support for fair labor conditions, regional development and the provision of economic opportunities for disadvantaged groups (Arrowsmith et al. 2000; McCrudden 2007). Such policies have been referred to as "secondary" in contrast with procurement's so-called "primary" objective of obtaining goods, works or services on the best terms (Priess and Pitschas 2000). However, this paper will use the term "horizontal" in agreement with Arrowsmith and Kunzlick's view that it is sufficiently generic to embrace all types of policies without the implication that the policies are irregular or ancillary to commercial aspects (Arrowmith and Kunzlik 2009, p. 14–15). The use of horizontal considerations in procurement seeks to leverage government spending power to promote socially and environmentally responsible practices. In the context of the EU internal market and WTO Government Procurement Agreement, social and environmental objectives must be reconciled with the principles of open competition, transparency and equal treatment.

There is an ongoing debate regarding both the legitimacy and efficiency of using the award of public contracts to pursue horizontal objectives (Semple 2012) reflecting the conflict predicted by Trepte's economic and political models. On the

matter of legitimacy, those against horizontal considerations argue that the dominating aim of EU procurement regulation is to advance competition and to achieve 'value for money'. The most comprehensive and systematic statement of these economic arguments has been made by Graells (2015). While his argument is based in the belief of a neoliberal ideology,⁷ as Kunzlick (2013a) points out, horizontal considerations are currently encouraged because of an equally neoliberal preference to use public procurement as a market-based instrument to improve the EU's international competitiveness. Kunzlick also puts forward that the efficiency/value for money norms are not legally justified as the concept of 'competition' to which EU public procurement regulation refers is not the neoliberal 'efficiency' concept, but a concept based upon economic freedom that is concerned with competitive equality and the structure of competition in public contracts markets.

An added layer is added by Arrowsmith who shows that although the pursuit of 'value for money' is the central goal of the domestic regulation of public procurement, the legal bases on which EU public procurement legislation is founded does not permit it to mandate the pursuit of 'value for money' as a matter of European obligation (Arrowsmith 2009). In the context of social procurement, 'value for money' is a complex, multi-faceted and value-driven concept that does not equate to neoliberal notions of 'efficiency' as it encompasses not only the value to be achieved by meeting the purchaser's functional need but also wider benefits to society.

Thus, the pursuit of horizontal policies by means of public procurement intended to achieve social policy goals, may be considered to provide true value for taxpayers' money, even though they might cost more than equivalent procurements that do not serve such horizontal policies. This means that while pursuing such political objectives may have a knock-on effect on economic efficiency, it can still be an effective policy method of delivering social benefits. As these different procurement objectives are not normatively recognized, this incompatibility is not generally accepted. The cost of Social Value, the argument goes, outweighs whatever purported good it is supposed to achieve.⁸ Therefore, finding effective methods of measuring and articulating Social Value has, in a sense become the Holy Grail of social procurement, aiming to provide a definitive answer as to whether it is, in economic terms, legitimacy and efficiency to use public procurement to achieve social and environmental goals.

⁷Neoliberalism represents a set of ideas that caught on from the mid to late 1970s, and are famously associated with the economic policies introduced by Margaret Thatcher in the United Kingdom and Ronald Reagan in the United States following their elections in 1979 and 1981. The 'neo' part of neoliberalism indicates that there is something new about it, suggesting that it is an updated version of older ideas about 'liberal economics' which has long argued that markets should be free from intervention by the state.

⁸For extended discussion and further references to this academic debate, see Graells (2015). Public Procurement and the EU Competition Rules. Oxford, UK: Hart (2nd ed., p. 101–04).

Social Value and Social Procurement, Auditing, Measurement and Valuation

The core principle of social procurement is to create Social Value through purchasing. However, there is a dearth of empirical evidence on the outcomes and impact of social procurement at the time of writing of this paper. Assessing the evidence on how social procurement produces Social Value requires defining what is Social Value and then finding ways to determine how Social Value has been measured. There is little evidence in the literature of analysis of the Social Value obtained with the original strategic procurement objectives, while academic case studies tend to focus on generalized assumptions by the authors of what constitutes social value, rather than examining the types of value produced in relation to stated aims. Academic research in this area is still in its infancy, with studies dominated by the grey literature of non-profit organizations, consultancies, research organizations and third sector funding bodies.⁹

As detailed in Power's "The Audit Society", auditing, monitoring and evaluation has become a universal reality in the corporate and public sector, influenced by a number of factors such as the advent of New Public Management (NPM)¹⁰ and the growing requirements for increased transparency in Government activity (Power 2014). Third Sector Organizations [TSOs] in receipt of government income, report increased pressure to demonstrate their achievements due to the development of more intensive performance regimes in the public sector and shifts towards outcomes-based commissioning (Ellis and Gregory 2008; Harlock 2013).

While the measurement and definition of economic value is relatively straightforward, this is not true of Social Value. What can be said is that Social Value broadly refers to soft, intangible outcomes, and to wider outputs, that include the effect an activity has on the wider communities and the environment, and not only on the individual. Social Value is often produced by the indirect impact of activities, such as services delivered by volunteers recruited from disadvantaged groups generating skills development, and social inclusion for those delivering a service as well as for those for whom a service is intended (Arvidson et al. 2013). Furthermore, the definition and measurement of Social Value is unique to every organization, depending on the services and products being produced and on the community stakeholders affected.

⁹An exception to this is Erridge's paper on the concept of 'public value' as a guide to public preferences in relation to services and projects delivered by public procurement, and an analytical framework has been proposed for development and testing as a means of assessing procurement initiatives against a framework of public procurement values. This was used to analyze the Unemployment Pilot Project in Northern Ireland (Erridge 2007); Public procurement, public value and the Northern Ireland unemployment pilot project. Public Administration 85(4), pp. 1023–1043.

¹⁰Interestingly, countries where NPM has penetrated furthest i.e. the USA, UK, Canada, Australia and New Zealand, are countries where the influence of neo-liberalism has been particularly significant (Belfiore 2004).

According to Barraket, the prevailing assumption about Social Value is that it is measurable (Barraket et al. 2015). But, is it? Does Social Value exist as an objective thing? Is Social Value inherently subjective? If so, it follows that the definition relates to what the definer think matter most. So how do you develop mechanisms by which different types of Social Value can be comparatively evaluated? Analysis of the literature finds that Social Value measurement is currently diverse (Wood and Leighton 2005), 'fragmented' (KPMG International 2014), 'not yet fully developed' (The UK Cabinet Office 2015) and requiring an industry standard (Tomlins 2015). Many of studies in this field are based on the "blended value proposition", as coined by Emerson (2003); a conceptual framework for value creation in which non-profit organizations, businesses, and investments are evaluated based on their ability to generate a blend of financial, social, and environmental value, sometimes used interchangeably with the term "triple bottom line".

Defining Evaluation Concepts

According to the UK's Cabinet office, to measure social value, one must be able to measure the "impact" of the Social Value intervention (The UK Cabinet Office 2015). In the literature, there appears to be an overlapping in the use of the terms 'social impact' and 'social value' (Cox et al. 2012), such that the social impact results of a project are often used as commensurate with its social value. However, there is an important distinction between these two separate but connected concepts, as in the process of evaluating the impact, underlying assumptions as to the value of the change at a societal level are made.

There is a lack of consensus on the definition of social impact. Variations are found between the different academic fields of social science, business, management accounting and strategic management (Maas and Liket 2011). It is described as a combination of resources, inputs, processes, or policies that occur as a result of the real, implied, or imagined presence or actions of individuals in achieving their desired outcomes (Emerson et al. 2000; Latané 1981; Reisman and Giennap 2004). A useful example by Clark et al. (2004) is based on the Impact Value Chain (Fig. 3.2): "by impact we mean the portion of the total outcome that happened as a result of the activity of an organization, above and beyond what would have happened anyway".

Inputs refers to all the resources that needed to accomplish the alignment goal. Activities are the things that are done with inputs in order to achieve its mission. Outputs of a project are defined as the direct result of the activity that can be measure or assess directly. Outcomes are the wider benefits or changes for the intended beneficiaries. They tend to be less tangible and therefore less countable than outputs such as increasing employability and improving living wages. Impact refers to the long term change or difference that the activity can create, which can be measured to assess how much impact has occurred. Social value in this model refers to the value, financialised or not, attributed to that change to individuals, society,



Fig. 3.2 Impact value chain [Note Adapted from Clark et al. (2004)]

the economy and the environment, often relative to its cost (Wood and Leighton 2010). Hendricks et al. (2008), emphasizing the need to distinguish between measurement of the outcomes and its impact, highlights that simply aggregating data does not yield data on social impact. Conclusions regarding impact rely on assumptions, or theories of change and can be influenced by the perspective or position of the particular actor making the assessment. A recurrent debate about frameworks on evaluation and impact assessment is they reflect values and beliefs about what is 'good' or 'bad', 'success' or 'failure', therefore relying on interpretations, and lacking objectivity (Arvidson 2009).

While Social Value has no single authoritative definition (Mulgan 2010; Wood and Leighton 2010), it has become a mainstream organizational issue with such key groups as the government, foundations, social sector organizations, impact-driven businesses and impact investors interested in its measurement (The Social Impact Investment Taskforce 2012). The UK Cabinet Office (2012) describes it as the positive social, environmental and economic impact of an activity on stakeholders over and above what would have happened anyway, taking into account the negative impact of an activity. Enterprise UK define Social Value as 'the additional benefit to the community from a commissioning/procurement process over and above the direct purchasing of goods, services and outcome' (Cook and Monk 2012).

In the UK Public Services (Social Value) Act 2012, Social Value is not prescriptively defined but rather articulated in very general terms as the collective benefit to the community of the awarding of a public sector contract. Such benefits refer to the wider added value that may accrue to communities through the ways that services are procured and delivered. Emphasis on Social Value is purported to encourage public commissioners and service planners to consider the wider multiplier effects and benefits of service purchasing beyond the price value that accrue through the procurement process itself (Harlock 2014). 'Social value' as a concept has additional implications beyond those of measuring the outcomes of a particular project or organization. In theory, it is an attempt to measure what is 'valued', and therefore, prioritized by different stakeholders. It also implies that an organization needs to look at the full extent of its social, environmental and economic impacts (intended and unintended, positive or negative).

Evaluation

Broadly speaking, evaluations should offer a systematic assessment of the results of an intervention, based on a logical collection of data. The preference for evaluations is often based on a belief that they will provide objective evidence of what works. Arvidson and Kara's study on the evaluation of Social Value found that the choice of an evaluation framework is often based on pragmatic considerations such as cost, skills and the availability of data, masking the inherent value-bases of evaluations (Arvidson et al. 2013). Therefore the evaluation framework reflects 'a normative belief in the superiority of particular approaches to performance measurement and evaluation' and can be tailored to highlight different policy priorities (Hall 2014). Arvidson and Kara's thesis is that the choice of an evaluation framework is a political one-reflecting a policy that prioritizes its own agenda. Evaluations can simultaneously assess achievements and promote both political and methodological values. An evaluation that is aimed at promoting equity in the distribution of health will have a different focus than one that prioritizes efficiency in service delivery. The language of evaluation reports can advance the interest of the tax-payer (value for money) or that of the underprivileged (social inclusion). This thesis may have particular value in examining the choice of the evaluation frameworks utilized by the UK and Scottish government to assess their social value.

Frameworks to Measure Social Value

There are a large number of diverse standards and frameworks that have been developed to measure social value, mainly intended for third sector and social enterprises (Bull et al. 2012). In 2014, LUMSA university developed a hierarchical cluster analysis which mapped 76 of the most commonly used tools to group them in macro-categories, to aid evaluation (Grieco et al. 2015). Metcalf for TSCR (2013) provides an overview of some guides that have sought to categorize impact measurement tools and assist in navigating the wide array of available options. This paper, while seeking to clarify this area, concentrates on a few of the main techniques that are being used in the area of social procurement.

Economic or Financial Assessments

Social Return on Investment [SROI] has been the most dominant of the measurement approaches across a number of countries, and has influenced the development of a number of other alternative methodologies (Tuan 2008). A meta-analysis of social impact measurement methods utilized between 2002 and 2012, undertaken by Krlev et al. (2013) found that SROI was one of the most widely utilized and discussed methods in the field. With its origins in the work of the Roberts Enterprise Development Fund in the United States and later popularized through the New Economics Foundation and SROI network in the UK, SROI developed from traditional cost-benefit analysis and social accounting. It applies accounting principles to a stakeholder- informed approach using financial proxies to determine a ratio value for the (financial) costs versus the (monetized social) value created by particular interventions (Luke et al. 2013).

Despite its popularity, in studies of the use of SROI, researchers have concluded that standardization of the application of financial proxies was needed for the tool to be useful (Arvidson et al. 2014). Other negatives are the complex administrative undertakings which carry considerable cost implications—both for investment in skills and training to employ the SROI methodology, as well as time and administration resources (Arvidson et al. 2013). More fundamentally, the biggest concerns were whether the nature of data and evidence utilized in SROI could be aggregated meaningfully to produce an accurate cost measure, and whether it is even possible to put an accurate monetarised value on all interventions and outcomes.

Disturbingly, it was found that the most underdeveloped aspect of the application of SROI was in the measurement of Social Value where the social is treated "...as a residual category that lacks definitional criteria ... and is negatively affected by the urge of monetization" (Krlev at al. 2013). Despite these finding, the Scottish Government in 2010 developed its own framework to assess Social Return on Investment and in 2012 commissioned a report (Scottish Government 2012) to examine the views of public sector commissioners and procurement professionals in Scotland about sustainable procurement, Social Value and the SROI approach. The findings show that of those that were familiar with the concept, the most commonly held view was that SROI was 'fairly' helpful (49% of respondents). Many also held a neutral view on the issue (38%), perhaps reflecting the lack of full knowledge of the framework.

Social Earnings Ratio (SER)

As reported by the Centre for Citizenship, Enterprise and Governance 2014 report "Social Value in Birmingham", SER is the fastest growing Social Value measurement metric currently being adopted in the field of Social Value measurement. Developed by the Centre for Citizenship, Enterprise and Governance (CCEG) and highlighted in Lord Young's Social Value Act report in February 2015 as a quick, low cost, high volume way to assess social impact providing a single metric. The Social Earnings Ratio (S/E) is the corollary to the Price Earnings Ratio (P/E) used universally to measure financial value. The metric was commissioned in 2011 by senior UK government strategic advisors to develop a single number metric. In February 2013, it was used to evaluate the first contract regulated by the Social Value Act 2012. Despite the approval of the metric by the Cabinet Office, no outside studies have been done on the use of SER so it is difficult to analyze its usefulness and effectiveness.

Local Multiplier 3 (LM3)

LM3 was created by the New Economic Forum in 2002 to make visible the link between social impact and economic benefits in the context of supply chains, by creating a metric called LM3, or the Local Multiplier 3. It maps an organization's source of income, how this is spent, and then respent within the local area. LM3 has been used to influence the public sector to consider the impact of its procurement decisions, and to highlight where an organization can improve its impact (Arvidson and Kara 2014). Sacks (2002) The Money Trail, details the results of two pilot projects in North Norfolk District Council (NNDC) and Knowsley Metropolitan Borough Council (KMBC), to evaluate the impact of construction contracts on their respective local economies, evaluating local and nonlocal contracts.

Well-Being and Satisfaction Measures

Well-being or satisfaction measures try to summaries social impact in terms of how happy or satisfied people feel. An increasing bank of financial proxies for wellbeing is developing. The Wellbeing Valuation assessment tool, was inspired by the work of Daniel Fujiwara at SImetrica and developed by the Housing Associations Charitable Trust (HACT 2015). This tool aims to address the challenges of placing a monetary value on non-market qualities such as 'confidence levels' and 'sense of belonging to the neighborhood' by using large data sets from national surveys. To do this, the results of large national surveys are analyzed to isolate the effect of a particular factor on a person's wellbeing.¹¹ Analysis of income data reveals the equivalent amount of money needed to increase someone's wellbeing by the same amount. HACT and SImetrica have developed 53 outcomes based on the Wellbeing Valuation approach. The values were established with the housing sector in mind and focus on outcomes around employment, financial inclusion, environment, health, and young people. In terms of procurement activity, HACT states that this approach enables the comparison of the Social Value of contracts bid for and delivered by different organizations on equal terms. The Social ValueBank, created by HACT is, according to them, the largest bank of methodologically consistent and robust social values currently available. The values can provide a basic

¹¹NEF (2002. The Money Trail. [On-line]. Available at: http://www.neweconomics.org/ publications/entry/the-money-trail. Accessed February 3, 2015.

assessment of social impact, provide evidence of value for money, and compare the impact of different programmes.¹² The approach is recognized in the HM Treasury Green Book as a method for establishing the Social Value of goods and services that are not traded in the market. Additionally, the recent Social Value Act Review references Wellbeing Valuation and HACT's associated tools as examples of approaches to generating financial proxies to measure wellbeing (HACT 2015). Despite these nods of approval, no outside research report has been done on the tools usefulness and effectiveness and so it is difficult to assess this tool.

Natural or Sector-Specific Measures

An opportunity exists for specific sectors to create a bespoke service to compare results for people who have been through an intervention, to results for a comparator cohort of people (Cabinet Office 2015). These might include, for example: jobs created or sustained for employment; educational attainment for education; or reduced crime, offending, or reoffending for criminal justice and rehabilitation. The UK Ministry of Justice has developed the Justice Data Lab pilot, which gives organizations working with offenders' access to central reoffending data to help organizations assess the impact of their work on reducing reoffending. It also helps develop a collaborative understanding of effective rehabilitation.¹³

Review of Findings

According to the Social Enterprise UK's (SEUK's) review of the UK's Public Services (Social Value) Act 2012, the uptake of social procurement in leading governments and firms is "encouraging" but there remains, nonetheless, a large number of organizations that have not yet adopted it (Social Enterprise UK 2014). A review by Lord Young on the Act found that despite its growing awareness amongst public bodies, the incorporation of Social Value in actual procurements is low due to such difficulties as how to define social value; how to apply Social Value within a legal framework and how to measure and quantify social outcomes (Cabinet Office 2015). The report recommends improving understanding of how to define social value, how and when to include it during the procurement process and

¹²The values are calculated through statistical analysis of four large national datasets that contain data on wellbeing and life circumstances: British Household Panel Survey (BHPS), Understanding Society, The Crime Survey for England and Wales, and The Taking Part Survey.

¹³Ministry of Justice (2014). Accessing the Justice Data Lab Service. [On-line]. Available at https://www.gov.uk/government/publications/justice-data-lab Accessed December 2, 2015.

how to apply Social Value within a legal framework and procurement rules. The report further recommends measures to strengthen the framework for measuring and evaluating Social Value and developed a framework and principles for the current state of Social Value measurement.

The Cabinet Office is currently working with Inspiring Impact, a UK-wide collaborative programme with the voluntary sector on impact measurement, to see whether an agreed Social Value measurement framework can be established for England and Wales. This follows earlier social investment initiatives from HM Treasury, the DWP, the Ministry of Justice and the Cabinet Office itself (Tomlins 2015; Inspiring Impact 2013).

The difficulties with the concept of Social Value were echoed in Temple and Wigglesworth's survey of 77 local authorities and 123 housing associations, which found that one-third of housing associations and local authorities do not yet consider Social Value in the services and products they procure and that 56% of respondents reported a low impact on their procurement practices. The most common barrier to implementation was the measurement of social value (Temple and Wigglesworth 2014).

These findings are repeated in Harlock's (2013) research with adult social care commissioners in six local authorities in England, with difficulties in defining and measuring Social Value reported by all the interviewees. There the key challenge was found to be the lack of a universally accepted definition of social value.

A 2015 report by the University of Glasgow for the Scottish Government to assess the usage of CBCs and the impact these have on employment and skills development illustrates further the difficulties faced in this field (Sutherland et al. 2015). They found that a lack of monitoring data and data on the additionality and sustainability of CBC outcomes presented a significant constraint in assessing the impact of CBCs. The research findings strongly point towards the need for a more comprehensive evidence base to be developed around the longer-term impact of CBCs, necessitating a more systematic monitoring of CBCs and their impacts in future contracts. The report makes recommendations on how the monitoring and evaluation of CBCs in public sector procurement can be improved. Among their recommendations are that four different types of CBC activity indicators are collected for information outcomes to demonstrate the use and impact of CBCs.

These recommendations are in line with those of Richard Macfarlane, who is in favor of simplifying the task of evaluating and measuring the social value of CBC: by limiting the range of social/community benefits sought by the purchaser; limiting the information that is required from contractors to assess outcomes; and obtaining other data on a one-off basis (Macfarlane 2012). One implication of this limited but precise data gathering would be excluding the use of economic or financial assessments tools such as Social Return on Investment [SROI]. These necessitate elaborate data collection with multiple indicators and required outcomes. Rather that discarding them wholesale, the use these tools may be useful on a strictly limited basis, for example to establish the case for including social/community benefits in procurement in a case study but not in the routine monitoring of contracts.

An example of Richard Macfarlane's approach is that of Value Wales, which has developed a Community Benefits Tool—effectively a monitoring report—which has to be completed for contracts valued at or above £2 million. This collects output data for ten sustainable development measures from clients and contractors/suppliers, and uses a local multiplier to measure the impact on the economy of Wales (Welsh Government 2014).

Conclusion

This paper is an initial exploration of the articulation, measurement, evaluation of Social Value in social procurement and social clauses together with the forces that are driving the demand for this data. While much more work needs to be done, some emerging issues have been captured. It is clear that there is a need for greater clarity over vocabulary and concepts related to Social Value as well as further research that critically evaluates both the engagement in Social Value measurement together with a comprehensive assessment of the options available and the relative strengths and weaknesses of these options.

At the same time, it is obvious that there is a rapidly emerging marketplace of numerous Social Value measurement methods and tools available. It's important to recognize that the development of outcome measures for Social Value has largely been driven by the requirements of funders: governments, social investors and philanthropists, leading to important questions to be addressed about the implicit values underpinning the Social Value environment and the influences over Social Value measurement practices.

Moreover, the evidence base associated with social value and procurement consists mainly of case studies and grey literature produced by independent bodies, governments, and the community and voluntary sector, rather than peer-reviewed academic publications. In many instances the quality of these studies are weak, due to methodological challenges and biases, which limits its usefulness.

The recommendations by Liverpool University and Richard Macfarlane to limited but precise data gathering are useful and would exclude the use of Economic or financial assessments tools such as Social Return on Investment [SROI]. In conclusion, fitting the outcomes of social procurement and social clauses into an economic type social value measurement tool may not ultimately be useful and acknowledging the dissonance between the economic and policy objectives is fundamental before the appropriate and workable mechanism to achieve those objectives can be established and developed.

Coming up with the perfect way to capture Social Value may be social procurement's Great White Whale. Social Value measurement and methodologies are redundant in the absence of clearly stated policy intentions and the prioritization of social clauses in procurement contracts. A methodology for measuring impact can be applied, but for it to be meaningful it is of utmost importance that it be used within the context of achieving the desired objective. This paper proposes that there is an overemphasis on economic goals and that focusing initially on creating good outputs will be critical to the development together with a strategic approach to social procurement, clear definitions of Social Value and transparent processes for assessing such value.

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Chapter 4 Promoting Public Procurement of Sustainable Innovations: Approaches for Effective Market Dialogue

Katriina Alhola, Marja Salo, Riina Antikainen and Annukka Berg

Introduction

Public procurement of innovation (PPI) can promote the quality and efficiency of public services. It can also provide a platform and market for new innovative solutions by ensuring sufficient critical mass of consumers, which in turn, could encourage private enterprises to invest in product development (Edquist et al. 2015; Rijkswaterstaat 2014; Uyarra 2013; Uyarra et al. 2014). In addition, public investments may pave the way for the diffusion of innovation to the private sector by developing the infrastructure that is needed for private markets (see e.g., Mazzucato 2015; Uyarra et al. 2014; Edler and Georghiou 2007).

Accounting for around 16% of the EU's GDP, public procurement offers an enormous potential to drive innovations while also addressing environmental and social challenges (European Commission 2014; Uyarra et al. 2014; European Union 2014; Edler and Georghiou 2007). The role of PPI as a demand-side innovation policy instrument is addressed in the literature (e.g., Edquist et al. 2015; Edler and Georghiou 2007) and considered high in the EU's political agenda as a means to promote the sustainability policy goals, i.e., increasing the use of renewable energy, promoting circular economy and resource efficiency as well as improving the

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© Springer International Publishing AG 2017 K.V. Thai (ed.), *Global Public Procurement Theories and Practices*, Public Administration, Governance and Globalization 18, DOI 10.1007/978-3-319-49280-3_4 framework conditions for business to innovate (European Commission 2010a, b, c, 2011, 2015).

Also national governments see public procurement as a strategic platform to accelerate the growth of innovation and new markets. The Finnish Government Program (2015–2019) has set an objective that 5% (i.e., 1.75 billion euros) of the total value of Finland's annual public procurement should be directed to innovative solutions. However, no policy measures or methodologies have been presented on how to assess this objective. In addition, the Government Resolution (2013) on the promotion of sustainable environmental and energy solutions (cleantech solutions) in public procurement states that 1% of the public sector spending should be targeted to new cleantech solutions, where the key industries are construction, energy sector, transport and waste management (Finnish Government 2013).

The interaction and dialogue between buyer and supplier has been identified as an important trigger for innovation (Lundvall 1992) having crucial implications for innovation dynamics (Edler and Georghiou 2007). The value of a product or service is never created by simple transactions between the buyer and producer but in co-creation with the user and every stakeholder involved in procurement preparation. Thus competitive tendering and contract implementation are part of a network that creates the value proposition of a service to the end customer (Vargo and Lusch 2004). Cleantech innovations, in particular, are considered more blended, networked and boundary spanning, in which the decision-making is viewed as a collaborative and complex set of activities involving a variety of industries, firms, products, services, technologies and hubs of innovation (Horwitch and Mulloth 2010).

However, dialogue and communication can sometimes be poor in public procurement, especially if demand is not articulated sufficiently to make suppliers read the signals and translate them into innovations (Edler and Uyarra 2013). Technical dialogue related to a specific tendering process [Directive 2004/18/EC (8)] is often limited and insufficient for achieving successful innovative procurement as it has been targeted to find out the number of potential suppliers in the market and pricing issues (Länsimies 2014) whereas early market involvement and more extensive market dialogue have been observed to enable successful public contracts (Patajoki 2013). Indeed, the most important challenges for PPI are related to understanding and assessing the market and its opportunities, recognizing procurers' needs and those technical and functional improvements that could be possible through innovation, establishing incentive structures and being able to implement the innovation in the organization (Edler and Yeow 2016).

Due to the complexity of public procurement transaction and the innovation environment, the role of intermediation may be crucial in implementing PPI in terms of improving the link between different actors (Edler and Yeow 2016). Guiding organizations and platforms, such as the Procurement of Innovation Platform supported by the European Commission, may act as intermediaries for the market dialogue between procurers and potential suppliers, or share information about PPI and upcoming calls and events (Procurement of Innovation Platform 2016). The crucial role of market dialogue in the planning and tendering phases is recognized as an important determinant of the success of the public contract (e.g., Edler and Uyarra 2013; Edler and Yeow 2016). Despite this, evidence from actual innovative procurement cases is relatively scarce especially in terms of analyzing the extent and contribution of market dialogue to the public procurement of sustainable innovations. The goal of this paper is to examine the role of market dialogue in the procurement of sustainable innovative solutions. We use case studies and a complementary search for market dialogue procedures in order to answer the following research questions:

- How and to what extent public procurers carry out market dialogue prior to or during the procurement process of sustainable innovations, i.e., eco-innovations?
- What is the contribution of market dialogue to the sustainable outcome of the procurement, i.e., procurement of eco-innovation?
- What is the role of intermediaries, i.e., a third party facilitator or a digital platform in promoting innovative sustainable solutions?

We aim to understand the interactions that public procurers undertake in order to meet the sustainability targets of the procurement. We also study what kind of market engagement processes and dialogue procedures are being used. We focus on the sustainability approach, i.e., to what extent market dialogue has been undertaken and how different market dialogue procedures have contributed to achieving the sustainability goals of the procurement.

Market Dialogue in the Context of Innovative Public Procurement

Public procurement of innovation (PPI) means that contracting authorities act as a launch customer of goods, services or solutions that have not yet been launched or are not commercially available on a large scale (Edquist et al. 2015). PPI occurs when the public authorities procure, or place an order for, a product-service, good or system that does not exist at the time but which could be developed within a reasonable period according to the demands of the procurer (Edquist et al. 2000). PPI requires that public organizations are able to understand, define and clearly express their future needs as well as to approach the marketplace and interact with potential producers in a way that stirs market interest (Edler and Yeow 2016). Thus, innovative public procurement contrasts with 'regular procurement' where governments place orders for 'off-the-shelf' products (Uyarra et al. 2014). However, the objective of PPI is not primarily to enhance the development of new products, but to target functions that satisfy human needs, solve societal problems or support economic goals, and here some form of new products or processes is necessary

(Edquist et al. 2015; Edquist and Zabala-Iturriagagoitia 2012; Edler and Georghiou 2007; McCrudden 2004).

Public procurement is covered by the public procurement directives, renewed in February, 2014 (2014/24/EU). Several tendering procedures, namely competitive procedures with negotiation and competitive dialogue, have been aimed to promote innovative procurement. They allow the contracting authority to discuss all aspects of the contract with the bidders before calling for final bids (Haugbølle et al. 2015; Lundström 2011). Although competitive procedures are firmly established in the procurement processes in the EU and have shown to be appropriate legal instruments for purchasing complex and innovative projects (Haugbølle et al. 2015; Burnett 2009; Lundström 2011) the use of competitive dialogue is still at a low level compared to other procurement procedures such as open procedure (Haugbølle et al. 2015; Länsimies 2014).

The new public procurement directive (2014/24/EC) introduces a new means of awarding tenders—innovation partnership—which gives an opportunity to the tenderer to come up with an innovative solution together with the purchaser. The difference between innovation partnership and pre-commercial-procurement (PCP) is that the former includes procurement of both the development work and the new innovative solution, whereas in PCP the procurer acquires only development work without committing itself to the procurement of the new solution (European Commission 2007a).

Innovations can also be triggered through output specifications—whereby the public buyer asks for a solution to a specific problem rather than specifying the concrete product or services to buy, while allowing companies leeway to propose the innovative solution (Edler and Uyarra 2013; European Commission 2007b). In the public procurement law, technical dialogue [in Directive 2004/18/EC (8)] and preliminary market consultation (in the new Directive 2014/24/EC Article 40) are mentioned as means of obtaining information from the market before launching a procedure for the award of a contract. With these procedures contracting authorities may seek or accept advice which may be used in the preparation of the specifications provided, however, that such advice does not have the effect of precluding competition [2004/18/EC (8)]. The preliminary market consultation also aims to inform economic operators of the procuring unit's future plans and requirements (2014/24/EC, Article 40).

It seems that so far *technical dialogue* has mainly represented one-way communication of a certain procurement where the procurer is the initiator and the potential suppliers are informants (Länsimies 2014). The concept of *market dialogue*, on the other hand, has been used to describe all forms of interaction between the buyer and the supplier prior to a competitive tendering, including technical dialogue (Patajoki 2013). It is a wider phenomenon than technical dialogue, being as it is an encounter process, usually initiated by the procurer, between the public and the private organizations as well as end customers. Market dialogue aims at a successful contract that serves all participants' needs (Länsimies 2014). Market dialogue should take place at a sufficiently early stage due to the fact that needs and innovative solutions are not usually known beforehand and technology development or modifications may take more time than is available in the time frame of the formal procurement process (Nissinen 2013). Further, markets for innovation may not be established, different functions within public organizations may have different expectations, the learning and adaptation costs within the buying organization are often high and the process includes joint risk management (Edler and Yeow 2016). Especially in case of sustainable innovations, early phase needs analysis and market dialogue can facilitate the implementation of such solutions (e.g., Ecopol 2013). In addition, the active involvement of end users is essential especially in service development so that the actual needs of users can be harnessed to guide procurement (Nissinen 2013; Alam 2002). Thus we see that the market involvement in terms of market dialogue *prior to starting the formal tendering process* is of great importance in innovative public procurement.

Materials and Methods

Definition and Scope of Market Dialogue

The definition of market dialogue in this study is based on the definition developed within the context of Finnish municipal procurement (Länsimies 2014, p. 37), according to which market dialogue, including technical dialogue [2004/18/EC (8)] as a part of it, is a two-way interaction between suppliers and the contracting authority, consisting of the following characteristics:

- Communication between the contracting authority and potential service providers prior to competitive tendering where the company provides expertise and the procurement unit has the power over decisions.
- Market mapping concerning features of the specific industry pricing and common contract terms, as well as the composition of the market.

In addition to the definition above we consider that market dialogue includes the preliminary market consultation described in the new public procurement directive (2014/24/EC, Article 40): "Contracting authorities may seek or accept advice from independent experts or authorities or from market participants. That advice may be used in the planning and conduct of the procurement procedure, provided that it does not have the effect of distorting competition and does not result in a violation of the principles of non-discrimination and transparency."

Our approach is that market dialogue is a broad range of interaction between different stakeholders in the context of public procurement, including the dialogue before, during and after the procurement process.

Research Methods

Case studies were used to study the phenomena, i.e., procurement of eco-innovations in its real context. The rationale for selecting a case study was to obtain more detailed information about the contextual conditions of a phenomenon (Yin 1994). In addition, the analysis of case studies was completed from searching other possible means of effective market dialogue and conducting related in-depth interviews.

The methodological part of the study included two steps:

- 1. **Collection and analysis of cases**: Collection of cases of sustainably innovative public procurement and a descriptive qualitative analysis of the procurement process in terms of the extent and contribution of market dialogue.
- 2. Search for effective market dialogue procedures and related interviews: Search for effective market involvement and market dialogue procedures in public procurement of (eco) innovations and carrying out related interviews with procuring units and/or third party facilitators of market dialogue.

Collection and Analyses of Cases

In this study we focused on sustainable innovations. Sustainable innovation is an innovation towards more sustainable technological and institutional systems and processes, broadly understood as systems for which resource use and waste production remain within appropriate environmental limits and socially acceptable levels of economic prosperity and social justice are achieved (Foxon and Pearson 2008). In the selected cases the sustainability focus was on energy- or material efficiency, use of renewable energies and/or less environmental impacts. We also refer to these innovations as eco-innovations or cleantech¹–innovations.

In the selection of cases we collected Finnish procurement cases that were analyzed and documented in a web-based portal www.ymparisto.fi/hankintamappi (in Finnish), which is a collection of Finnish public cleantech procurement cases. The material includes detailed analyses of selected cleantech procurement cases and related market dialogue processes. This data was collected in a parallel research project by semi-structured interviews in 2014–2015 (Alhola 2015). The procurement cases documented in the web portal are considered to be among the best practices and good examples of innovative cleantech procurement as they had been

¹Cleantech means new technology and related business models that offer competitive returns for investors and customers while providing solutions to global challenges. Cleantech represents a diverse range of products, services and processes, all intended to provide superior performance at lower cost while greatly reducing or eliminating negative ecological impacts and improving the productive and responsible use of natural resources (Cleantech Group 2014).

granted or promoted by organizations or research projects that specially aim to promote innovation through public procurement. One of these funding programs was taken by Tekes (Finnish Funding Agency for Innovation), an agency where public procurement units can apply for funding for preparing innovative public procurement (Tekes 2015). In addition, we looked for cases by Motiva, a Finnish government-funded focal point that gives advice and consultancy to public procurers about sustainable and cleantech procurement (Motiva 2016). Several public organizations such as The Association of Finnish Local and Regional Authorities, Regional Hospital Districts, the Finnish Transport Agency and other governmental authorities as well as other nationally well-known cases from cities and municipalities were also recognized. Altogether, 35 cleantech procurement cases were screened.

In the selection of cases for deeper analysis we focused on—but were not limited to—'new to the market' innovations that were—through public procurement—for the first time introduced in global or national markets, which may also be called as developmental public technology procurement (Edquist et al. 2000; Edler and Uyarra 2013). However, we also accepted few cases in which the sustainable solution was novel or innovative to the purchaser despite having been already introduced or used somewhere else (see OECD 2005, for classification). The rationale for this was that these kinds of innovative procurement cases play an important role in the diffusion of innovation (Valovirta 2013). For the deeper analysis, 13 Finnish cleantech procurement cases were selected (Table 4.1).

Case	Sustainability target	Why was this procurement innovative?		
Construction and renovation of buildings				
Haltia—The Finnish Nature Centre (2008– 2012)	To build 100% of wooden material. To minimize the building's carbon footprint.	The first Finnish building built from cross-laminated timber (CLT). CLT tech was used in outdoor cladding for the first time in the world		
Solar energy-based swimming hall (renovation), Pori (2010)	Focus on solar energy production and energy storage	A new solar energy-based construction (of copper) was created during the procurement process		
Near zero energy concept —Leinelä, City of Vantaa (2014)	To define a 'near zero energy' concept for buildings	The concept was defined and introduced for the first time in the context of the construction of public buildings in Vantaa		
Multi-purpose facility, Municipality of Hämeenkyrö (2014)	To close separate units, and to build a new multipurpose house	Innovative learning center with focus on high energy efficiency was acquired on a life-cycle basis		

Table 4.1 Cases selected for analysis

(continued)

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Case	Sustainability target	Why was this procurement innovative?
Public transportation		
Biogas buses, City of Vaasa (2014)	To organize low-emission public transportation while promoting local biogas production and create private markets	Biogas buses were procured for public transportation. New delivery network was developed for biogas manufactured from local waste
Public transport services, Municipality of Siuntio (2013)	To decrease the need for private driving and to optimize the cost efficiency of public transportation	Transportation service system connected public transport and local transportation services that were initially driven only for the internal transportation
Electric car hub, Municipality of Ii (2012)	To be a forerunner in the use of electric cars by investing in the charging network and infrastructure for an electric car hub	A new infrastructure was built that utilized renewable energy. The use of electric cars has increased also among private consumers
Energy production and ene	rgy-efficiency	
Joint procurement of solar panels, HINKU municipalities/SYKE (2015)	To improve the energy efficiency of public buildings. To buy service instead of products	Leasing contract in which the monthly cost equals the monthly electricity bill. No extra costs were caused to the procurer
Energy improvements by ESCO contract, Vantaa (2014)	To improve the energy efficiency of 14 public buildings.	Suppliers presented the means to gain energy efficiency within a preset price band. An ESCO service contract was conducted
Waste management		
Waste multi-locker collection for households, City of Porvoo (2013)	To improve the recycling rate. To provide more efficient recycling of different waste fractions	A new waste bin was introduced including separate lockers for different waste fractions (board, paper, glass and metal, and mixed waste)
Water management and sev	wage	
Water pump system, City of Lappeenranta, Finland (2014)	To acquire a water pump with special technology that would lead to highly improved energy efficiency for water treatment	The new water pump technology was developed as a result of co-operation between a local start-up and the University (LUT), and was for the first time implemented in practice
Biowaste and sewage sludge treatment service, Porvoo (2014)	To improve recycling and reuse of phosphorus and nitrogen	Recycling of nutrients was included in the procurement process of such service for the first time

Table 4.1 (continued)

(continued)

Case	Sustainability target	Why was this procurement innovative?
Road infrastructure		
Utilization of soil and ash in road construction— Finnish Transport Agency (2014)	To utilize as much soil and secondary materials in the construction process as possible	A new combination of used material and ash was developed, which reduced the carbon footprint by 20,000 tons

Table 4.1 (continued)

Search for Market Dialogue Procedures and Related Interviews

In order to complete the information gained from the case studies, we also searched for other market dialogue procedures from the literature and different public organizations. Important sources were so called forerunner cities and municipalities that have committed themselves to ambitious sustainability targets to be followed in all their operations, including procurement. In Finland, for example, the HINKU (Carbon neutral municipalities) network, which is a cooperative forum of municipalities, businesses, residents and experts, provided good examples or initiatives for efficient market dialogue (HINKU Forum 2016). We also searched for good and best practices from other cities and networks, such as the Finnish national network on green public procurement (GPP) maintained by Motiva. International examples of good market dialogue procedures were screened including procedures in the 'sustainable cities' and organizations that promote sustainable procurement. Key words in mapping these organizations, networks and links were used, including: 'green public procurement', 'sustainable procurement', 'innovative procurement', 'smart cities', 'sustainable cities', 'market dialogue' and 'online platforms', among others.

The data was compiled from organizations' websites, reports and documents, and completed by interviewing selected procuring units and/or organizers of market dialogue. In order to gain in-depth understanding of the role of market dialogue in different procedures, three semi-structured interviews were carried out with a procuring unit or a third party facilitator of market dialogue.

Results

In the selected cases, the sustainable innovation had resulted as an outcome of the procurement process. In the process, sustainability target was reached by several means (listed below) in which the market dialogue played an important role:

- Identifying the needs of end-users and their willingness to pay.
- Leaving the definition of the subject matter open to some extent allowing the potential suppliers possibilities to suggest innovative solutions how to meet the sustainability goals of the procurer.
- Co-creating the innovative solution together with stakeholders.
- Setting sustainability goals and related contract terms.
- Co-operating towards the sustainability targets with suppliers and other stakeholders also during the contract implementation.

In the analyses we focused on finding out to what extent market dialogue was engaged in the procurement process and how the market dialogue contributed to the sustainably innovative outcome of the procurement or investment. In addition, we searched for other possible market dialogue procedures that were not necessarily used in the selected cases but can be found in the literature or in practice. These practices were often organized by the procuring unit but can also be carried out by a third party facilitator. For example, we found many platforms (in Finland at least 14 databases) that provide different kinds of value adding services to procurers and suppliers but in this study we focused on those that enable interactive market dialogue instead of being just informative. Below is an overview of the results, which is further discussed in the Discussion chapter.

Extent of Market Dialogue in the Procurement of Eco-Innovations

In the studied cases market dialogue occurred within three dimensions and diverse procedures and communication methods were used (Fig. 4.1). Firstly, market dialogue between procurer and potential bidders was undertaken in terms of market research and technical dialogue within the formal tendering process, i.e., between issuing the contract notice and making the contract decision. Competitive procedures, notably competitive dialogue, were used in the procurement of building construction, for example. However, competitive procedures with negotiations were used as a procurement procedure only in one-third of the studied cases, whereas preliminary consultation with potential bidders prior to the contract notice was undertaken more often and more extensively. Preliminary consultation was seen as a main source of information in the formulation of technical specifications. For example, in the procurement of the biowaste and sewage sludge treatment service, a public enquiry was launched in order to examine the views of potential bidders before proceeding with the tendering process. The main purpose of the preliminary dialogue between procurer and potential bidders prior to the tendering phase was to get information on potential suppliers and/or solutions to the procurers' needs. Technical dialogue during the tendering process, on the other hand, focused on formulating specifications in the calls for tender in a way that the market is able to respond with innovative solutions.



Fig. 4.1 Extent of market dialogue in the studied public procurement cases

Secondly, market dialogue between procurer and other stakeholders (excluding potential bidders) provided valuable information that helped specify the procurer's needs. For example, in the case of a multi-locker waste collection system in the city of Porvoo, extensive market research was undertaken in order to get information on households' willingness to pay for such service. This information was meaningful in order to keep the final contract within a certain budget frame. In addition, in the case of the Hämeenkyrö multi-purpose facility, end-users were included in the negotiation phase and decision-making, which helped define the target of procurement, i.e., 'innovative learning environment' more precisely.

Thirdly, companies and potential bidders co-operated with each other and with other industries, research institutes, universities and schools. This co-operation and dialogue was essential when a new solution was required in order to meet the procurer's needs. For example, in the case of the Pori 'solar-energy based' swimming hall, the co-operation between Satakunta University of Applied Sciences (SAMK) and the supplier was essential. The innovation, i.e., developing a copper-based solution, was in fact not known until during the actual procurement process, in which the procurer had set a requirement for the supplier to co-operate with SAMK. Also in the case of Lappeenranta, the innovative water pump solution resulted from the co-operation between the water pump manufacturer and Lappeenranta University of Technology (LUT). The public procurer had followed the development process during many years and was now able to provide a platform for the prototype in real life through the tendering process by using life cycle cost as a basis for the procurement decision.

Diverse market dialogue procedures and communication channels were identified in the study. Most of the market research and technical dialogue took place prior to tendering, i.e., in the procurement preparation phase. Procurers conducted themselves to market research, i.e., searched information on the latest technology developments as well as mapped user needs by organizing and attending events, i.e., industry fairs, workshops and info sessions. Public procurers also kept themselves informed on the market situation and technology development through co-operation with schools and research institutes. Procurers informed potential suppliers about the upcoming procurement needs and related calls for tender by setting up info sessions or meetings, or by sending a public enquiry about the suppliers' interest towards the idea. In addition, drafts of specifications and/or invitations to tender were sent to potential suppliers for commenting and answering specific questions. Consultants and preliminary studies were also used as a means of extensive market research and in order to find potential new solutions. Dialogue between other procurers was undertaken in order to map potential risks, to share experiences and to get support.

During the tendering process, notably the competitive procedure with negotiations and competitive dialogue, public procurers carried out the technical dialogue by organizing several rounds of negotiations with potential suppliers that had been selected based on the invitation to tender. For example, in the case of Leinelä, the negotiating procedure helped build a team with special expertise instead of selecting one consulting company to carry out the procurement. After the formal tendering process, i.e., the final contract, procurers used contract follow-up of the implementation of the contract as well as gathered customer feedback by open information channels or by sending a request to end-users.

In addition, we found several examples of cities or municipalities that have taken market dialogue as a part of their overall procurement strategy (see Table 4.2). For example, the City of Jyväskylä in Finland is engaged to market dialogue on a continuous basis, which in practice means regular open meetings with potential suppliers. With this dialogue they aim at developing the market toward a more innovative and sustainable direction and prepare the potential bidders for their forthcoming environmental requirements while giving enough time for the suppliers to develop innovative ideas in response. (Laine 2015) Also in the city of Rauma, a procurement forum, established in 2013, actively encourages public procurers and suppliers to co-operate by organizing pitching events, for example (Rauma 2015).

Procedure	Examples
Continuous face-to-face dialogue with procurer and stakeholders	City of Jyväskylä has a strategy of continuous market dialogue in PPI, including regular face-to-face meetings with potential suppliers and other stakeholders. The purpose is to share information about forthcoming procurement needs and requirements. (Laine 2015)
Procurement Forum	City of Rauma has established a procurement forum that is a direct communication channel between procurers and potential bidders (Rauma 2015)
Matchmaking	BusinessOulu-matchmaking event aims at better information sharing between procurement and companies (BusinessOulu 2015)
	Pitch and Match events give an opportunity for companies to pitch for public procurers in an organized event (Malmberg 2015)
Organized 'buyer-supplier' events	Organized 'buyer—supplier' events bring procurers and suppliers or certain sector together to discuss about best practices and challenges in carrying out a successful contract (Motiva 2015)
Research projects, pilots	InnProBio project tests a new dialogue format to explore the possibilities of biobased procurement (InnProBio 2016)
Networks	National network on GPP (in Finland), established by Motiva, is a network of 30 procuring units meeting regularly in which they share best practices on PPI (Motiva 2016)
	Sustainable city—network provides a number of tools to help local governments in PPI (ICLEI 2016)
	Network of cleantech procurement in Helsinki region meets regularly and share experiences on cleantech procurement (Koivusalo 2015)
Collaborative platforms	Solved is an international cleantech collaboration platform, which collects around 700 experts from 250 organizations globally to work for a pre-set challenge, e.g. developing an innovative procurement process (Hulkkonen 2016)
	Innovillage is a web service providing an environment for co-designing and co-preparing public procurements and for collaboration during the contract period (Innokylä 2015)
	The Procurement Forum , managed by ICLEI, is a meeting point of international stakeholders to discuss, share and learn from one another and to improve public procurement practices (Procurement of Innovation Platform 2016)

Table 4.2 Different types of market dialogue procedures and related examples

Contribution of Market Dialogue to Procurement of Sustainable Innovation

The intent of procurers in the studied cases was to successfully implement an innovative sustainable procurement. In order to support this objective we recognized three main purposes for market dialogue: (1) searching available technical solutions (market research), (2) assessing potential to develop innovative solutions and related technical specification (technical dialogue with suppliers) and (3) defining the procurement needs (extended dialogue with end users, potential bidders and other stakeholders).

The major contribution of market dialogue in the studied cases was to help define the procurement needs and draft the tendering documents, including technical specifications, so that they would support the development of an innovative solution. Procurers saw that the role of market dialogue in this sense was essential.

Market dialogue took a long time, in some cases even many years. Dialogue during this period helped deliver information on the forthcoming needs and encouraged the suppliers to come up with new ideas. Long-lasting dialogue also helped identify important stakeholders, such as procurers with similar experience, and structure the path on how to proceed with the planned procurement. Preliminary studies and consultant works were also important as well as the information gathered from end-users. Information about end-users' willingness to pay was of great importance in accepting the final contract especially in the service procurement. The relation of costs and quality of the investment was crystallized in many cases during a long preparation process, which made the expectations of the outcome more realistic. Most of all, the long preparatory phase provided the procurer with better knowledge on solutions that exist on the market or could be developed within a reasonable time.

Role of Intermediaries in Market Dialogue Facilitation

A third-party organization, i.e., another public organization or a private consulting company, could be the organizer of a facilitated matchmaking event for the development of ideas and co-creation of an innovative solution (Table 4.2). An example of such concepts is the Swedish Pitch and Match concept (Malmberg 2015) that organizes special pitching events to a certain procurement case, for example. Although being generally open in nature, these events also provide the possibility for discussions between the procurer and potential bidders in a way that the bidders do not have to present their preliminary ideas to a public audience.

Some organizations, such as Motiva in Finland, also organize sector-specific 'procurer—bidder' events. These events focus on the challenges in formulating a call for tender or a bid (e.g., Motiva 2015). Another example of an organized market dialogue is carried out within a research project named InnProBio in the

Netherlands. The project aims at testing the first format of how to set up a market dialogue, learn from it and improve the format. The aim is to exchange knowledge between hospitals, public authorities, producers, suppliers, waste recyclers and researchers (InnProBio 2016). In order to reach the public audience, information about these events can be given in digital platforms, e.g., the Procurement Forum which is an on-line portal and discussion forum for procurers and other stakeholders to join.

In addition to the informative role of many online platforms and discussion forums, several digital collaborative platforms have been used in the implementation of market dialogue in public procurement. The main benefits of these collaborative platforms are gained through the thorough but faster and more efficient planning process, and possibilities to connect experts from different areas effectively. In addition, best and good practices and former experiences can be delivered and applied relatively fast to other procurers and areas through these platforms (Hulkkonen 2016).

Based on the case studies and the review of other market dialogue practices, we categorized the different market dialogue procedures as follows:

Procuring Unit as Organizer:

- Continuous face-to-face dialogue and organized events between procurer and supplier for informative purposes about forthcoming procurement and investment needs of the procuring unit.
- Continuous face-to-face dialogue and organized events extended to several stakeholders, e.g., end users prior to a specific tender competition (needs analysis) and post contracts (feedback and service quality improvements).
- Market research for actively searching new technologies and being receptive to market and supplier information about new innovations.
- Active participation and learning from other procurers (e.g., procurer networks, networks for sustainable cities).
- Legal procedures and related technical dialogue and preliminary consultancy related to a specific tendering process, e.g.,:
 - public enquiry
 - · competitive procedures with negotiation and competitive dialogue

Facilitator:

- Organized 'procurer—supplier' events in certain sectors, usually general in nature and not necessarily related to a specific procurement, organized by a third party organization, usually an organization that promotes sustainable procurement.
- Organized pitching events for a specific procurement case prior to the formal tendering process, events organized by a third-party consultant or organization.
- Online platform completing or replacing the face-to-face discussions meant for different stakeholders, e.g., procuring units, industry experts, potential suppliers

etc. in order to make the facilitation of the planning process more effective and being accessible despite long distances.

- Consultant in the tendering process working in co-operation with the procurer.

Discussion

This study identified three dimensions for the analysis of the extent and contribution of market dialogue in the context of innovative sustainable procurement. Firstly, we recognized the scope of market dialogue in terms of involvement of different interest groups, i.e. 'buyer—supplier' dialogue, 'buyer—other stakeholders' dialogue and 'suppliers—other stakeholders' dialogue. Secondly, we identified market dialogue relative to different phases of the procurement process and over time, i.e., prior, during and after the formal tendering process, as well as on a continuous basis. Thirdly, different market dialogue procedures were identified in terms of the organizer of the dialogue, i.e., a procuring unit or a third party facilitator.

Extensive Market Dialogue Promotes Innovation and Risk Management

Market dialogue played an important role in the public procurement of sustainable innovations. The most important contribution of market dialogue to the procurement of eco-innovations related to identifying the procurer's needs, informing the market about forthcoming needs and formulating tender specifications so that they would promote innovative solutions. Indeed, market dialogue between the procurer and supplier often focused on the procurement process and formulation of technical specification whereas the market dialogue with other stakeholders such as end users, industry experts and educational institutes helped define the procurement needs.

Market dialogue between procurers and end-users was especially important not only in defining needs but also in engaging end-users and other stakeholders to the procurement objectives. This could help the procuring unit to better manage risk and encourage to PPI instead of drawing back on buying traditional solutions. The cases revealed that the strong commitment of end-users early in the process and the sustainability objectives of the innovative procurement led to a more broad acceptance of risk of potential technical failure especially in case of a piloted technology. The practical implication of this could be that in case of a potential realization of technological risk, one individual, i.e., the main procurer, would not have to bear all the consequences. Engaging end-users in the early phase of the innovative procurement and justifying a certain level of risk related to innovative procurement could indeed reduce the risk-averse behavior of the procurer, which has been recognized as one of the main barriers to innovative procurement (e.g., Georghiou et al. 2013).

Dialogue and co-operation between companies, research institutions, universities and schools provided new ideas which indeed could end up as pilots for public procurement. In turn, although not highlighted in this study, it has been argued that taking part in the public tendering process and/or dialogue may help companies learn about the logic or public procedures, especially if they have never before tendered or co-created with the public sector (Alhola et al. 2016). Especially, in the procurement of eco-innovations, a fruitful dialogue process often resulted from the parallel interactions of all the dimensions discussed above, e.g., parallel discussion and dialogue between buyer, supplier and other interest groups. Thus our study supports the view of previous studies, according to which the procurement professionals should focus more on collaboration and dialogue with all members of the network to be able to create value propositions for the end-users that eventually will result in real customer value (Vargo and Lusch 2004).

Our study focused on market dialogue between the buyer and external stakeholders. In addition, the importance of internal stakeholders and internal communications has been raised (e.g., Edler and Yeow 2016; Länsimies 2014). Internal communication in the studied procurement cases included communication between substance experts of the procuring unit, procurement professionals and the decision makers in the municipality council. The role of substance experts was important in innovative procurement as they had know-how of technologies and services, whereas procurement in many cases overlapped many sectors, and thus internal communication and involvement of substance experts from different fields, e.g., technical, social and educational departments, could provide improved and better quality services. In addition, the early stage communication and commitment of the council members to the sustainability goals of the procurement was essential.

Early Phase Market Dialogue Stimulates Innovations

Market dialogue prior to the tendering process was highlighted as having a major contribution to the procurement of an eco-innovation. Although it was difficult to assess to which extent innovative and sustainability targets would have been gained without extensive market dialogue or by solely using an open procedure, the procurers clearly saw that market dialogue, notably market research and dialogue prior to the formal tendering process, played an important role in formulating the innovative sustainability targets for procurement. On the other hand, competitive procedures, particularly the negotiation phase, seemed to promote the sustainable and innovative procurement especially in terms of drafting the tender specifications. Thus, our study supports the view that competitive procedures with negotiations could promote innovative procurement (e.g., Lundström 2011; Haugbølle et al. 2015) especially in relatively broad and complex procurement cases. However, our study revealed that innovative solutions can be gained also by other procurement procedures, e.g., open procedures. A thorough and extensive market dialogue prior to the formal tendering process, including discussion and feedback about technical specifications, allows the procurer to choose an open procedure and emphasize or compete on price or pre-set price band, and still gain the innovative solution. Nevertheless, no matter the procurement process chosen, the extensive market dialogue provided a sounder basis for identifying the environmental criteria in a way that promoted innovation but was still within reach to the potential suppliers. In addition to the market dialogue prior to and during the tendering process, post-contractual negotiations after awarding the contract may stimulate the overall success of the procurement process in terms of promoting joint problem solving, reducing risk and transaction costs, as well as helping to commit to common targets (Meijers et al. 2014).

Based on the findings of the study, one could argue that the more complex and unmet the procurement need is the more market dialogue is needed. However, in a few cases such as in the deployment of electric cars in the municipality of Ii, the procurement was innovative to the procurer and region despite extremely little market dialogue being undertaken. This may apply to procurement cases in which the objective is clear and the market supply is well-known. Thus, the procurer should recognize when an extensive market dialogue should take place and when it is not needed as there may be transaction costs that must be borne (Edler and Uyarra 2013). The innovativeness in the case of electric cars was in fact in the process, i.e., procurement of a leasing service. Leasing service procurement was also applied in the procurement of buildings and the leasing of solar panels. Procuring services instead of products could indeed transfer the technical or quality risk of the functioning and maintenance of the technology from the procurer to the supplier of the leasing service, which, in turn, could lessen the procurer's need to understand all the product's technical details and thus the need to undertake an extensive market research.

Diverse Methods Can Be Used for Effective Market Dialogue

Diverse communication methods were used to carry out the dialogue. Online platforms, although so far scarcely used in the realized procurement cases, could be used as a tool and working environment for the co-creation of an innovative solution. Many tests and pilots exist in this area, one of which was the joint procurement of solar panels, in which the market dialogue was initiated in one of the online discussion forums (Hankintamappi–forum). However, participants of the joint procurement preferred more traditional communication channels such as email, phone calls and face-to-face meetings. This may be partly due to the reluctance or unwillingness to adapt new practices related to sustainable procurement (Gormly 2014) or just because the project was relatively small and focused. We suggest that digital collaborative platforms could be applied especially in large

projects e.g., in developing smart systems or in creating a local eco-system that is based on complex interactions between different parties. The online platforms for market dialogue seemed to work well also in a definition and creation of procurement concepts or procedures that support the implementation of municipal strategy or political targets.

In addition to collaborative platforms, different forums and networks can be utilized in order to share experiences and best practices, and to gain information and advice. Case studies indicated that learning from others and previous experiences provide valuable information in the formulation of the procurement and undertaking the market dialogue. So far, it seems that procurers tend to act as the initiator and facilitator of market dialogue at least in Finland, although the search for other market dialogue procedures indicated that in practice pitching events and digital platforms provided by a third party facilitator are gaining more attention as a promising means to carry out market dialogue in an innovative context. The coordination of different actors and activities in relation to a specific policy instrument such as procurement is very likely to require effective coordination among different institutions (Rolfstam et al. 2011). Thus, benefits of digital and collaborative platforms arise from the effectiveness of coordination in terms of time, broad expertise and reachability of stakeholders and experts despite the geo-graphical distances.

Market Dialogue Should Play a Role in the Procurement Strategy

Common for the procurement of sustainable technological solutions, i.e., cleantech was that the planning and preparation of the procurement had taken a relatively long time. This may be partly due to the fact that technology development may take time (see e.g., Gupta and Wilemon 1990) or just because the procuring needs are not clear and end-user preferences not known in PPI (e.g., Edler and Yeow 2016). In the studied cases, technology was either new or existing technology was modified to the needs and conditions of the procurer. In many cases the experiences and references from other procurers were of great importance and information was gathered also from abroad. Thus, a thorough market dialogue and market research played an important role in the cleantech sector procurement.

Public procurement can be a major source of innovation and improve the value of services delivered to the local community as well as increase the technological competitiveness of the local industrial and research system (e.g., Edquist et al. 2015; Uyarra et al. 2014; Valovirta 2015b; Vecchiato and Roveda 2014; Edler and Georghiou 2007). In this context, regional foresight might help identify both long-term societal needs and technological possibilities that could match these needs (Vecchiato and Roveda 2014). In several studied cases market dialogue had indeed helped recognize and utilize local conditions. However, public procurement

does not allow for favoring the local suppliers and thus market dialogue should be conducted in a manner that provides equal opportunity for all suppliers to participate in tender competition. However, preliminary market dialogue with stakeholders is possible from the legal point of view as long as the dialogue is accessible to all potential bidders, none of the suppliers is given more information than the others, and the dialogue is documented properly (Mäkelä 2011).

Our study revealed that early stage market dialogue can overcome some of the major hindrances that hold back the majority of public procurers from purchasing innovative solutions. The recognized barriers, such as a dominant emphasis on price rather than quality, formulation of too prescriptive specifications, lack of interaction with markets, risk-averse behavior or procurers and lack of competence of procuring organizations (Georghiou et al. 2013; Uyarra et al. 2014) could be managed through effective market dialogue. For example, lack of knowledge and expertise on the use of practices that favor innovation and insufficient management skills as having accounted for failures in PPI projects (e.g., Uyarra et al. 2014) could be captured by using effective collaborative online platforms that reach experts from certain areas.

The above mentioned barriers have been recognized also in Finland (e.g., Leskinen 2014; Kajala 2015). Successful public contracts in particular are hindered by the lack of end-user and company involvement and the view on procurement as a strictly transactional legal process (Länsimies 2014). We agree with the previous studies (e.g. Valovirta 2015a; Edler and Uyarra 2013; Edler and Yeow 2016; Edquist et al. 2015; Uyarra et al. 2014; Rolfstam et al. 2011) that in order to overcome the recognized barriers, procuring units need to improve and adopt novel skills, internal coordination and management practices as well as link different stakeholders to the procurement process.

We consider that innovative public procurement of sustainable solutions, in order to become a systematic way of procuring in Finland, should be seen as a new type of procurement culture, in which market dialogue should be seen as an integral part of the public procurement process especially in large or complex procurements. In turn, this might require the definition of public procurement of innovation to go beyond just including 'the moment where a public procurer places an order for something which does not exist' (Rolfstam et al. 2011; see Edquist et al. 2000 for definition). Especially in case of procuring sustainable innovations, the market dialogue prior to placing the order was of great importance in terms of developing the innovative solution. Since the procurement law only governs competitive tendering, municipalities tend to focus solely on following the procedure and leave the part that is not governed by law to very little consideration. Therefore the procurement defined by the law does not include most activities that a successful procurement process would require (Länsimies 2014). Although the current market dialogue procedures may still in practice focus on the technical dialogue after issuing the contract notice, some procurers have begun to see the strategic role of market dialogue in the procurement function, especially in relation to innovative sustainable procurement. Continuous market dialogue in the form of holding periodic info sessions, for example, is a solution to keep the potential suppliers informed about and better prepared for future needs of the procuring unit. Given that the development of many innovative solutions has taken a long time, even many years, to mature to the stage of commercialization, more focus could be given to the strategic nature of market dialogue.

Conclusions

The main purpose of market dialogue in the public procurement process is to end up with a successful contract. So far market dialogue has mainly focused on a certain upcoming procurement process until recently when procurers have begun to develop their strategic procurement processes, build competence in procurement and continuously inform potential suppliers about long-term requirements as well as develop collaboration with various other stakeholders.

The amount of market dialogue prior to the tendering process does not indicate the result of the tender competition. The innovativeness of certain procurements can be assessed objectively only after the contract has been implemented and realized. However, we consider that the extent to which market dialogue is engaged entails the innovative approach of the procurement and stimulates innovative solutions. Further studies could take place in order to measure the effectiveness of market dialogue in relation to the innovation. More research is also needed in order to understand the impact of sustainable procurement strategy including market dialogue to the procuring unit's success in the public procurement of innovations.

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Chapter 5 Analyzing Local and SME Participation in Public Procurement—Evidence From Seven Finnish Municipalities

Timo Kivistö and Veli Matti Virolainen

Introduction

The procurement volume of municipalities and their subsidiaries comprises the majority of the public procurement in Finland, corresponding to 32 billion euro of a total of 52 billion euro (Kivistö and Virolainen 2015). Joint municipalities account for 6 billion euro of this total. Compared with other countries, Finnish public organizations are very municipality centered.

The monetary definition of procurement is anything that creates an invoice. Prier and McCue (2009) refer to the American Bar Association's Model Code for Public Procurement, which defines public procurement as "buying, purchasing, renting leasing or otherwise acquiring any supplies, services or construction."

One of the objectives in the new public procurement directive 2014/24/EU (European Commission 2014) is "facilitating in particular the participation of small and medium-sized enterprises (SMEs) in public procurement." The Ministry of Economy and Employment ordered a report on SME perceptions of present public procurement for use in deciding on the national legislation (TEM 2014). The main conclusions were that the public market is interesting for enterprises of all sizes, the majority of SMEs are well equipped with electronic means, and they welcome easy procurement procedures, small contract values, and publishing business opportunities for procurement under threshold values. In Finland, there is a national

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© Springer International Publishing AG 2017 K.V. Thai (ed.), *Global Public Procurement Theories and Practices*, Public Administration, Governance and Globalization 18, DOI 10.1007/978-3-319-49280-3 5 threshold value of \notin 30,000 for supplies and services, which is proposed to increase to \notin 60,000 in the new national legislation based on the directive above.

On the other hand, the same directive states that "Contracting authorities shall treat economic operators equally and without discrimination and shall act in a transparent and proportionate manner" (Chapter III, article 18). According to this principle, local enterprises should not be favored in procurement above the threshold values. Local employment is, however, an important political goal in municipalities. Many municipalities have stated that they are a good place for an enterprise. Some municipalities have small procurement systems in use, publishing under threshold business opportunities to local suppliers.

PWC (2014) estimates that in EU-27 countries, SME access to public procurement is 27% below the share of the national economy. In Finland, PWC used the SME share from the state procurement unit Hansel, which corresponds to 1.6% of the national procurement volume. From this figure, it is not possible to draw conclusions.

Kidalov and Snider (2011) analyzed small business policy in the United States and the European Union. They found several aspects of public procurement policies. One of the differences in the policies are the size caps: the European Union has one cap in all industries, whereas the United States has individual caps considering both the sizes and competition environment in different industries. In the United States, there are also certain procurement programs for innovation targeted at SMEs. Kidalov and Snider concluded that SME access to public procurement is still an overall policy but without exact procedures.

Nicholas and Fruhmann (2014) questioned the existence of SME policies, indicating that the SME policies are fuzzy, and the policies treat SMEs as one group. They also concluded that political goals will dominate economic motivations. One of the aspects in SME policies is the economic benefits to local communities from local sourcing (NERA 2005).

The existing literature focuses on SME access to (PWC 2014; Kornecki 2011) and perceptions of and experiences with public procurement (Karjalainen and Kemppainen 2008; Loader 2015; Loader and Norton 2015; Flynn and Davis 2015). Marketing and tendering behaviors were analyzed by McKevitt and Davis (2013), market orientation was reviewed by Tammi et al. (2014), and SME participation in tendering was examined by Flynn et al. (2015). SME success in tendering was studied by Stake (2014).

Loader (2011) created a survey on SME policies in local governments in the UK, and Nijaki and Worrel (2012) reviewed local procurement policies in an archival research study in the United States.

Sustainability includes buying locally, but many other issues affect local communities. Brammer and Walker (2011) performed a large survey on sustainable procurement, and local and SME procurement were found to be two of the most significant factors of sustainability across all continents. Other studies on sustainability aspects include those by Walker and Preuss (2008), Nijaki and Worrel (2012), and Lehtinen (2012) on food sustainability.

Local procurement was investigated by Qiao et al. (2009) and Williams (2014) and under spatiality terms by Cabras (2011) and Mamavi et al. (2014). Qiao et al.

(2009) reviewed all kinds of preferential programs, and they found that local procurement in most programs, but they found that many respondents felt that preference programs violate free competition and may cause higher prices and make purchasers' work difficult. The authors suggested further research on gains, costs, success rates, monitoring, and alternative solutions. Williams (2014) investigated local preference in one municipality environment and recommended an evaluation of whether the preferential treatment results in a beneficiary outcome or not. Mamavi et al. (2014) found that there is a correlation between construction work and more local suppliers, whereas the opposite is true in goods and services. Cabras (2011) analyzed the procurement volume of one county in the UK, mapping the spatial distribution of procurement volume. He found that social services and construction have the greatest procurement volumes, and specialized consulting and other specialized services concentrated in the Greater London area. He also analyzed the dynamic effects of procurement by surveying suppliers about their first tier subcontractors.

Brulhart and Trionfetti (2004) studied the effects of public procurement on enterprises on a cross-national level and found that in a perfect competition environment, there is an insignificant impact on national suppliers, whereas if the country is a major public user of certain products, it will enhance the enterprise sector.

Erridge (2007) analyzed the employment of the unemployed as an additional requirement for suppliers. The results showed that this was realized with marginal or no additional cost.

The majority of the available studies comprise surveys either of SMEs or public entities and qualitative papers on policy matters, while Stake (2014) used mathematic models.

Public procurement data are generally from procurement notices (Kornecki 2011; Mamavi et al. 2011; PWC 2014). Stake (2014) did not specify the data source used, but it is likely to be competition results from eTendering software. If the data source is procurement notices, the research is focused on tenders over the EU threshold values (\notin 209,000 or higher), unless the national legislation requires notices under EU threshold values or the public entity voluntarily puts a notice under threshold value.

In our paper, we analyze municipalities' invoice data, which covers 100% of the procurement value. Apart from procurement over threshold values, it also covers the procurement under threshold values, and from other public entities, as well as procurement that falls outside the procurement directives. For a detailed analysis, see Kivistö and Virolainen (2015). Using the data of seven municipalities, we analyze distribution according to different supplier types and share of local procurement and create a calculation method for employment and local tax revenue.

The scientific contribution of this paper is a broader view of public procurement by using invoice data instead of public procurement notices. The broader data raises the supplier role of other public entities. It also has its effects on SMEs and local procurement. Managerial contributions will be the local procurement potential and the effects on sustainability reporting.

Methods

The data used in this study are secondary data from accounts payable or from accounting of the municipality. The reliability of the data is ensured by the fact that organizations must provide an official annual report containing profit and loss accounting and a balance sheet. The classification of invoices to different accounts is likely to be made according to the recommendation by Heinonen (2012). In principle, we should have 100% of invoices and procurement volume of all suppliers.

Any possible inaccuracies in the data come from the system the data is from: invoice handling systems may have parallel systems for confidential invoices, in-house organizations may have simplified routines, and payments can be made through clearing accounts or in cash. There is a possibility that the person delivering the data has not read the data delivery instructions and delivered either too much or too little data. A major part of these inaccuracies was encountered by comparing the figures from the annual report to the aggregated data. There may also be classification errors regarding which year and which account the data belongs. The possible errors might come from decentralized invoice handling, which may involve someone unfamiliar with the recommendation of accounts. Connecting supplier data to invoices may cause incompatibility errors. However, these are minor problems.

The invoice data were connected to suppliers and their addresses to determine the location of the supplier. The location information of the major suppliers was checked using company webpages to determine whether they were located in the municipality. Usually, the invoicing address was the company's headquarters. Companies' postal numbers were also reclassified to a municipality. The judgement used to classify an enterprise as local was based on the type of business. Construction, catering, and cleaning were classified as local, whereas local financial and insurance services were classified to headquarters.

Suppliers were classified into public, third sector, and big, medium, and small enterprises according to EU rules. The turnover of the companies was retrieved from a credit information company (Fig. 5.1).

In the first case, local employment was calculated on a regional level; in four subsequent cases, it was calculated on the municipality level; and in the two last cases, it was calculated on a consolidated municipality level, focusing on external suppliers and thus eliminating the volume by in-house suppliers.

The analysis of the data itself and the calculation results was done using the Gioia method (Gioia et al. 2013). This method is normally used with qualitative archives, but we use it here for numeric calculation results based on invoice data (archival data). The Gioia method is especially well suited to exploratory research.



Fig. 5.1 The calculation process

Results

The cases are from seven municipalities from different parts of Finland. Espoo is the second largest municipality and is situated in the Helsinki metropolitan area. The metropolitan area is characterized with rich employment possibilities. Rauma is the second largest municipality in the Satakunta region and is situated 50 km south of Pori, which has double the population of Rauma. Kokkola is the largest municipality within 120 km. Porvoo is 50 km from Helsinki; Sastamala is 50 km from Tampere, which is the center of the second largest region in Finland; and Lappeenranta is largest municipality within 85 km, and Imatra is 40 km away from Lappeenranta.

Table 5.1 shows the data source difference between measuring procurement notices and invoice data. In addition, a number of procurement notices did not show any value.

The results are described using the data structure of Gioia. On the left, there are the first order concepts, in the middle are the second order themes, and on the right are the aggregate dimensions. Using these dimensions, we are able to look at procurement from SMEs and local suppliers (Fig. 5.2).

	EU	National	Under	
Espoo	405,637,373	56,007,034	21,213,502	
Rauma	39,275,523	20,738,731	8,310,330	
Lokkola	110,026,677	23,229,161	11,020,371	
Porvo	53,667,184	22,469,830	10,607,317	
Sastamala	13,733,356	12,999,692	5,795,566	
Lappenranta	32,582,560	12,304,059	7,115,199	
Imatra	22,311,305	10,292,640	6,410,245	
Data capture	Notices	Beyond notices		

 Table 5.1 Procurement volume from non-public suppliers

Large % of public suppliers / location		
Share of the third sector suppliers /	General public	
location	sector structure	
Large % of inhouse suppliers		
	Municipality	Organizational
Large% in public suppliers	structure	structure
Trade between in-house organizations		
Large SME share among enterprises		
	Enterprise	
Large enterprises' local offices	structure	
Speciality suppliers are nationwide		
Hardly any cross-border trade		
Supplies from national wholesalers		
Dedicated suppliers in manufacturing	Supply network	
Distance to the larger municipality		
Large enterprises' local offices		
	Procurement	
SME access compared to the share of GNP	SME policy	
Employment potential varies between		
industries		
Greatest potential in social- and	Procurement	Procurement
healthcare and construction	strategy	decisions
The second biggest potential in labor-		
intensive services		
Local procurement first tier	Monitoring	
Local procurement actions second tier		

A large share of the public suppliers is due to the legislation. The Finnish public organization structure is very municipality centered. Every municipality has to be a member of a hospital district, a joint municipality for the care of disabled people, and a regional council. The membership means that the municipality procures the services from these organizations. The location of the central hospital greatly affects the share of local procurement.

The second indication of the general public sector structure is the size of the third sector. The state monopoly, the Slot Machine Association, is governed by law and funds projects by third sector associations.

The effect of the general public sector structure is shown in Fig. 5.3. It shows the distribution of procurement by supplier organization type, revealing that public suppliers account for half of the procurement volume.

In addition to the general public sector structure, there are in-house organizations made by local decisions. These are partly enforced by recent legislation to form limited enterprises from the municipality units that produce services for the market.

The municipality structure effects are presented in Fig. 5.4. There are structural differences between the municipalities concerning subsidiaries in energy production and distribution: Kokkola has in municipal limits; Rauma, Porvoo, and Lappeenranta have subsidiaries; and Espoo buys electricity from a private supplier. The catering and cleaning operations in Sastamala and Lappeenranta are done by a subsidiary, and Imatra has subsidiaries in construction and technical services. Lappeenranta has all its social services and healthcare in a joint municipality, whereas the other municipalities have their own operations within the municipal organization. Lappeenranta has also established a limited company for financial and ICT services. One of the reasons for having limited companies is the establishment of the social services and healthcare union, which uses the same kind of services both in Lappeenranta and Sastamala. Rauma and Kokkola also have large commercial ports within their municipal limits.



Fig. 5.3 Procurement volume by supplier organization type



Public suppliers by organization type





Fig. 5.5 Procurement volume by location

Figure 5.4 also shows that municipalities procure services from other municipalities. Rauma procures social services from Pori, and the same kind of procurement is seen in Sastamala and Imatra (Fig. 5.5).

Lappeenranta has the largest share of procurement volume in the municipality due to the large share of public suppliers—both joint municipalities and in-house subsidiaries—located in Lappeenranta. The percentage is high because Lappeenranta procures social services and healthcare, not just specialized healthcare like the other municipalities. On the other end is Espoo, with a procurement volume of less than 20% from Espoo suppliers. One of the explanations is again social services and healthcare, the operation of which cannot be divided between Espoo and Helsinki. Originally, the analysis of Espoo was made at the regional level, showing a high percentage.

One interesting comparison is between Rauma (20%) and Kokkola (70%), where the population, the number of enterprise locations, and the number of personnel in the enterprises are at a similar level. Rauma has had a procurement organization for two decades, and Kokkola has had a procurement manager for three years. Kokkola has also merged with neighboring municipalities in the past four years. Both municipalities have started communicating with local enterprises. The best explanation for the local supplier share is the location of the central hospital; Rauma procures healthcare from Pori and for Kokkola the central hospital is in Kokkola. In addition, there are several other social services produced in the Pori area, whereas Kokkola is the major location for other social services. This situation is shown in Fig. 5.6. One of the explanations for the difference is that Kokkola is an overall better location to make business. Rauma suffers from its proximity to Pori (50 km), whereas any municipalities that are larger than Kokkola are more than 120 km away. This situation can be seen in Figs. 5.6, 5.7 and 5.8.

The trade between in-house organizations is clearly seen in the analysis of Lappeenranta. For Lappeenranta (Lpr) and Imatra, the analyses looked at external procurement. Looking at the consolidated information from Lappeenranta, the municipality has several organizations in its consolidated annual report. The procurement volume was collected from seven different financial systems and 23 out of 28 organizations. The remaining five organizations had a different ledger, and they were small. One (an energy producing company) was majority owned by a large company and therefore classified as a supplier. The share of in-house procurement is seen in Table 5.2.

Figure 5.7 shows the share of SMEs in the procurement volume. The greatest percentage occurs in Sastamala (80%) and the smallest in Espoo and Imatra (ca. 55%). The enterprise structure in Sastamala mirrors the share of procurement from SMEs.



Fig. 5.6 Social services and healthcare suppliers by location



Fig. 5.7 Procurement from enterprises by size



Suppliers in construction by location

Fig. 5.8 Suppliers in construction by locationTable 5.2 Lappeenranta procurement volumes

Organization	Subsidiaries (whole/part)	Inhouse procurement	External procurement
Lappeenranta (itself)		270,607,000	46,572,453
Lpr Housing Services Ltd	4/0	8,349,000	10,011,808
Lpr Energy Ltd	3/1	33,855,757	40,369,179
Lpr Business Ltd	11/0	2,637,000	17,449,804
Saimaa Support services etc.	0/2	2,802,000	10,174,107
South Carelian Waste Ltd	0/1	769,000	10,093,757
Saimaa Univ of Applied Sciences	0/1	379,000	5,942,477
Partly owned organizations	0/5	2,128,000	4,863,229
Joint municipalities	0/4	2,051,000	13,334,726
Lappeenranta (consolidated)		323,577,757	158,811,540

To determine what the equal share of SME access would be, we used the municipal procurement statistics and calculated the share of SMEs for every industry. The differences between industries are large, ranging from 37% in the manufacturing industry to 84% in professional services. The calculation shows that the share of SMEs should be 61%.

The municipalities buy supplies from wholesalers, either national or regional. In Rauma, a successful stationary wholesaler has a great proportion of the sales from the municipality, whereas the cleaning products supplier is not successful and the procurement volume is directed to Pori. Lappeenranta has a regional supplier of cleaning products. Most of the municipalities do not have a regional supplier of foodstuffs, which is one of the aspirations of local politicians. In the construction industry Porvoo and Lappeenranta are chosen by the largest enterprises as good places to have an office (Table 5.3).

When looking at procurement decisions, we must first consider the SME policy. The policy makers are usually from the national level, but implications can be on a local level. The figures show that the SME share of public procurement is equal to SME share of GNP. The procurers could be satisfied with measures not to exclude SMEs by formulations in the tender documents.

TOL 2008	Turnover/ employee	Salaries/ employee	Proc vol local	FTE local	Local mun tax 1000 €
C Manufacturing	428.60	43,566	65,960	0.2	1.14
D Electricity, gas, steam supply etc.	1093.00	49,067	947,673	0.9	7.33
E Water supply etc.	335.10	34,691	17,186	0.1	0.29
F Construction	181.10	34,631	5,368,320	29.6	168.68
G Wholesale, retail trade	482.60	33,895	875,830	1.8	10.07
H Transportation and storage	176.20	34,672	2,918,972	16.6	94.40
I Accomodation and food service	103.70	23,738	4,731,471	45.6	164.28
J Information and communication	208.30	52,720	1,545,820	7.4	67.98
K Financial and insurance activities	1225.34	55,275	1,000,897	0.8	7.88
L Real estate	390.20	36,299	1,354,467	3.5	20.86
M Professional, scientific and	134.80	42,254	1,783,712	13.2	94.65
N Administrative and support	84.00	26,652	4,775,002	56.8	236.45
P Education	95.10	32,825	160,413	1.7	9.01
Q Human health and social work	84.70	30,335	18,676,312	220.5	1072.98
R Arts, entertainment and	275.80	27,361	18,984	0.1	0.30
All			44,241,017	398.8	1956.31

Table 5.3 Sastamala public procurement effects on local employment and municipality tax

Major procurement decisions are connected to the share of local suppliers and their employment potential. The employment creates the municipal tax revenue. The calculation of employment from procurement volumes was made using the following procedure.

Municipalities have a national recommendation regarding the accounts compatible for delivering the financial date for the national statistical bureau (Heinonen 2012). From this recommendation, we chose the accounts including procurement (customer service, other services, supplies, the parts of subsidies including procurement, and investments). Each of the accounts was connected to a specific industry classification (TOL 2008) used by the national bureau of statistics (Finnish Statistical Bureau 2014). Further, the procurement volume was converted to FTE employees using the turnover and number employed from statistics: "Enterprises by industry and turnover, 2013-2014" In the case of public suppliers, the corresponding figures from the private industry were used. This number will give a robust estimation of employment.

The tax revenue of the municipalities was calculated based on the same statistics using salaries and the number of people employed, giving the annual salary by employee and converting it to municipality tax using the calculation rules from the tax administration (Fig. 5.9).

The municipality tax is based on the assumption that employees also reside in the same municipality in which they work. This is likely in the case examples where the municipality is surrounded by smaller municipalities, whereas in the metropolitan area and in larger regions, it is unlikely. However, the assumption gives a robust estimation of the tax revenue effects on the municipality.

SME and local procurement are parts of sustainable procurement, as already presented in the literature. Therefore, they are well suited to corporate sustainability reports showing the share of SMEs and local suppliers on the first tier level. The



Local employment by industry

Fig. 5.9 Sastamala local employment by industy

social work activities

- support services activities
- I Accomodation and food service activities
- H Transportation and
- M Professional, scientific and technical activities
- Others
additional level could present the measures and figures on the second tier level, as presented by Cabras (2011).

Discussion

The aim of this study was to analyze the local and SMEs access to public procurement in seven municipalities. We used invoice data to analyze procurement distribution to different supplier types, and share of local procurement. We also draw a calculation method for employment and local tax revenue. Our findings are that this type of analysis was new to municipalities and the access to local companies was an interesting contribution to be further developed within municipalities.

The study has three different types of implications. First, there are some policy implications: In the literature it seems that the existence of SME policies is motivated by innovations, company growth, or the local economy. To achieve these effects, we should use innovation policy, growth policy, and local procurement policy because the average SME does not produce those values. Many of the previous researchers seem to motivate SME policies with innovation arguments without criticism. From SME policy viewpoint in the European Common Market recent studies in Finland (TEM 2014) and this study, and in Sweden by Stake (2014), show that SMEs can take their equal share of the public procurement either in competition or in procurement practices under threshold values. We should consider measures that do not exclude SMEs from obtaining their share of the turnover. From equality point of view this could be the motivation for SME policy, whereas otherwise any type of organization should be equally treated.

Local procurement can be enhanced with a procurement strategy, especially in labor intensive industries such as social services and healthcare, construction, and professional services. There is little to no effect on the national level, unless there are economies of scale in special services for narrow social groups. Conversely, there can be effects at the international level on specialization, as shown by Brulhart and Trionfetti (2004).

Procurement policies on SME and local enterprises are well suited in the sustainability framework. Public entities could measure SME local enterprise access by industry (Kidalov and Snider 2011). An additional view could highlight even second tier suppliers.

Second, as a scientific contribution, this research develops a research method using invoice data and extends the data captured to suppliers under the threshold values and to procurement outside the directives. It also gives a more detailed description of the supply network characteristics than the existing research and raises the question of in-house suppliers.

Third, this study provides also some implications for practitioners. With an active procurement strategy, it is possible to achieve a greater share of local enterprises and increase a municipality's tax revenue. An analysis of what is not procured locally reveals the share of procurement that could be directed to local

businesses. The recent developments in small-procurement systems focus mainly on under threshold values, representing a smaller procurement volume.

Further research should be directed to in-house procurement and using this rich database to quantify public procurement processes on a national level. Additional investigations could be made studying the dynamic effects of local procurement, as presented by Cabras (2011).

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Chapter 6 Small Public Procurement Contracts: A Comparison of the French, Dutch And Belgian Legal Treatments

Bert Baeyens

Observation

Small public procurement contracts, with a value largely below the EU thresholds, are the subject of considerable different views in opinion and legal treatment: in some countries almost all contracts have to be published in official journals; in other countries, there is considerable discretionary power left to the public entities whether they publish these contracts, or even negotiate directly with the supplier they choose.

In Belgium, a part of the electronic public procurement publication platform can be used for publishing notices for contracts where according to Belgian public procurement legislation the publishing of a notice is not required. Some recommend even the publication of all the public procurement contracts, believing that the publication will also enhance the participation of small medium enterprises (SMEs) to public procurement. On the other hand, regularly, public officers of Belgian public entities mention the low participation, even of SMEs, in the award procedures of small contracts. Particularly it seems that for small public works contracts, especially reliable and well performing contractors do not participate wholehearted in the public procurement award procedures.

Participation of SMEs to public procurement is in the EU already quite a time a much discussed issue (EC 2014), this is the case for contracts above as well as below the EU publication thresholds. The last category of contracts is still the largest category in terms of number of contracts and this category is in value also very substantial. In terms of contract value awarded, estimations by extrapolation of contract value indicate that the ratio "value of contracts below EU threshold/value above EU threshold" is very different from one EU country to another (Table 6.1).

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Country (examples)	Above EU threshold (In billions)	Below EU threshold (In billions)	Ratio
Belgium	€10.9	€10.6	0.97
Germany	€33.8	€98.2	0.34
France	€80.7	€14.3	5.64
Netherlands	€9.7	€35.6	0.27

Table 6.1 Ratio value of contracts below EU threshold and value above EU threshold

Note Based on values from "Exhibit 2-16: Estimation of SMEs' Share of Contract Value Awarded in below-Threshold Public Procurement (Extrapolation Method)" (EC 2014, p. 38)

 Table 6.2
 EU thresholds as of 01 January 2016 and relative value of the thresholds of small contracts

Value	Classical sectors		
	Works	Supplies	Services
EU thresholds as of 01 January 2016	5225,000	209,000 135,000	209,000 135,000
Relative value of "small contracts" thresholds as defined in % of EU thresholds (%)	2.87	14.3 22.2	14.3 22p2

At first glance the contracts below the EU thresholds are especially suitable for SMEs, as the requirements for economic and financial standing and technical capacity can be set much lower. So a right way of dealing with these contracts, and more specifically also the small contracts, is very important.

Small Contracts

We define small contracts as contracts with an estimated value considerably lower than the EU thresholds (see Table 6.2). For ease of reasoning: we assume the following values: \notin 30,000 excluding VAT for supplies and services and \notin 150,000 excluding VAT for works.

Competition and Publication Rules at Odds with Sound Public Procurement in Small Contracts

Incompressible Tendering Costs of Small Contracts at the Supplier's Side: Rules Concerning Technical Specifications

Some tendering process costs at the supplier's side are quite different in a public procurement environment compared to a private sector procurement. Often the

administrative burdens are higher: the so called "Red Tape". But the technical proposal of the tenderer requires also more effort, because of the specific public procurement rules on technical specifications.

According to the EU directives on public procurement, the technical specifications lay down the required characteristics of a works, service or supply. They have to afford equal access of economic operators to the procurement procedure and shall not have the effect of creating unjustified obstacles to the opening up of public procurement to competition. Unless justified by the subject-matter of the contract, technical specifications may not refer to a specific make or source, or a particular process which characterizes the products or services provided by a specific economic operator, or to trade marks, patents, types or a specific origin or production with the effect of favoring or eliminating certain undertakings or certain products. Such reference is only permitted on an exceptional basis, where a sufficiently precise and intelligible description of the subject-matter of the contract is not possible. Such reference shall be accompanied by the words "or equivalent" (EU 2014, p. 121).

The EU directives allow several ways to specify the subject of the contract, but in general it is a combination of functional and performance requirements and references to "standards", where each reference is accompanied by the words "or equivalent."

But applying these rules, any how the public entity specifies, the undertakings have to search for products that are compliant to these specifications, or searching for a product where it could be advocated that it is equivalent to what is required. This is much more demanding than preparing a quotation for a private sector procurement, where regularly a specific trade mark or origin of products is explicitly mentioned or suggested. For example, construction cost estimates require much effort, even for small works due to the necessity of a careful search for compliant products, calculation, and multiple contacts with suppliers and sub-contractors. These efforts are hardly sensitive to administrative simplification.

Incompressible Tendering Costs of Small Contracts at the Buyer's Side

The costs of preparing a tender at the side of the public entity are determined largely by the required efforts in market research, in preparing the content of the tender documents, and especially also in evaluating the tenders, avoiding litigation. These costs are mostly "incompressible" content related costs and not very sensitive to measures of administrative simplification. For example, there is little difference in the efforts required to evaluate insurance proposals correctly, whether the insurance policy concerns a contract of \notin 30,000 for a small public entity or a contract of \notin 300,000, supposing we have three or four undertakings selected to submit an offer, either directly or in a negotiated procedure with prior publication.

Cost Estimates

The Netherlands made the effort to determine the costs for public entities as well as suppliers to participate in a negotiated procedure without prior publication with competition (Sira consulting, Significant 2009). These values may according to our experience, be also considered as of an appropriate order of magnitude for the Belgian situation, but are surely no overestimation.

Some recurrent contracts require undoubtedly much more effort and cause much more costs: e.g. insurance contracts, telecom contracts, (internet, phone, etc.), and inevitably also non recurrent contracts like specific works, combined maintenance and repair contracts, marketing and communication contracts.

As these cost estimates were calculated at the tariff of €75/pro h, it is clear that the hypothesis in the Sira study is that there is no consultant input involved in the processes! But a lot of small private entities, that are functional public entities in the meaning of the EU directives, have not enough knowledge, human resources or competences available to apply the public procurement regulations and need to involve consultants, working at much higher rates (e.g. Belgian consultants at about €140–€180/pro h, lawyers at about a rate of €400/h) so those costs are generally much, much higher than the estimates as shown in Table 6.3.

Are the Costs Spent by the Public Entity Justified?

As explained, often the costs spend by the public entity in a negotiated procedure without prior publication of a notice are much higher than those of Table 6.3. What could be won by a competition in a small contract, is already clearly partly lost in tendering costs in a procedure where the final results are uncertain. So it is indeed very questionable if such a competition will deliver value for money, especially in circumstances where a good solution (experienced contractor with good references) is ready available at a correct price.

Can the Tenderer Recover the Tendering Costs?

We suppose that participating in an award procedure is an experiment with "p", or the probability of winning the contract. And we suppose "n" independent trials.

	Costs public entity	Costs pro tenderer
Works	€1725	€1600
Supplies/services	€1250	€1120

Table 6.3 Estimated tendering costs

Note Based on Sira consulting, Significant (2009). The costs to establish and conclude the final contract with the chosen supplier are not taken into account

Although this seems a rather simplistic model, it is sufficient, as it is not the aim to proof but rather to illustrate the relevant issues in tendering for small contracts. We define the stochastic variable X as the probability of winning a contract.

In order to be able to win back the incurred costs within the portfolio of public procurement contracts, the tenderer has to win at least one of the n competitions. The probability p_{atl1} of at least winning one of the award procedures is given by 1—the probability of winning not any competition or 1—the probability of n failures.

As the probability of getting exactly k successes in n trials is given by:

$$\Pr(\mathbf{X} = \mathbf{k}) = \left(\frac{\mathbf{n}}{\mathbf{p}}\right) p^{\mathbf{k}} (1-p)^{\mathbf{n}-\mathbf{k}}$$

Then:

$$p_{\text{atl1}} = 1 - \sum_{k=0}^{n} {n \choose k} p^{k} (1-p)^{n-k} = (1 - (1-p)^{n})$$

So we can find n by approximation if p_{atl} is given. The mean value is given by n.p.

If we assume that in award procedure without publishing an notice, z = 5 undertakings are invited to participate in an award procedure and we assume for simplicity, although strictly not necessary, that a contractor has a probability of winning a competition of 1/z, all of the competitors being experienced contractors, well aware of procurement rules and with equal chances. In order to be in a position to be compensated for the incurred costs, a tenderer has to win at least one tender. Indeed, in general, there is no compensation of the incurred tendering costs given by the public entity to the tenderers.

The number of 5 tenders may be assumed as an adequate number of participants that a public entity invites to submit an offer in a negotiated procedure without prior publication, as to guarantee a suitable number of offers. It is also not unrealistic to suppose that the average number of undertakings submitting a tender for a contract of works in a geographical region is, although a high number, z = 15 when contracts are published in the official journal. If the probability of winning at least one contract is set at around $p_{atl1} = 99\%$, respectively 95%, then an undertaking has to participate in "n" award procedures, considered as independent trials, given by Table 6.4. It is clear that a tenderer, depending on the situation, has to participate in many procedures to have a reasonable probability to win back the high tendering costs.

From the model (see results Table 6.4), we can derive that a tenderer has to win back for, example \in 33,600 spend for the participation in 21 award procedures for works in only a few contracts (the most probable event being winning exactly 4 contracts with a probability of 21.56%) It is clear that if it concerns small contracts, this is virtually impossible.

	z = 5;	z = 15;	z = 5;	z = 15;
	$p_{atl1} = 99\%$	$p_{atl1} = 99\%$	$p_{atl1} = 95\%$	$p_{atl1} = 95\%$
n =	21 $(p_{atl1} = 1 - 0.0092)$	$\begin{array}{l} 66 \ (p_{atl1} = \\ 1 - 0.0105) \end{array}$	$\begin{array}{l} 13 \ (p_{atl1} = \\ 1 - 0.055) \end{array}$	43 ($p_{atl1} = 1 - 0.0515$)
Costs (works)/supplier side	€33,600	€105,600	€20,800	€68,800
Probability winning exactly 1 contract (%)	4.84	4.96	17.87	15.81
Winning exactly 2 contracts (%)	12.11	11.52	26.8	23.71
Winning exactly 3 contracts (%)	19.17	17.56	24.57	23.15
Winning exactly 4 contracts (%)	21,56	19.76	15.35	16.54
Winning exactly 5 contracts (%)	18.33	17.50	6.9	9.21
Winning exactly 6 contracts (%)	12.22	12.71	2.3	4.17
Winning exactly 7 contracts (%)	6.55	7.78	0.58	1.57
Winning more than 7 contracts (%)	4.31	7.16	0.12	0.7

 Table 6.4
 Number of tenders necessary to be able to win at least one tender and probability of winning exactly X tenders

Is There Room in the Eu Legal Framework for Specific Rules for Small Contracts?

Competition and Publicity

The obligation for a public entity to organize a public procurement procedure with competition and with a suitable publicity (e.g. publishing a notice) is according to the EU case law and the interpretation of the EU commission a logical consequence of the principles of transparency, equal treatment, non-discrimination and proportionality.

Fundamental Rules and the General Principles of the EU Treaty

The thresholds for small contracts previously suggested are largely below the EU thresholds, so the EU directives do not apply.

From EU case law it appears that the fundamental rules and the general principles of the EU Treaty, in particular the principles of equal treatment and of non-discrimination on grounds of nationality and the consequent obligation of transparency apply, provided that the contract concerned has a certain cross-border interest in the light, inter alia, of its value and the place where it is carried out.¹

EU-case law provides also indications that help to determine if a contract has a certain cross-border interest. This certain cross-border interest has to be verified "in concreto" by reference to the particular contract characteristics e.g.: its estimated value in conjunction with its technical complexity or the fact that the works were to be located in a place which is likely to attract the interest of foreign operators. If a complaint is brought before the ECJ, the cross border interest may not be presumed. A mere statement that a complaint was made (to the European Commission) in relation to a contract is not sufficient to establish that the contract was of certain cross-border interest (ECJ: C-507/03, par. 34).

But the possibility of such an interest may also be excluded where the economic interest at stake in the contract in question is very modest (ECJ: Joined Cases C-25/14 and C-26/14, par.20). The court held up (ECJ: Case C-231/03, par. 20 [Coname]) that if a very modest economic interest is at stake, it could reasonably be maintained that an undertaking located in another Member State would have no interest in the contract and that the effects on the fundamental freedoms of the Treaty concerned should therefore be regarded as too uncertain and indirect to warrant the conclusion that they may have been infringed.

There is as far as we know no court case where an amount has be determined deciding on what contract is of little economic interest. But it is already clear that the European Court of Justice (ECJ), although not excluding the cross border interest, considered a value of \pounds 58,600 for a contract of supplies as a low value contract (ECJ: Case C-278/14, par. 5 [SC Enterprise Focused Solutions SR])0.²

Ways of Handling Small Contracts in French, Belgian and Dutch Public Procurement Legislation

Oral Contracts or Written Contracts?

The EU directive rules define a public procurement contract as a contract for pecuniary interest to be concluded in writing. However, below the EU thresholds and some nationally defined threshold (see Table 6.5), Belgium and France (Art.15 CDMP [2016]) still allow an "oral contract", where the only written evidence of the contract is the invoice (Dutch (Belgian) terminology: "Aanvaarde factuur" translated

¹ECJ: case C-159/11, par. 23, Azienda Sanitaria Locale di Lecce and Università del Salento v Ordine degli Ingegneri della Provincia di Lecce and Others.

²It must be said that in this court case the ECJ paid much effort to give the Romanian referring court, the Curtea de Apel Alba Iulia, a useful answer but under reserve that the referring court verifies in a detailed assessment all the relevant facts to determine if a certain cross border interest really exists.

	Belgium (actual)	Belgium (Future)	France (actual)	Netherlands (actual)
Thresholds	€8500	€30,000	€25,000 (€90,000)	33,000 supplies/services 150.000 works
EU Treaty principles apply?	Yes	Yes	Yes	No
Regulated by PP legislation	Yes	Yes	Yes	No
Exempted from competition (1 on 1)?	No	No	Yes	Yes
Do the (EU) rules regarding technical specifications apply	Yes	No	Yes	No
Oral contract allowed?	Up to €8500	Up to €30,000	Under €25,000	?
Motivation in writing of (award) decision	No obligation of formal motivation when "accepted invoice" (oral contract)	No obligation of formal obligation below the threshold of \notin 30,000	Apparently not	Reference to the circular is sufficient

 Table 6.5
 Small Contracts in French, Belgian and Dutch Public Procurement Legislation in Classical Sectors: Summary

Note The threshold of \notin 90,000 is applicable for some entities and under certain conditions for supply of books not meant for schools: (Art. 30 CDMP [2016])

as "accepted invoice"). It must be said, however, that at least in Belgium, even small public procurement contracts are seldom awarded orally (e.g., only by phone).

The Netherlands

In the Dutch legal framework, contracts of very low value may be excluded from the public procurement rules. The procedure is called "één op één" (one on one).

The legislator has not fixed thresholds, but the Guide of Proportionality (Ndl 2013), the official guideline with quasi-reglementary³ character, put forward with

³If the public entity does not apply the provisions of chapter 3 and 4 of the Guide, it has to document the reasons in the contract files. There is at least an obligation of material motivation.

	General rule of publishing of a contract notice
Works	$> \in 1,500,000 \ge$ EU threshold, also in <i>Official Journal of the European Union</i>
Supplies/A services	When cross border interest or $>$ = EU threshold \ge EU threshold, also in <i>Official Journal of the European Union</i>

Table 6.6 Publishing contract notices in classical sectors in the Netherlands

some reserve that it is realistic in general that the contract is considered a "bagatelle" when the value of the contract is lower than:

- supplies and services⁴: €40,000–€50,000, excluding VAT,
- works: €150,000 excluding VAT.

A circular (Ndl 2015) of the Ministry of the Interior and Kingdom Relations harmonizes the practice in the public entities of the State by establishing the following thresholds:

- works: €150,000, excluding VAT, and
- supplies, and services: €33,000, excluding VAT.

Although normally it is required to motivate if a contract is awarded outside the procurement legislation, a simple reference to the circular is considered a sufficient motivation for contracts below the referred thresholds. The publicity rules defined in the circular (see Table 6.6) lead to much higher thresholds than the competition thresholds.

France

In the actual French legal framework, that came into force on April 1, 2016, for the contracts below the threshold of \notin 25,000, it is possible to award these contracts without publishing a notice and without competition. For books not meant for schools, the threshold is \notin 90,000. These contracts can be oral contracts. The public entity defines on its own a "procedure adaptée."

The buyer has, however, the legal obligation (Art. 30 CDMP [2016]) to choose an appropriate offer, to use the public money well and to avoid to award systematically such contracts to the same contractor, when there are more possible offerings that are responding to the need. Even above that threshold, it is allowed to award a contract without competition when the value of the contract is lower than the EU threshold and the competition is impossible or clearly unuseful, because of the subject of the contract or the weak level of competition.

The principles of equal treatment, free access to public contracts and transparency are applicable (Art. 1 Ordonnance no 2015-899 July 23, 2015 on public

⁴A services are the services meant in Annex II A of the EU directive 2004/18.

	General rule on publishing of a contract notice
State, territorial collectivity,	Free choice by the entity if below $\leq 690,000$) $\geq 690,000$ publishing in French official journal \geq EU threshold: also in official Journal of the European Union
Other	(Below EU threshold: no threshold, free choice by the entity) \geq EU threshold, <i>Official Journal of the European Union</i>

Table 6.7 Publishing contract notices in classical sectors in France

procurement contracts, JORF no 0169 of July 24, 2015, p. 12,602, text no 38, NOR: EINM1506103R), as well as the provisions related to the technical specifications. The publicity rules defined in the decree lead to higher thresholds (see Table 6.7) than the competition thresholds.

Belgium

Actual Legislation on Small Contracts

The principles of equal treatment, non-discrimination and transparency are applicable, as well as all the provisions related to the technical specifications. Contracts with an estimated value of €8500 or less may be concluded orally with competition, otherwise such contracts have to be awarded in competition without publishing a notice. The rules on technical specifications are applicable and a motivated award decision has to be made. The decision has to be communicated in writing to the tenderers and the motivation of the decision has to be communicated to the tenderer on its simple written request within 15 days of his request. Contracts above the threshold of €8500, and with a value of €85,000 (or <€209,000 for B-services⁵) or below are treated in the same way.

Above the threshold of $\notin 85,000 \ (\geq \notin 209,000 \ \text{for B-services})$ unless a few specific exceptions, contracts have to be published in the Belgian official journal (see Table 6.8).

New Belgian Draft Law

The principles of equal treatment, non-discrimination and transparency apply also on the contracts with an estimated value lower than or equal of \notin 30,000, but no other provisions of the public procurement draft law apply, unless the rules to estimate the value of the contract. But derived from the aforementioned principles, the contracts have to be awarded with competition and although few other

⁵B services are the services meant in Annex II B of the EU directive 2004/18.

General rule on publishing of a contract notice		
All entities	$\geq \in 85,000 \ (\in 209,000 \ B \ services)$ publishing in Belgian official journal $\geq EU$ threshold, also in <i>Official Journal of the European Union</i>	

Table 6.8 Publishing of contract notices in Belgium's Classical Sectors (actual legislation)

provisions apply, the competent courts, in the absence of a clear provision, will be able to derive from these principles case law that will reduce the flexibility the law suggests. Oral contracts are allowed up to the threshold of \notin 30,000. No formal motivation of the award decision is required.

Discussion: Market Paradox

It is a large spread belief that publicity of public procurement contracts (publishing notices in official journals) and lowering all kinds of so called "barriers" will ensure a larger participation to public procurement tendering, especially for SME"s (EU (2014), pp. 80, 81). This belief is for example used as justification for the limitations put forward in the EU directive 2014/24 concerning certain minimal requirements regarding for example technical capacity and economic and financial standing. The results of Table 6.4 illustrate however that for small contracts this reasoning does not suit, as the transaction costs of the normal procedures with competition even without publishing the contract are out of proportion when compared to the objective value for money.

Indeed, the costs related to a tendering process with competition make that in small contracts, it is almost impossible for a tenderer to win back incompressible costs. The more undertakings participate, the less a tenderer will be able to win back the costs.

So it is clear that the actual strategy that is based on "reducing barriers" by enlarging publicity and improving the opportunities to participate will not lead to more participation, especially not in small contracts, on the contrary! What is needed is that the probability of winning the contract must be enhanced, and this can be done by relaxing the competition and publicity obligations for these contracts and relaxing the rules on technical specifications. The saying attributed to Pierre de Coubertin that participation is more important than winning is clearly not relevant! This argument is further reinforced by the costs useless spend by a public entity when a ready good solution is available.

From the analysis of the procurement legislations it is clear that France and the Netherlands have a legal framework where the opportunity exists to avoid the counterproductive effects of competition in small contracts. In both countries exist thresholds below it is not required to organize a competition.

At first glance the publicity threshold in the French legal system seems quite similar to the actual Belgian publishing threshold. In reality the difference is substantial. In France it is allowed to award a contract below the EU threshold but above the threshold of $\pounds 25,000$ without competition (and therefore also without publicity), when this competition is clearly unuseful. This provision does not exist in Belgian law. For private entities considered as functional public entities in the meaning of the directives, they are allowed in France to choose the publicity of their contracts freely below the EU thresholds, taking into account the value and the amount of the contract.

Especially in the French legal framework, it was necessary to mention explicitly the exemption from competition as in general the principles of non discrimination, and transparency apply also for small contracts and these principles have publicity and competition as logical consequences.

In the Netherlands the small contracts are awarded "outside the public procurement regulations", as the procedure "one on one" is not regulated, thus assuring the same flexibility for the small contracts as in private sector. The Dutch framework takes also clearly into account that the works contracts merit a much higher threshold. The Dutch competition threshold for works is even higher than the Belgian publication threshold of &85,000. An acceptable legal explanation is that the Dutch administration has decided pragmatically and with some save guarding but unambiguously on the values it assumed a contract of being of little economic interest. Confronted with the results of Table 6.4, this seems also economically justified. In France, the legislator has implicitly given a concrete meaning to the notion "little economic interest". In doing so, France has created legal certainty for the buyers by clearly stating that competition is not required for its small contracts. This puts an end to the endless but completely unfruitful and sterile discussions between lawyers whether and when a small contract is of cross border interest and requires competition.

The Dutch publicity threshold is also quite high compared to the general Belgian publication threshold of & 5,000 for works supplies and A services. The Dutch thresholds are not illogical taking into account that the publication of a notice will normally lead to even much higher number of participants and have similar counterproductive effects as the competition obligation.

On the contrary in Belgium, there is no such relaxation of the competition obligation, also the provisions in the draft law do not take into account the particularities of the works contracts. In absence of a clear exemption from competition and in the presence of the obligation to apply the general principles of such as non-discrimination, transparency, and equal treatment, irrespective of the value of the contract, the Belgian new draft law leaves much room to the courts to fill in the legal framework.

In contrast to France, there is no formal obligation in the Belgian draft law to spend the public money well, neither to verify if prices offered are correct in these contracts. This can probably be explained by a strong belief in the benefits of competition.

In such a system however, it may be expected that tenderers for small contracts will, after learning that it is not possible to win back their costs, either

- 6 Small Public Procurement Contracts ...
- abstain from participation, or
- make unlawful agreements with competitors, or
- try to impose much higher prices.

In any case, measures taken to reduce so called "barriers", or to reduce the administrative burden or to relax minimal requirements will not change this reality and will leave the tenderers, SME's in particular, frustrated. So we believe that it is illustrated by this paper that France and the Netherlands are showing the right way to tackle the problem of awarding the small contracts, even having substantial different ratio values of contracts below EU threshold and value above EU threshold.

In the France regulations it is expressly mentioned that the purchaser takes into account in his procurement of books, the necessity to maintain on the French territory a tight network of small retailers (SME's) to assure diversity in editorial creativity and the open access of all to this creations. The threshold of contracts without competition is in that case not \pounds 25,000 but \pounds 90,000. The regulation expresses clearly the conviction in France that "no competition" is the right way to maintain the network of small retailers of books. Although maybe some more concrete obligations like the obligation to execute a sound verification of the price (s), could improve the correct spending, their systems seem more productive for awarding small contracts, than the overstretched Belgian belief in the beneficences of competition and publicity.

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Chapter 7 The Effect of a Government Target for the Procurement of Innovation: The Case of the UK's Small Business Research Initiative

Jillian Yeow, John Rigby and Yanchao Li

Introduction

Public procurement of innovation (PPoI) has come to the forefront of the public procurement agenda in recent years, as a way to help foster market uptake of innovative products and services, increase the quality of public services and address major societal challenges, and support access to markets for small and medium-sized enterprises (Edler and Georghiou 2007; European Union 2014). Public sector procurement can significantly influence market dynamics and competition through its large purchasing power, in its production of scientific knowledge upstream and through creating new, forward looking markets downstream (Edler et al. 2012). Consequently, there has been extensive interest in the use of public procurement to spur innovation (Edquist et al. 2015; Izsak and Edler 2011; OECD 2011).

Public procurement in the EU accounts for almost 20% of GDP (ICLEI 2015); consequently, PPoI has a huge potential to deliver increased efficiencies and savings. In a time of decreasing public budgets, innovation can facilitate the delivery of vital infrastructure and services through better value for money. In the UK, public procurement accounts for approximately 16% of GDP and 35% of total public expenditure (Uyarra et al. 2013).

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PPoI can support innovation processes through different modalities. An important differentiation here is that between pre-commercial procurement (PCP) and other forms of PPoI which take place after commercialization of new solutions (European Commission 2006). Unlike commercial PPoI which often involves procurement of ready-to-use solutions/products, PCP involves the procurement of R&D services, which might or might not lead to a prototype (Rigby 2016). In practice there are many concrete forms of implementing PCP, the archetype being the US Small Business Innovation Research (SBIR) programme followed by its European counterparts such as the UK Small Business Research Initiative (SBRI) and the Dutch SBIR programs (ibid.). It should be noted that for a period, the policy framework for the operation of PCP within the European Union established a formal separation between what could be developed under a PCP activity and what could then be purchased as a result of the PCP in terms of an actual market-ready product or service. In 2016 this picture is changing as a result of the introduction of a new legal framework for public procurement (European Parliament and the Council 2014) that provides for a procurement under very specific conditions that covers all stages of the development of a product from initial feasibility study through prototyping to actual production. This so-called Innovation Partnerships procedure is in the process of introduction.

While the merits and challenges of PPoI to firms and the market has been widely debated and extensively researched, the practice of PPoI and its impact on the buying organization has been relatively underexplored with some notable exceptions. For example, Rothwell and Zegveld (1981) considered that procuring innovation requires a greater degree of in-house competence. Edler and Yeow (2016) looked at how capability and competence challenges in the buying organization could be overcome through intermediation whilst Yeow and Edler (2012) showed how managing innovation procurement as projects can address certain internal management shortcomings. It has also been found that the involvement of multiple stakeholders entailing all sorts of risks can sometimes impede innovative solutions (Tsipouri et al. 2009).

This paper looks at PPoI from the perspective of the buying organization. In particular, we examine how several UK government departments organize themselves to undertake PPoI activity, focusing on one particular aspect—the UK SBRI programme. We also investigate how the announcement of a target imposed on six UK government departments to increase their procurement of innovation through the SBRI influences their behaviour and attitude and any effects that might have. While much research has been done on the impact of PPoI on suppliers (in particular SMEs) (Edler et al. 2011; Georghiou et al. 2014; Uyarra et al. 2014) and the potential benefit to public authorities (and consequently, society) of increasing innovation procurement activities, less is known about *how* public organizations organize themselves to undertake PPoI and the effects on its internal organization (workings). It has been recognized that public organizations often face significant barriers and challenges to incorporate innovation in procurement and implement PPoI into their activities. Some have been more successful than others in changing practices and increasing their PPoI activity. Here, we look at some of the ways in

which the SBRI process is undertaken and how different UK departments approached the requirement to use SBRI to increase their PPoI activity. We identify some of the challenges departments encountered, as well as the effects such requirements might bring about. We argue that there is a need for a clear understanding of the logic and benefits of the programme, dedicated resources and clear lines of responsibility to reap the benefits.

Public Procurement of Innovation (PPoI)

A strict definition of public procurement of innovation (PPoI), or 'public technology procurement' as it was previously termed, is public agencies' purchase of not-yet-existing, innovative solutions which requires additional effort from suppliers (Edquist et al. 2000). This early definition, as noted by Uyarra (2016), has become too restrictive, particularly when innovation is denotes a broader range of activities. This paper adopts a broader definition as proposed by Yeow and Edler (2012), that PPoI is 'the commissioning and procuring of goods or services that are new to the purchasing organization and enable a novel service to citizens or enable a more efficient or effective delivery of that service' (p. 490).

Justification of using public procurement to promote innovation primarily lies in the necessity of addressing information asymmetry between supply and demand sides (Edler and Georghiou 2007). On the one hand, there is often unmet demand in the public sector driven by the changing needs of public infrastructures/services, and public buyers are not aware of what markets can offer in order to address this demand. On the other hand, because innovation is inherently a risky business, suppliers tend to be cautious in investing in R&D and innovation activities if they do not see clear signals of demand. Through PPoI public agencies can share risks, act as lead users to signal and articulate the unmet demand, and induce innovation through a 'pull' power (Uyarra and Flanagan 2010). The unique leveraging power of public procurement could help realize the critical mass needed to create and enlarge markets for innovations and establish related supply chains.

PPoI can function in different ways depending on configurations of demand and maturity of technologies (See e.g. Hommen and Rolfstam 2009; Uyarra and Flanagan 2010 for more detailed accounts of various forms of PPoI). Along the process of technology maturation, PPoI could support innovation through different stages of the innovation cycle, from idea development and feasibility study, to prototyping and commercialization, and to wider diffusion of innovative solutions. For PPoI that takes place prior to the commercialization stage, i.e. PCP, Rigby (2016) differentiates between an 'operational' mode of PCP where the public sector body conducts PCP for its own direct interests, and a 'policy' mode of PCP where the public body conducts PCP for a broader interest, as well as a hybrid mode of PCP which supports both operational and policy aims. Similarly, several authors have also differentiated between triggering and responding to innovation (needs), which may lead to different organizing of PPoI (Allman et al. 2011; Edler and

Yeow 2016; Miles et al. 2009). PCP can be useful in instances of triggering innovation and if used well can lead to a concrete procurement of innovation that transforms public services (Edler and Yeow 2016; Yeow and Edler 2012).

Compared with supply-side innovation policy instruments such as R&D subsidies and tax reduction, PPoI is believed to be able to achieve higher effectiveness in supporting business innovation under certain conditions. PPoI can generate immediate revenues for beneficiaries and thus significantly incentivize suppliers by reducing uncertainty associated with R&D investment. In theory, PPoI can drive firms' innovation activities without extra spending beyond the procurement budget. which is particularly meaningful when the context is economically challenging. Public procurement is considered especially effective for smaller firms in regional areas under economic stress and in distributive and technological services (Aschhoff and Sofka 2009). A more recent study in the European context has shown that PPoI has stronger positive impact on the probability of increase in total innovation expenditure than R&D grants (Guerzoni and Raiteri 2015). Another advantage of PPoI is that the policy design can incorporate strategic goals of socio-economic development so as to embed a mission orientation (Edquist and Zabala-Iturriagagoitia 2012). Moreover, as Edler and Georghiou (2007) noted, PPoI can serve as a cornerstone of a coordinated mix of instruments to systemically address policy problems. One early example in this regard is the EU Lead Market Initiative which is essentially a mix of PPoI policies, standardization, user subsidies and foresight (European Commission 2007b).

PPoI is not necessarily the result of policy interventions and can take place in a bottom-up fashion driven by the unmet needs of public authorities, as shown, for example, in the various case studies in Edler et al. (2005). However, successful conduct of PPoI cases in a bottom-up way is a challenging endeavour requiring various factors including but not limited to strong practitioner capabilities and institutional capacity. Public procurers, often constrained by the cost-saving agenda and legal inflexibility, can be too risk averse to orient their activities towards innovation. In this context, public intervention is believed necessary to provide the incentives and resources, and to support the building of skills needed to carry out PPoI. As classified by Georghiou et al. (2014), four broad categories of public interventions have been evident in practice. The first category is policies aimed at setting up friendly framework conditions, including adjusting procurement regulations to accommodate the goal of promoting innovation e.g. amendments of the European procurement directives in 2005. The second category is policies aimed at improving organization and capabilities, including networking and training schemes for public procurers e.g. the European Commission Lead Market Initiative networks of contracting authorities. The third category is policies aimed at identifying, specifying and signalling demand, including the development of special procedures to allow interactive learning between suppliers and users such as the use of competitive dialogues for projects involving highly uncertain technologies. The fourth category is policies aimed at incentivizing innovative solutions, including instruments to provide insurance for procurers and suppliers e.g. the Forward Commitment Procurement scheme in the UK (Uyarra et al. 2014). The existing PPoI policy schemes have mostly been on a voluntary basis, although in some contexts e.g. in the Korean New Technology Purchasing Assurance Program, mandatory procurement targets to support SMEs have been set for public agencies (OECD 2011).

There is some limited evidence on the conduct of PPoI and the barriers perceived and/or experienced by stakeholders. For instance, a number of reviews have identified a variety of shortcomings in the actual conduct of PPoI (Aschhoff and Sofka 2009; Bonaccorsi et al. 2012; Lember et al. 2007; Uyarra 2010, 2016). More recently a large-scale survey (Uyarra et al. 2014) highlighted a lack of organizational capabilities of all kinds and counter-productive incentive and organizational structures as some of the reasons for the lack of uptake. To a greater detail Yeow and Edler (2012) and Edler and Yeow (2016) offer some insights as to how public buyers have attempted to overcome some of the challenges of PPoI, both internally and through intermediation respectively. However, there has been very limited understanding developed regarding how public bodies organize themselves to respond to deliberate policy initiatives to promote PPoI. This understanding is crucial in order to open up the black box of policy implementation to promote PPoI.

Opportunities and Challenges of PPoI for Organizations

In times of austerity, public bodies are increasingly expected to do more with less (Uyarra 2010). Theoretically, PPoI requires no extra public spending on R&D beyond the normal procurement budget; it can generate immediate sales to firms to boost economy, and can address societal goals and generate positive externalities all these make a strong case from policymakers' perspective. A core argument by policymakers to promote PPoI has been the policy instrument's advantage of financing business innovation on the one hand and fulfilling public sector's needs with innovative solutions on the other. For instance, Innovate UK has addressed explicitly its consideration of upgrading the SBRI programme through its statement [that] '...SBRI encourages public sector organizations to take the lead customer role helping to develop and de-risk innovative solutions for which it might be the potential future customer.' (Innovate UK 2015).

Public bodies, rather than suppliers, are in fact the core target group that PPoIrelated policy interventions seek to directly influence. Unlike the target group of suppliers which often gets analysed in an in-depth way according to their demographic features (e.g. sizes, turnover and locations as conducted by Aschhoff and Sofka 2009; Guerzoni and Raiteri 2015; Uyarra et al. 2014), the target group of public bodies is rather neglected by the existing literature. This group could be diverse in terms of organizational characteristics, levels of governance and technical expertise. The existing policies targeting this group, as summarized by Georghiou et al. (2014), include those aimed to change the mind-set of public bodies towards supporting innovation, those aimed to build the capabilities and expertise needed in order to cope with technological and organizational risks associated with PPoI, and those aimed to create the institutional capacity including procedural flexibility for public procurers to carry out PPoI. Indeed, the Procurement of Innovation Platform point out that the implementation of PPoI can differ in terms of scope, ambition or budget; consequently, the extent to which a public body organizes themselves to undertake PPoI will vary depending on the size of the authority, the right political/high-level support, knowledge and experience in PPoI, and the availability of innovation products and services that the organization needs (ICLEI 2015).

The key benefits that PPoI could offer public organizations include higher efficiency/productivity and improved services/infrastructure which enable better performance in the functions those public organizations undertake. An example of achieving the benefit of higher productivity through PPoI has been documented in Caloghirou et al. (2016), whereby a Greek local authority through its purchasing power was able to offer improved and more efficient services to the public, which then generated potential opportunities for wider communities of users and suppliers. Other evidence of improved public services with benefits for the wider society includes those analysed in Meerveld et al. (2015) regarding the forward commitment procurement (FCP) approach in the UK context. For instance, the adoption of biodynamic technologies by the Rotherham NHS Foundation Trust led to considerable savings in terms of energy consumption and maintenance costs; in the case of zero-waste (i.e. fully recyclable) mattresses by the HM Prison Service, new solutions prevented landfill of retired products and hence achieved better environmental friendliness. The case of a closed loop recycled paper initiative in UK government ensured the safe and secure disposal of confidential documents whilst saving money for departments (through procurement) and achieving wider sustainability objectives (Yeow et al. 2015). From a wider perspective, as innovation has become increasingly of a systemic nature engaging different stakeholders, PPoI could offer immediate learning opportunities for departments that have not been traditionally involved in science and technology to become innovative, and contribute to a better functioning innovation system and furthermore to a more competitive economy.

PPoI poses a range of challenges at all levels; as Edler and Yeow (2016) point out "procurement is a complex market transaction with a high level of functional demands and risks involved that necessitate a broad range of capabilities" (p. 415). Adding the innovation dimension makes the challenge even greater—markets for innovation are, by definition, not established; different functions within public organizations produce different expectations and incentives to demand innovation, not to mention the high learning and adaptation costs within buying organizations. These, along with other factors, often lead public organizations to become overwhelmed. They lack crucial capabilities, are poor at linking up complementary skills and interest both internally and externally.

There is some literature in the PPoI arena that has identified conducive factors of the buying organization that can facilitate PPoI (Edler et al. 2005; Edquist et al. 2000; Izsak and Edler 2011; Rolfstam 2013; Rolfstam et al. 2009; Tsipouri et al. 2009; Yeow et al. 2015). Nonetheless, to establish those enabling factors poses severe challenges for the buying organization. Generally, the most important

challenges for PPoI from an organizational perspective as identified by Edler and Yeow (2016) are related to:

- 1. Understanding and assessing the market and its opportunities, both in terms of what is already offered and in terms of what the market could deliver if asked for by the public buyer (Edler et al. 2005);
- 2. Being able to understand one's need(s) and the functional improvements possible through innovation (Edler and Gee 2013);
- 3. Establishing incentive structures that reflect the risk-reward distribution, to ensure that those organizational units that bear the risk also share some of the efficiency or reputational gains associated with innovation. Additionally, PPoI needs capabilities and procedures to overcome risk aversion through risk management approaches (Tsipouri et al. 2009; Wilkinson et al. 2005);
- 4. Being able to implement the innovation and change organizational procedures, routines and capacities needed to do so (Kyratsis et al. 2010; Rolfstam et al. 2009; Rye and Kimberly 2007).

Literature has highlighted the challenge of innovation-related skills in procurement functions; for example, procurer competence has been identified as a possible concern when procuring innovative solutions. Authors have pointed to the possible discrepancy between the capabilities held by procurers and the skills required for procuring innovative solutions (Tassabehji and Moorhouse 2008; Yeow and Edler 2012) as the procurement of innovation requires a greater degree of in-house competence (Rothwell and Zegveld 1981). Commercial skills across UK central government have been found to be very inconsistent (Green 2010). Procurement of innovation requires different skills from normal procurement, and expertise from a wide range of functions, including and not limited to innovation necessarily. As a result, it has been recognised that PPoI is not and cannot be the responsibility of only the procurement or innovation department, but rather requires a co-operation of both types of skills (and sometimes even beyond) to achieve the potential of PPoI.

The UK SBRI Programme

The UK SBRI programme is a PCP programme developed based on the US SBIR programme. The origins of this approach to public procurement of innovation are in attempts by the US government to support small business and widen access to government procurement budgets. In the late 1990s the UK and then the European Union sought to imitate this approach, noting that it had a number of apparent advantages (Rigby 2016). The UK developed its own scheme and the EU followed this up by devising a framework for PCP that adopted the general principles of R&D service procurement but which ensured compliance with the EU's Treaty Principle of equal treatment and by avoiding state aid, sought to encourage

competition (European Commission 2007a). As time has gone on, EU Member States have themselves moved to develop their own national schemes and the UK has been joined by the Netherlands, and the government of Flanders in Belgium. The European Commission conducted a review of the state of development of the policies in Member States in 2011 and found that in nearly all countries of the EU, steps had been taken to prepare for PCP and in three countries there were schemes that were operating (European Commission 2011).

PCP may be conducted to serve the needs of government, where an operational need has been specified, or it may be conducted to deal with a general policy problem where the public or a private sector organization might be the ultimate user of the product or service delivered. Other choices for policy makers and the users of the policy include the following: should PCP be used or another of the options available through the directives, some of which allow for considerable scope in specifying innovation? Should procurement be conducted at the EU level, through EU initiatives of which there are a number, attempting to work cross-border in terms of specification and sourcing? Should Member States compel contracting authorities to use a specific programme or should they allow any organization to go it alone? What is the best way to build capacity to operate the process, nationally or locally? Should contracting authorities be required, as has been the case in the US since its inception to meet a target for the use of PCP, and if targets are set, how should they be monitored? There is therefore considerable scope in how PCP may be used, developed and supported.

The SBRI programme uses a two-stage competitive process whereby firms seek to demonstrate the scientific, technical and commercial feasibility of their product or service idea at the first stage, and develop a prototype in the second stage. The SBRI is used by UK government departments to engage with industry to define and meet (a) government's operational requirements (challenges) and/or (b) the need for more general innovations to address specific policy problems. In the latter case, the government will not itself be a purchaser of the innovation however, if left to itself, the market might not be expected to deliver solutions. It is expected that at the end of the SBRI process, innovations have been developed to the point where volume production is the next step and market competition can take place.

The UK SBRI was introduced in 2001 and has been in its current incarnation since its relaunch in 2009 when Innovate UK (then as the Technology Strategy Board) took responsibility for it. SBRI is predominately funded by the government department or public sector organization which has a challenge and is looking for an innovative solution. In addition to managing the scheme, Innovate UK is also an important financial contributor to it, providing funding where it is responsible for the formulation of challenges that address key public policy objectives, but also co-funding challenges that are led by, or which involve, combinations of departments. Figure 7.1 provides a comparison of the UK SBRI Process in relation to the US SBIR, the EU PCP Process and the new EU Innovation Partnership Procedure.



Fig. 7.1 UK approach to PCP compared with the EU and US

Case Study Background and Methodology

In the 2013 Budget, the Government announced that it would substantially expand SBRI among six key departments, thereby increasing the value of contracts awarded through this route from £40 m in 2012–13 to over £100 m in 2013–14 and to over £200 m in 2014–15. The 2013–14 amount represented 0.25% of procurement budgets. The aim of the target was to increase utilization of the programme "across all departments", and was one of two approaches taken to use the

Departments	Target spend for 2013–2014 (in £ Millions)
Ministry of defence	50
NHS (Heath)	30
Department for transport	7
Home office	7
Department for energy and climate change	3
Department for food and rural affairs	3

Table 7.1 Target departments and their respective target spend for 2013–14

programme to support SMEs.¹ The table below lays out the target departments and spend respectively (Table 7.1).

The authors were part of a study team commissioned by Innovate UK to conduct an evaluation of the SBRI Programme focusing on three aspects: (1) Use of the programme by departments and other public bodies and thereby understand the effect of the announcement of new departmental targets announced in the 2013 Spending Review; (2) Thorough review of the SBRI process by which the programme realises its mission and achieves its impacts; and (3) A detailed review of the impacts achieved by the programme. This paper focuses on the review of the programme from the perspective of the departments, in particular exploring the SBRI process in departments and the effect of new departmental targets on the organization of SBRI within departments.

This paper utilizes a case study methodology to present the findings of the study. According to Yin (1994, p. 23), a case study is "an empirical enquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and *multiple sources of evidence* are used". The case study approach allows organizational phenomena to be examined in actual situations, and its usefulness is "its ability to deal with a full variety of evidence—documents, artefacts, interviews and observations" (Yin 1994, p. 20). In case study methodology, one or a few entities are focused on and studied intensely. These include core events, processes and outcomes within specific contextual boundaries (i.e. the case) (Creswell 1994), and can include both qualitative and quantitative approaches (Yin 1994). In this study, we focus on how departments organize themselves to undertake SBRI and the effect the announcement of a target spend has on the organizing of SBRI.

As part of the study, semi-structured interviews were conducted with key individuals in 12 government departments and user agencies—6 target² and 6

¹The other step which the government took to promote the programme was to require all departments to ensure that their SME action plans identified how departments should make more use of SBRI (House of Lords Science and Technology Committee 2013, p. 9, page 9).

²The target for Health applies to both the Department of Health (DH) and the National Health Service (NHS) so both organisations were interviewed. However, interview discussions revealed that DH and NHS rarely fund competitions together or share common funding channels thus are treated as separate departments in our analysis. The team did not manage to interview MoD.

non-target, as well as firms and Innovate UK. This paper mainly draws on the interviews, some statistical data from an analysis of individual SBRI competitions as well as some desk research. The competitions analysed in the study covered the period from October 2008 to July 2014 in 17 departments. The semi-structured interview guide broadly covered the following:

- Role of the Programme in the procurement of innovation
- Management of the SBRI process, including engagement with industry
- Issues relating to route to market
- Effects of the targets set
- Overall impacts of the SBRI programme

We note the special case of MoD in this paper; its inclusion in our analysis is partial partly because we do not have direct interview data. Thus in terms of examining the way SBRI is organized within MoD, our interpretation is limited to the quantitative data and prior knowledge of the scheme and its operation. We do not feel that this causes any bias to the results; our intention in the study was to include departments which were prepared to use both policy and operational competitions and who might experience the organizational challenge of deciding between such competitions. The authors felt that MoD's use of SBRI might not be representative of the way in which the broad range of government departments experience and operate the scheme. More precisely, the MoD is a very heavy user of the operational side of the scheme and while some other departments appear to show sole use of either the policy or the operational competitions, In MoD, the emphasis is very strongly on the operational side with 76 such competitions and no policy procurements. Furthermore, the Centre for Defence Enterprise, which operates the MoD's part of the SBRI, operates a slightly different procedure.

In the following section, we present the challenges that departments face in implementation and operation of the SBRI and the different ways in which departments, both target and non-target, respond to the setting of a target for SBRI. We seek to determine if there is evidence that targets have had an effect upon the way the programme has operated.

Findings

Use of the SBRI Programme

Since the UK SBRI programme was relaunched in 2009, its use has risen steadily, with over £200 m spent through the programme by mid-2014, and the number of public sector bodies that have participated has also increased (70) although the majority of use of the programme is concentrated within a small number of departments. The total number of competitions launched during the study period was 195, with 186 awarded contracts by the time of analysis. On average, three

Departments	Number of operational competitions	Number of policy competitions	Total
MOD	78	0	78
NHS	23	0	23
Innovate UK	0	15	15
NC3Rs	0	15	15
НО	11	1	12
DEFRA	0	11	11
DAs	3	6	9
DH	9	0	9
DECC	0	7	7
Other	2	5	7
BIS	0	5	5
DfT	4	0	4
Total	130	65	195

Table 7.2 Count of operational and policy competitions (by department)

Source Innovate UK management data

Note This table includes all competitions that were launched, the number of which is 195 excluding PCP competitions. departments are sorted according to size of use

competitions per month were launched during this analysis period. Two-phase competitions have appeared as the more and more frequently used approach across departments, taking up 40% of all competitions in Period 1, 47% in Period 2, and as high as 73% in Period $3.^3$

As previously stated, PCP can serve to meet 'operational' or 'policy' objectives, or it can also occur in a hybrid mode (Rigby 2016). The table below details the number of operational and policy competitions across the various departments (Table 7.2).

For departments such as healthcare (DH and NHS) and MoD, competitions are exclusively 'operational', i.e. for their own use as end users. In contrast, for departments such as DECC, Defra, and those belonging to the BIS family (including BIS, NC3Rs and Innovate UK), competitions are exclusively in the 'policy' mode. For other departments the nature of competitions has been mixed. From the above table, it can be see that there were twice as many competitions in the operational mode compared to the policy mode. However, excluding MoD (who ran the most number of competitions and all of which were exclusively operational), we see that the other departments launched 52 operational competitions and 65 policy ones in total. The spending on each mode of competitions was fairly even.

Overall, departments expressed positivity towards SBRI; they believe the process is helpful to them, the scheme is relatively easy to use and is effectively

³The periods studied were: October 2008–August 2010 (Period 1); September 2010–September 2012 (Period 2); and October 2012–July 2014 (Period 3).

managed by Innovate UK. There was a relatively significant amount of 'hand holding' in the early days of SBRI use in individual departments (by Innovate UK), which the departments welcomed, but overall the extent of involvement of Innovate UK in individual departments' challenges and competition varied, depending on the level of complexity of the challenge, capabilities within individual departments and whether there was co-funding involved. However, departments generally did not operate on their own and Innovate UK is always involved in selecting challenges and implementing competitions. Similarly, the organization and management of the SBRI process varied across the various departments. One of the differences in the treatment of SBRI in various departments is the overall responsibility of SBRI. For some departments, SBRI comes under the remit of the procurement/commercial directorate (even though many of the procurement functions do not have a budget themselves) while in other departments, SBRI may sit under other directorates, e.g. economic growth, innovation or policy teams. For some, the delivery of SBRI can be the responsibility of more than one person/function. We observe that in most cases there is no overall ownership of the programme/scheme to take it forward (and champion it). This has been particularly the case for target departments who often ask the question "who's responsibility is it to meet the target?" In the areas of Health and Defence, SBRI has a high level of recognition and there is strategic use of the programme. Elsewhere, decisions about using SBRI are not considered systematically, or against all policy and operational requirements a department may have and against all the other options (i.e. normal procurement, forward commitment procurement, R&D contracts, R&D grants, participation in European Union procurement projects). This is discussed in further detail in the following section.

There is also variability in terms of departmental capability to originate, administer and finance a challenge. Two departments, MoD and DH/NHS have developed their own in house capability; this does not yet however make either completely self-sufficient in any of these respects for all types of challenge. MoD SBRI activities are mostly operated through the MoD Centre for Defence Enterprise. All the NHS England competitions are run through EAHSN and HEE but not all the DH ones and there is an NHS in each of the devolved administrations also which, if they run SBRI, they do themselves. The budget to fund SBRI competitions typically comes under the area or programme within a particular department where the challenge originated.

Effects of the Target Set

The target for the use of the SBRI programme was intended to increase the use of the programme amongst government departments (the target departments) but also to change attitudes about the use of the programme. While the targets appear to have led to an increase in use, overall the effect of the targets set has been somewhat negative and was met with some resistance by target departments.

On the one hand, departments considered that the target has given a well-justified emphasis to a scheme which has the potential to contribute in a number of ways to the UK economy and society through its use by a range of public sector bodies and raised its visibility. It has also made departments more aware of the procurement of innovation agenda generally, and of the possibility of realizing benefits for departmental policy and operational objectives from the programme. On the other hand, it caused some confusion and frustration as the targets set were regarded by some as "simplistic and inflexible" and even "ill-informed". The decision to set targets was taken by HM Treasury and communicated to departments by letter from the Cabinet Office. It was felt that while there was a rationale for the target based on SME engagement targets of government departments, the target was set without detailed consideration of how departments would actually use the Programme. In other words the target setting process did not look into how the programme would be used in practice, based on a forward planning exercise. While the target spend through SBRI for 2013–14 was £100 m, the average annual spend of all the target departments (since 2009) has only been around £18 m. Furthermore, the 6 year average of SBRI spend as a proportion of gross procurement budgets was only 0.08%; nowhere near the targeted 0.25%. This represented an enormous challenge for the target departments, one which some have taken head on while some others struggled slightly more to tackle.

Importantly, departments (both target and non-target) were not opposed to the setting or presence of a target per se, but stressed the importance of having targets that were reasonable and achievable. Many felt that a consultation process for target setting, and sufficient time to develop internally a realistic understanding of how the programme could be developed, used and how targets could be met would have been more productive and ultimately would have secured greater buy-into the notion of a target. Crucially, while PPoI has the word 'procurement' in it and does involve a purchasing activity (i.e. an R&D service), for many of the departments the money for SBRI does not come from the procurement budget (and in fact in many cases the procurement function did not have a budget). Furthermore, the expectation to increase use of the programme was not matched by corresponding levels of increased funds and even in departments where there was will to increase its use, they were hindered by a lack of money available to fund more competitions. The costs of operations of the programme consist of (1) contracts given to firms; and (2) administrative costs of departmental/Innovate UK staff. The UK programme was established without specific recommendations for how much the programme would cost to operate and the study team believes that no special budget for staff time exists within departments for the use of the programme with the exception of Innovate UK which, as the organization responsible for the support and administration of the whole programme, has mechanisms for assessing staff time allocated to SBRI activities. The respondents' concern with a lack of increased funding mainly relates to (1) rather than (2). Staff time spent on operating the programme is likely to be higher during the first years of operation as staff in departments acquire and develop the expertise to operate it. However, without regular use of the programme, such capacities may decline. Furthermore, the programme is complex, hence the need for the specialist help of Innovate UK, and although the scheme has been documented and procedures detailed, there are many aspects that cannot be written down and must be learned through practice.

In the period after the target began, spending rose significantly, although the amounts spent through the SBRI programme were well short of the proportion expected. When we compare the target and non-target departments, the former account for around 66% of total expenditure (of the programme), and non-target departments were not increasing their use of the programme at the same rate as the target departments.

Target departments highlighted the fact that there was no known consequence of hitting (or missing) the target. A lack of incentive (or even disincentive), whether financial or otherwise, to achieve the target spend made it difficult for departments to figure out a way to approach the announcement, and they did not know to what extent they should or needed to prioritise or push the presence of a target. In contrast, the US SBIR is a mandated scheme where departments are legally obliged to meet their targets for use and where sanctions are dealt if such targets are missed. While some departments appear to have run more competitions and increased their spend as a result of the target, this does not appear to be sustainable in the long-run without additional funds (SBRI-specific or otherwise) made available to do so. This is crucial for both target and non-target departments, as all departments interviewed mention the difficulties they are facing overall due to year on year budget cuts in the public sector.

As previously mentioned, ownership of the SBRI process also emerged as a key issue in determining how departments organize themselves to undertake SBRI. Each department had an SBRI contact or Champion, who is normally based in either procurement or an innovation function. There might also be a challenge user, who may be responsible for the origination of the challenge within the department and who can specify the need/challenge to which the technology is a solution. In the case of the target departments, the ambiguity of whom the responsibility of the target lay with was an added issue. In some cases it appears that procurement are responsible for delivering the target but as previously mentioned, procurement very rarely had the budget for SBRI (or even anything). Currently, no ministerial portfolio includes explicit reference to responsibility for the SBRI programme.

Nonetheless, the majority of interviewees cited that the presence of the target had (initially) increased awareness of SBRI within their departments and made people think about approaching challenges via this route to contribute towards the target (whenever possible). However, uptake of SBRI is still faced with the challenge of where to find the money for the competition in the first place.

We also consider whether the target setting process has been effective in changing attitudes and capabilities within departments to use the programme. Target departments believed that the removal of the target would not change their behaviour or attitude towards SBRI. For those who already run a substantial number of SBRI competitions or at least use SBRI regularly, the feeling is that they use SBRI to meet their needs regardless of whether there is a target or not, which is

just an added pressure/marker to hit, but without the appropriate incentive/ motivation/support. This is particularly the case for smaller departments, i.e. those with smaller targets and who use SBRI to a lesser extent (i.e. run fewer and smaller competitions). For the larger departments, the feeling is that the removal of targets might actually create a more positive attitude towards SBRI.

Contrastingly, many of the non-target departments indicated that a target for them would not be a bad thing as it might increase the use of SBRI within their departments and create the justification to ask for additional funding towards this spend and promote the view that innovation should support the work of government. However, this was spoken with a cautious note that the target set had to be realistic, feasible and achievable, as many were aware of the difficulties the target departments were facing in trying to hit their target spend. For one, target departments were frustrated by the annualised nature of these targets, which further creates artificial boundaries and potentially leads to results that do not accurately reflect the true picture of the uptake, use and success of SBRI within departments. SBRI competitions normally operate over a period greater than one year and the nature of innovation means that there are often external factors that influence the innovation process. It was suggested that consideration of flexibility in financial year limitations to achieve the target (e.g. over 3–5 years rather than annually) would be helpful and reduce the risk of departments attempting to 'game' the system. It also helps in situations where there is uncertainty over budgetary amounts for competitions and uncertainty over start dates.

We have also previously highlighted the role of Innovate UK; not only do they have overall responsibility for the scheme, they are also an important financial contributor to it, providing funding where it is responsible for the formulation of challenges that address key public policy objectives, but also co-funding challenges that are led by, or which involve, combinations of departments. This co-funding by Innovate UK has been an important feature of the use of the programme in that it has formed a substantial part of the money allocated to competitions. The degree to which Innovate UK money has been able to leverage departmental money into the SBRI competition is difficult to determine, but it appears that this spending is likely to have had some effect in helping departments raise their own spending on the programme, thereby helping them achieve the target. Whether this support of departments to achieve targets is desirable or practicable are difficult questions. Clearly, there may be competitions that might need the involvement of Innovate UK as a technical partner. But it is perhaps less justifiable that Innovate UK should in effect subsidize departmental use.

Discussion

The above has shown that there is no one-single way to approach SBRI or even use it. Here we discuss some of the implications of the current state of play of SBRI and the effect of the announcement of a set target. The SBRI programme aims to help realize departmental policy objectives and/or meet operational needs.⁴ To that end it is clear that it has been successful. Overall, for all departments, SBRI has also had the important and useful outcome of triggering more strategic thinking about their operational and policy objectives, and creative ways in which these problems might be solved. This might be through the use of SBRI but can also be through other tools and instruments. Crucially, such a view propels SBRI beyond an end in itself and instead is a means to an end (of achieving innovation procurement to meet departmental objectives). Nonetheless, even if SBRI is the way to go, there is still an underlying issue of money to fund the competitions.

Departments were not always aware of the benefits that arose from policy competitions since they were not direct beneficiaries of them. Consequently, they might not be able to assess the social and economic impacts which their competitions might have produced once the technologies were developed and commercialized. This 'pulling through' of the benefits into the commercialization stage is crucial and is something that still needs to be overcome.

SBRI is one within an arsenal of tools that can be used as a matter of routine to achieve departmental objectives but is not presently. One challenge is that the process of formulating a broad challenge area and a competition from a range of departmental objectives needs some new capabilities in departments, involvement from staff at senior level, and the accumulation of experience at all levels to make the process effective and efficient. One way to tackle this is to ensure that person responsible for overseeing the programme has an overview of the department (and its activities) and can make the link between how SBRI could support those activities effectively and thus would be able to drive the programme forward. This idea of an "innovation champion" has gained traction in the literature. Innovation champions, in order to have significant impact, are typically powerful individuals high up in the management structure of the organization (Wilkinson et al. 2005; Yeow and Edler 2012). Currently, responsibility for using SBRI lies at relatively low levels in many departments and is not considered as a policy tool that can be strategically. Similarly, embedding SBRI within used departments as business-as-usual may overcome some of the cost of constantly trying to reinvent the wheel with each competition. For example, regular challenge announcements are made on a six-monthly cycle in the area of Health. This not only allows them to allocate capacity and resources more efficiently, but also enables industry to better respond to these competition announcements, facilitating early engagement and better relationships between (eventual) buyer and supplier (Georghiou et al. 2014; Uyarra et al. 2014). Furthermore, SBRI is one of many tools within the PPoI portfolio. Thus, it should not be considered in isolation but needs to be seamlessly

⁴While the distinction is made by Innovate UK between policy and operational competitions, certain competitions may fall under both descriptions, and in any case all competitions whether policy or operational have the potential for the technologies to be sold beyond the lead customer.

woven into the fabric of the organization and used where appropriate to support policy and operational objectives rather than being an end in itself.

SBRI is not just for triggering innovation in firms to help departments achieve their policy and operational goals. SBRI also has an aim to contribute to the development of public sector bodies' innovation capability in a number of ways: it is meant to make government departments more aware of the opportunities that may exist for innovation amongst the UK SME supplier base; it is intended to provide departments with a greater understanding of how its own departmental responsibilities and needs can be discharged through more innovation procurement activities. These changes that are expected are what we term capacity and capability developments: they are a change in organizational capability and readiness to work in new and improved ways. It can be seen that as a result of long-term and continuous exposure to and success with SBRI, most departments have begun to think more strategically about procurement although not all have the administrative capability to 'routinize' SBRI in the policy making process.

In terms of the effect of the announcement of targets set, we have seen that the initial reaction has been a negative one. Nonetheless, most departments recognise that 'resistance is futile' and have 'got on' with trying to make sense of the target and finding ways in which it could be met. This was difficult, given the main underlying issue of a requirement to increase spend through SBRI competitions but not being given any corresponding increase in funding to achieve that, not to mention a lack of ownership of the target and understanding of the consequences of meeting or missing it. Some departments were able to increase their spend, but not to a level anywhere near their target amount. In some ways, a lack of sanctions with regards to not meeting the target has allowed departments to increase their SBRI use at comfortable levels without fear of repercussions and therefore achieving an initial aim of the target in the first place. However, that same uncertainty and ambiguity made departments unsure about the extent to which they should or needed to push the agenda, and therefore perhaps did not increase their SBRI activity level to its fullest potential.

It is quite clear that a one-size fit-all approach to the target (albeit one that is proportional to departmental spend) does not work. A more flexible target that takes into account the capacity and level of use within departments, departmental budgetary cycles and fluctuating rates of uptake will allow the scheme to be used more as well as more effectively, and consequently enable better reflection of the actual outcome against any target set. Encouraging and enabling departments to actively participate in the target setting process would also help to circumvent problems of unrealistic expectations, underachieving potential and frustration with the programme, and ultimately secure buy-into the idea through early engagement. Such steps have been proven to help overcome some of the challenges in the procurement of innovation (Edler and Yeow 2016).

In terms of dealing with and responding to uncertainty; the importance of good communication in times of uncertainty helps to create a viable environment in which decisions made can be undertaken. The decision was taken in HM Treasury and correspondence from the Cabinet Office to departments indicates that the target was communicated by letter to departments. The Government also indicated its policy in the Appendix to the House of Commons Science and Technology Committee in the summer of 2013 (House of Lords Science and Technology Committee 2013). Such "top down" communication was fairly unwelcomed, and appeared to undermine the efforts and importance of those who actually run the scheme at the departmental level.

The effect of such targets for savings may impact upon the ability of departments to implement and operate the SBRI despite the fact that SBRI may allow departments to save costs in the long run. There is no clear strategy within departments on how SBRI can contribute specifically to the realization of the major aims of the government's austerity programme.

An effective target relies upon a defined owner of the target and upon the existence, implied by the term "target", of some form of sanction if the target is not met. At present, departments do not have clear ownership of the programme, nor is there a clear penalty if the target is missed. SBRI champions within departments with the exception of a notable couple are not senior staff and have no programme office or permanent budget. For SBRI to become one of the tools of choice for the development of organizational improvement (through operational competitions) or for policy purposes (through policy competitions), the SBRI programme needs greater recognition within departments and those departments would benefit from greater capability in how to use SBRI.

Conclusion

Public sector bodies are key actors in the SBRI process; to this end it is important to understand the challenges they face in undertaking SBRI activities and explore how they manage and organize the process to overcome these challenges and thus show good practice. We have seen how UK government departments have operational competitions that aim to meet the needs of departments, but in a visionary way with technologies that do not yet exist. Similarly they have policy competitions to address the needs of the department, which may include the needs of a wider public or private sector client. They also can operate on their own in selecting challenges and implementing competitions, however they have not generally done so and have often been assisted by Innovate UK albeit in varying degrees depending on level of complexity of challenge, capabilities available within and experience of undertaking SBRI of the department involved. The level of involvement of Innovate UK can also be in financial terms and can influence the type or depth of competition posed.

Procurement of innovation is not (and cannot be) an activity limited to procurement departments; it is much wider and must involve multiple stakeholders within government organizations to fully respond to complex policy agendas. Capacity is required at the strategic level in terms of knowledge of how to use SBRI within departmental priority setting and how to formulate challenges, as well as at the operational level in terms of engagement with firms to fully exploit the programme. To a large extent, the responsibility for SBRI falls under the remit of innovation in the majority of departments but the involvement and enrolment of procurement is still vital.

Procurement is often seen as something of a policy panacea and repeated efforts to put procurement budgets to work to drive innovation have been met with limited success (NESTA 2012). Barriers to effective implementation that have been documented extensively in the literature include organizational, regulatory, a lack of skills and the risk averse nature of the public sector. In this article, we looked at some of the ways in which government departments organize themselves to undertake SBRI and how they have responded to the publication and expectation of an SBRI use target. The SBRI is an ambitious programme with multiple objectives, one of which is to improve the operation of Government departments. Nonetheless, to reap the benefits of it requires significant changes in mind set, practice and resources. This research has shown that there is a need for clear understanding of the logic and benefits of the programme, to see it as a means to an end and not just an end to itself, dedicated resources and clear lines of responsibility to fully reap the benefits of the programme.

The creation of the target has given the SBRI programme greater visibility in government; it has made departments more aware of the procurement of innovation agenda, and of the possibility of realising benefits for departmental policy and operational objectives through SBRI. To that end, it has achieved one of its aims. The challenges that are encountered in using SBRI are not so much in terms of willingness or understanding, but rather it appears to be hindered by resource constraints. This remains a challenge in times of austerity and continuous budget cuts.

The SBRI programme will have benefits on departmental budgets in terms of efficiency and effectiveness. However, to assess the extent of the savings properly, good data needs to be kept over a significant period of time, and the programme must be allowed to run without constant tweaks and changes so that any outcome can be attributed directly to SBRI.

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Part II Performance-Based Public Procurement

Chapter 8 Contractual Governance Mechanisms, Dynamic Capabilities, Transactional Specific Relationships and Supplier Performance in Uganda

Desire Kansiime, Joseph M. Ntayi and Arthur Ahimbisibwe

Introduction

The Public Procurement and Disposal of Public Assets Authority (PPDA) were established in Uganda in 2003 to promote public interest by regulating and monitoring public procurement processes of Procuring and Disposing Entities (PDEs). As part of routine compliance monitoring, the Public Procurement and Disposal of Assets Authority (PPDA) has been conducting annual procurement audits since 2005. In 2012, PPDA conducted 329 audits in 221 procuring and disposing entities. Findings of these Audits coupled with a stream of research continue to reveal poor supplier performance evidenced in terms of deviations from the contractual obligations e.g. cost, delivery time, deliveries not conforming to specifications and poor quality of products, services and works (Ntayi et al. 2011: Office of the Inspectorate of Government 2015).

Worse still, suppliers continue to think less of end users and shirk their contractual obligations (Ntayi et al. 2013; Inspector General of Government 2010; Inspectorate General of Government 2015). Whereas a budding number of researches propose insightful explanations for supplier performance, theory testing, data limitations, and

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absence of comprehensive studies drawn from various contexts still restrain against across-the-board generalizations (Mugabi et al. 2015). The main purpose of the study is to test the extent to which the dynamic capability theory explains supplier performance. The study employs a cross sectional research design using a sample size of 120 Central Government Procuring and Disposing Entities (PDEs) in Kampala and 240 service providers (suppliers). Results reveal that Transaction Specific Relationship and dynamic capabilities were significant predictors of supplier performance explaining 14.9% of the variance. However, contractual governance mechanisms was not a significant predictor of Supplier Performance. These results have implications for theory and practice, which we discuss in the chapter.

Background

Public Sector Procurement is a key area used for growth and socioeconomic transformation (Brookshaw and Teriovski 1997; WTO 2013). Globally, the public procurement spends for many countries has continued to increase, signifying the role public procurement plays in a country's economic growth and development. Efficient and effective public procurement may promote rapid economic growth while keeping both unemployment and inflation low. Additionally, governments can promote public interest by using procurement as a macro-economic tool (Revised PPDA Act 2014; ICAEW 2012). Locally, Uganda spends more than 65% of her budget on public procurement (Background to the Budget 2012, 2015). Scholars have argued for the implementation of sound public procurement policy (Mujabi et al. 2015) in order to bring immediate and tangible macroeconomic benefits, where more cost-effective procurement relaxes budgetary pressure and creates fiscal space.

Despite the introduction of PPDA Act in 2003, the government of Uganda has not effectively and efficiently utilized procurement as a macro-economic tool, yet procurement can have a substantial role to play in achieving the growth of the economy. Government inefficiencies can be traced in failure to articulate the concept of public interest, weak contractual governance mechanisms, dynamic capabilities, unclear transactional specific relationships to mention but a few. These issues have become of utmost necessity to pay attention to, since the Procuring and Disposing Entities (PDEs), regulators, suppliers and others interact in the course of going about their own business either in pursuit of "their own interest" or "public interest". In order to perform procurements, PDEs use a number of procurement methods e.g. Open International Bidding, Restricted International Bidding, Open Domestic Bidding, Restricted Domestic Bidding, Request for Quotations, Micro Procurement and Direct Procurement. These procurement methods define the size and degree of participation for foreign or local suppliers in public procurement. Whereas, local suppliers are recognized as vital drivers of growth and innovation, their participation is public procurement remains low. For example, a small proportion of SMEs are able to effectively tender for work and win contracts leaving a much larger proportion of firms unable to successfully integrate tendered contracts into their revenue streams (Access to the Public Procurement Market 2011). Most of the SMEs that have managed to access public procurement have done so through Micro Procurement, Restricted Domestic Bidding and Request for Proposal.

Supplier performance in Uganda remains a big challenge for public sector (Matovu 2013; Ntayi et al. 2012a). Available evidence reveals that most suppliers display opportunistic behavior by failing to fulfill their contractual obligations (Ntayi et al. 2011). Charging high prices for shoddy or none existent products and/or services supplied, poor quality services and products and late deliveries are a common phenomenon. Worse still, suppliers think less of end user (Ntayi et al. 2010a) and display high levels of contract violations (Office of Inspectorate of Government 2010). This state of affairs is changing the landscape of PDE's perception towards local suppliers and shifting preference for contracting big serious suppliers in order to reduce costs, increase flexibility, access better expertise, and improve quality and delivery (Ahimbisibwe 2014). Whereas a budding number of researches propose insightful explanations for supplier performance, theory testing, data limitations, and absence of comprehensive studies drawn from various contexts still restrain against across-the-board generalizations. The main purpose of the study is to test the extent to which the resource based, dynamic capability and transaction cost theories explain supplier performance.

The Access to the Public Procurement Market Report (2011) cites resource constraints and lack of capacity as constraints to supplier performance. However, we note that some of the suppliers exhibiting poor performance have considerable resources at their disposal to execute their contractual obligations. This perspective doesn't explain how resources help the supplying firms to survive in the dynamic environment. Besides, anecdotal evidence suggests that their procurement personnel have gone through 'continuous professional development'. This makes us to question as to whether the observed poor supplier performance is a function of resources or lack of dynamism in the available resources. A dynamic capability refers to "the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments" (Teece et al. 1997, p. 516) while "organizational competencies" refers to "patterns of current practice and learning" (Teece et al. 1997, p. 518), through which "firm-specific assets are assembled in integrated clusters spanning individuals and groups" (Teece et al. 1997, p. 516). The present configuration of resources in the supplying firms may be responsible for the increased pre and post transaction costs. As noted by Helfat and Peteraf (2003), firms aiming at better supplier performance need to continuously alter their resource base to take advantage of the attractive arenas in the wider supplier market. Adaptive capabilities in public procurement include but not limited to abilities to network, negotiate, use information to one's advantage, innovative bidding. This could open new strategic alternatives or "paths" for the firm through improvements in transaction specific relationships. This is possible because Eisenhardt and Martin (2000, p. 1107) have noted that dynamic capabilities are "the firm's processes that use resources ... to match and even create market change." When dynamic capabilities are looked as processes it includes product development routines, alliance and acquisition capabilities, resource allocation routines, and knowledge transfer and replication routines.

Since SMEs supply PDEs in a highly regulated public procurement environment, SMEs that focus on dynamic capabilities can modify an organization's operating routines to outperform those that do not (Zollo and Winter 2002). This is consistent with Kant (1878–1949) who notes that "everything in nature works according to laws." However, humans differ from other parts of nature in that humans alone can accord principles. Thus; Kant (1878–1949) recognizes the rationality and dynamism of human beings. Humans are rational in having a "conception of laws," or principles. The foregoing discussion suggests a link between contractual governance mechanisms and dynamic capabilities. Despite Kant's observation (1878–1949), Helfat and Peteraf (2003, p. 3) have noted that "Not all dynamic capabilities, however, act upon operating routines. This is supported by Teece et al. (2002), who underscore the significance of information processing capabilities that may enable the firm to identify the nature of the changing market environment and sense opportunities that it holds. In this study we conjecture that firms that possess dynamic capabilities will experience better buyer—supplier relationship and supplier performance.

Literature Review

Governance Mechanisms and Supplier Performance

Much of the prior research suggests governance as a cost minimising tool which protects against known exchange hazards (Williamson 1985). Many scholars acknowledge that relational governance and contractual governance mechanisms are essential to achieving supplier performance (Macneil 1978; Dyer 1997; Meryem 2011). Contractual-based governance involves the use of a formalized, legally-binding agreement to govern the relationship while relational governance literature argues that relationships are shaped by the structure of social relations (Gulati and Gargiulo 1999). In support, several authors suggest that when both governance mechanisms are used, higher performance is achieved (Poppo and Zenger 2002; Goo et al. 2009). Therefore, organizations need to choose governance structures that reduce the transaction costs efficiently. The transaction cost theory presumes that in absence of formal governance mechanisms, opportunism and uncertainties increase significantly (Williamson 1981). Contracts are considered as an ex ante governance tool used in monitoring transactions through contractual clauses. Therefore, suppliers with formal contracts are likelier to make investments to support the agreement and perform consistently to keep good relationships with buyers (Williamson 1985). This is attributed to the fact that possession of the contract is an assurance to the supplier of the buyers' commitment (Kulwani and Narayandas 1995). However, they are associated with high monitoring and enforcement costs and may indicate mistrust.

Dynamic Capabilities and Supplier Performance

Today, most businesses ignore the dynamic aspects of business environment that greatly affect performance. In this sense, performance can only be achieved if firms develop and apply their resources and capabilities (Eisenhardt and Martin 2000). Grant (1991) embraces the idea that suppliers are resources enabling firms to consolidate in-house competencies that they lack. Superior supplier performance is achieved if their capabilities for innovation and learning are increased (Helper 1991). The Resource based view explains an existence of a relationship between performance and firm-specific resources, which are valuable, rare, imperfectly imitable, and imperfectly substitutable (Amit and Schoemaker 1993). It is assumed that firms that possess the strategic resources have a competitive advantage which is a source of superior performance. In support, the dynamic capabilities view of the firm suggests that the ability to achieve a competitive advantage depends on deployment of its internal resources to the external environment (Teece et al. 1997).

Dynamic capabilities are defined as a firm's capacity to integrate, build, and reconfigure internal and external resources, using organizational processes to respond to changes in the competitive environment and to design new value creating strategies (Eisenhardt and Martin 2000; Teece 2007). This promotes timeliness, expedited action, and efficiency of the firm's response to the market environment (Tiantian et al. 2014). Absorptive capability represents a firm's capacity to recognize, develop and utilize external knowledge to create valuable new knowledge (Lane et al. 2006). Adaptive capability explains the firm's ability to quickly reconfigure and coordinate its resources in response to rapid environmental changes (Gibson and Birkinshaw 2004). And lastly, innovation capability is the firm's ability to come up with a new way of doing things for example a new good or a new quality of good; a new method of production; a new source of supply; or a new organizational structure (Adeniran and Johnston 2012). We therefore hypothesize that

H1 Dynamic capabilities and supplier performance are significantly and positively related.

Transaction Specific Relationship and Supplier Performance

Suppliers' performance affects buyers' outcomes on several dimensions. The prices influence firm profitability while quality of purchased items affects final quality of end products and its reputation with customers (Degraeve and Roodhooft 2001; Lane et al. 2001). Research however, indicates that supplier performance can improve if business-oriented relationships are created (Zaheer et al. 1998; Heide and John 1992). This is because their abilities are influenced not only by internal activities, but also by suppliers' activities. Morgan and Hunt (1994) assert that partners who demonstrate superior performance are highly valued. Other firms

commit to establishing, developing and maintaining strong relationships with them. As a result, delivery times shorten and costs reduce, while influencing longer-term performance by helping firms develop new capabilities (Dyer and Nobeoka 2000). There is scanty research that relates dynamic capabilities and relationships in achieving superior performance. Firms can manipulate various resources over which they have direct control to generate competitive advantage with superior performance outcomes (Rijamampianina et al. 2003). Some scholars argue that interorganisational relationships are a viable option for creating a competitive advantage through complementary resource combination (Pierce et al. 2002). This is because transaction specific relationships built on trust and information sharing influence behavior that leads to positive outcomes (Dwyer et al. 1987). Firms are compelled to agree to combine their resources which can improve performance (Barney 1991). In addition, proponents of the dynamic capability suggest that dynamic capabilities are assets which are firm specific, created over time and based on exchanging information (Amit and Schoemaker 1993) or a set of abilities that enable firms in a relationship to respond quickly to new opportunities, and quickly rejuvenate and integrate firms' resources (Adeniran and Johnston 2012).

Research indicates that supplier integrative capabilities can be utilized by buyers to sense changes in the supply environment by sharing information, seizing opportunities and making long-term changes to existing processes (Vanpoucke et al. 2014). Walter et al. (2006) assert that by building relationships, dynamic capability enables a firm to connect its own resources to those of other firms to improve performance. Therefore, in order to manage the complex relational sets efficiently, organizations must develop: the ability to absorb competencies from others and the ability to generate new knowledge (Henderson and Cockbur 1994). However, the mechanisms by which dynamic capabilities and transaction specific relationships affect supplier performance are not fully understood (Zott 2003). In spite of this, it is appreciated that they indirectly affect performance by reconfiguring resource positions (Eisenhardt and Martin 2000), operational routines (Zollo and Winter 2002) and operation capabilities (Helfat and Peteraf 2003). Possession of dynamic competencies leads to high response capability, reduced time to market and innovative capability (Shin et al. 2000). We therefore hypothesize that

H2 Improvements in Transaction specific relationship lead to improved supplier performanceSupplier performance.

Contractual Governance Mechanisms and Supplier Performance

It is suggested that firms can be successful and effective if they know how to manage their suppliers and commit resources to this activity (Kale et al. 2002).

Suppliers can be managed through the use of contractual governance mechanisms to control and monitor opportunism (Williamson 1979) and improve performance. Recent research by Ntayi et al. (2010a) indicates that there is poor supplier performance in the public sector. This is exemplified by late deliveries, high prices, and failure to match specifications and poor quality goods and services delivered. Most suppliers tend to hold key information regarding their products, quality and cost which helps them to pursue their own interests at the expense of a buyer (Wathne and Heide 2000). According to the Transaction cost theory, numerous hazards in exchanges require the drawing up of explicit legal contracts (Williamson 1985; Dyer and Singh 1998; Poppo and Zenger 2002). Formal contracts signify that the exchange is important to both parties (Ahimbisibwe 2014). Contracts involve Service Level Agreements (SLA) which specifies the responsibilities that build trust between partners and reduce supplier opportunism over time (Goo et al. 2009). They also provide for administrative procedures explaining ways of how to manage the relationship in cases of changes in specifications, effects of economy such as inflation, conflict arbitration and penalties (PPDA 2003). We acknowledge that well designed contracts enable joint planning, open communication and information sharing (Goo et al. 2009). However, for them to be effective they should be monitored (Ntavi et al. 2010b). We therefore hypothesize that

H3 Governance mechanisms would result in improved supplier performance.

Methodology

Research Design, Population and Sample Size

This study employed a cross sectional research design involving data collected at a defined time. Cross sectional studies offer a snapshot of a single moment in time. The Cross-sectional study allowed us to compare many different study variables at the same time without any additional cost. The study utilized a population of 140 Central Government Procuring and Disposing Entities (PDEs) with 5158 corresponding suppliers/service providers. The population of 140 PDEs excludes (foreign mission PDEs). A sample size of 120 Central Government Procuring and Disposing Entities (PDEs) and their respective service providers were chosen using a table of sample size determination by Krejcie and Morgan (1970). We obtained the updated list of the entities from the Public Procurement and Disposal of Public Assets Authority report, the body that is mandated with regulating public sector procurement in Uganda (PPDA 2011) and selected a representative sample using simple random sampling. The PDU were requested to avail a list of their suppliers from which 3 suppliers were randomly selected. Data were collected using self-administered questionnaires. All questionnaires were delivered to the

respondents (Procurement officers and suppliers) and retrieved after two weeks to allow the respondents ample time to answer the questions.

Measurement of Variables

All measurement items were derived from previous studies and adapted to suit the study. All measurement items were anchored on a 5 point Likert scale with 1 = strongly disagree and 5 = strongly agree. All Item scales were subjected to exploratory factor analysis prior to the final survey. All item scales with communalities less than 0.70 and factor loadings below 0.50 were dropped. All constructs produced a KMO measure of sampling adequacy above 0.70. Measurement items for Supplier Performance were derived from Ntavi et al. (2010a) who operationalized the construct using supplier performance measures like quality, cost and price, delivery time, user complaints, customer satisfaction and others. Consistent with Nunnally (1978), the measurement items yielded an acceptable Cronbach Alpha Coefficient of 0.712 and a Content validity index of 0.727. Contractual governance mechanisms were measured basing on the measurement items developed by Goo et al. (2009) and Meryem (2011) while the measures for dynamic capabilities were derived from the scales developed by Wang and Ahmed (2007). The corresponding Cronbach Alpha Reliability Coefficients statistics (α) and Content validity (CVI) indices respectively were: Contractual Governance Mechanisms ($\alpha = 0.702$; CVI = 0.750), Dynamic Capabilities ($\alpha = 0.703$; CVI = 0.852). Item scales for transactional specific relationship were based on the dimensions of trust and information sharing as operationalized by Morgan and Hunt (1994) and Stefanie et al. (2010). The corresponding Cronbach Alpha coefficient and the CVI were all above 0.7.

Common Methods Bias, Data Management and Analysis

Use of the questionnaire to collect data from the same source may generate biased data due to common method and single source variance inflation (Singleton and Straits 1999). To solve this problem, data were collected from both the PDEs and suppliers. Data on supplier performance transaction specific relationship, dynamic capabilities and contractual governance mechanisms were collected from the PDEs while data on transaction specific relationship, dynamic capabilities and contractual governance mechanisms were collected from the PDEs while data on transaction specific relationship, dynamic capabilities and contractual governance mechanisms were collected from suppliers. The measurement items provide little systematic bias of their measures (Podsakoff et al. 2003). Data were entered in SPSS version 23 and cleaned prior to analysis. Data were edited for wrong entries and missing data. The Missing Data Analysis (MVA) revealed missing values of 1.2%. Data were missing completely at random therefore pausing no serious threats to the study. We therefore filled all missing values using linear

interpolation. We examined multicollinearity by examining the Variance Inflation Factors (VIF). All independent variables produced VIFs of less than 2, in fact the highest VIF in the model was 1.48 meeting the suggested cut off point of 4 (Neter et al. 1996). We used the regression model with studentized residuals above two, to compute DFFITS and Cook's distance and found no threats with outliers. We examined the assumptions of parametric data and found that the data fulfilled all the assumptions of parametric data.

Results and Findings of the Study

Characteristics of PDEs and Suppliers

The response rate for both PDEs and suppliers was 86.96 and 51.39% respectively. Responding PDEs that had above 200 employees were 46.2%. This was followed by 35.0% of the PDEs that had 51–100 employees and 18.8% of the PDEs with 101–200 employees. The study revealed that 32.4% of the supplier firms employ employed between 11 and 50 employees followed by 31.9% that had 51–100 employees and finally only 0.5% suppliers had less than 10 employees. As regards organizational age, 81.1% of PDEs had been in existence for 20 years and above 2.5% of the PDEs had been in existence for 16–20 years while the remaining 16.4% had existed for a period less than 15 years. The percentage of suppliers' firms that had existed for 5–10, 11–15 and 16–20 years respectively were 4.23, 20.76 and 75% respectively.

Characteristics of the Unit of Inquiry

Analysis of gender composition revealed that 69.7% of the males constituted the respondents from the suppliers' firms as opposed to 68.8% from PDEs. The remaining 30.3 and 31.2% were females from suppliers and PDEs respectively. The average age of respondents for both PDEs and suppliers was 31–40 years of age. As regards their work experience, majority of procurement officers from the PDEs (61.1%) and the suppliers' firms (60.0%) had worked in these institutions for a period of 5–10 years constituting. This was followed by 38.8% of the employees that had worked for above 10 years in supplier firms and 29.2% in the PDEs. The remaining 1.2% had worked for 3–5 years in supplier firms and 9.7% for PDEs. The average education level for the respondents in both suppliers' firms (51.4%), and PDEs (73.8%) was a degree holder. This was followed by diploma holders (23.2, 13.8%) and lastly post graduates (19.5, 8.8%)in both supplier firms and PDEs respectively.

Relationship Between Variables

Table 8.1, presents the zero order correlations. The table reveals that there is a significant positive correlation between contractual governance mechanisms and Transaction Specific Relationship (r = 0.18, $p \le 0.01$), Dynamic Capabilities (r = 0.13, $p \le 0.05$) and Supplier Performance (r = 0.14, $p \le 0.05$). Similarly, Transaction Specific Relationship is significantly and positively correlated with Dynamic Capabilities (r = 0.16**, $p \le 0.01$) and Supplier Performance (r = 0.35**, $p \le 0.01$). There is a significant positive correlation between Dynamic Capabilities and Supplier Performance (r = 0.23, $p \le 0.01$).

Prediction Model for Supplier Performance

Regression analysis was run to explore the extent to which Contractual Governance Mechanisms, Transaction Specific Relationship and Dynamic Capabilities predict Supplier Performance. Results are presented in Table 8.2. Contrary to Hypothesis 1, Contractual Governance Mechanisms was not a significant predictor for Supplier

	1	2	3	4
Contractual governance mechanisms (1)	1.00			
Transaction specific relationship (2)	0.18**	1.00		
Dynamic capabilities (3)	0.13*	0.16**	1.00	
Supplier performance (4)	0.14*	0.35**	0.23*	1.00

Table 8.1 Zero order correlations

Notes *Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Table 8.2	Regression	model
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Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	В	Std. Error	Beta		
(Constant)	2.243	0.382		5.872	0.000
Contractual governance mechanisms	0.051	0.047	0.063	1.089	0.277
Transaction specific relationship	0.278	0.051	0.316	5.398	0.000
Dynamic capabilities	0.258	0.089	0.168	2.887	0.004

Dependent variable Supplier performance

R = 0.399; R Square = 0.159; Adjusted R Square = 0.149; Std. Error of the Estimate = 0.349; R Square Change = 0.159; F Statistic = 16.314; Sig. = 0.000

Performance. However, Transaction Specific Relationship and Dynamic Capabilities were significant predictors of Supplier Performance explaining 14.9% of the variance. The overall model was significant at 1%. The results suggest that suppliers who possess abilities to integrate, build, and reconfigure internal and external competences to address rapidly changing environments, will experience better Supplier Performance. Additionally, if transaction specific relationships are improved and developed through information sharing and trust, PDEs will benefit from increased Supplier Performance.

Discussions, Conclusions and Implications

Dynamic Capabilities is a significant predictor of supplier performance thereby confirming H1. This finding supports the work of Teece et al. (1997) who assert that the suppliers' ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments result in better performance. Teece (2007) notes that dynamic capabilities enable business enterprises to create, deploy, and protect the intangible assets that support superior long- run business performance. This study has revealed that successful supplying firms that develop distinct supplier skills and reengineer their business processes are able to deliver their business promises on time. This is possible because of the supplier abilities to reconfigure capacities required to meet PDE supplier requirements in a highly competitive environment. This could partly explain a growing trend of clusters of buyers coming together to procure services ('Monopsony') on the demand side and the creation of sophisticated 'Monopolies' who come together and 'compete' on the supply side in order to deliver a one stop shop of end to end services (Access to the Public Procurement Market report 2011). Public procurement employees in PDEs and suppliers have a tendency to form strategic alliances and develop coping strategies in ways that often sidetrack or sabotage state policies or public interest, leading to systematic deviation from the original intention of these contracts.

Suppliers have developed adaptive behavior through innovation and collaboration with suppliers who provide ideas and materials required in meeting their contractual obligations. Supplying firms have through business process reengineering involved their executives and technical personnel in creating new method of operation aimed at meeting their buyers/PDEs. Suppliers design and reconfigure the process of coming up with solution even when the challenges have never been encountered before. Leadership of the supplying organizations resist the temptation to be high handed and decisive in every situation thereby giving room for staff to innovative. Continuous transformation and learning from mistakes are normally used as vehicles for learning. A strong sense of and commitment to share organizational purpose and associated organizational priorities is encouraged. Supplier interacts frequently with internal and external stakeholders in order to acquire new knowledge. They periodically organize special meetings and network with other suppliers to acquire new knowledge. A good environment for knowledge sharing amongst organizational members is created. Learning process is ongoing and suppliers have managed to evolve into a pro-active way. Both staff and management participate in managing knowledge acquired. Suppliers' record and keep newly acquired knowledge for future reference.

Suppliers that perform better in PDEs tend to be retained and have better chances of being awarded contracts through Micro Procurement, Restricted Domestic Bidding and Request for Proposal. These established relationships represent a barrier for those suppliers who are not currently engaged with the public sector. Suppliers typically seek to be retained through improvements in service, while PDEs aim at finding reliable suppliers with whom they can build effective working relationships. This may induce more collaborative learning, relationships and efficiency-enhancing knowledge of the partner's structure and routines (Kumar and Nti 1998; Larson and Kulchitsky 2000). The foregoing imply that dynamic capabilities not only help firms to meet their contractual obligations but build their integrity and credibility thereby improving their chances of not being black listed by PPDA as stipulated in the PPDA Regulation 351(3). It is interesting to note that the PPDA has been blacklisting suppliers which are reported by Entities to have shirked their contractual obligations. These suppliers are prevented from participating in any procurement and disposal activities for specified periods of time.

Contrary to Williamson et al. (1975), our findings reveal that dynamic capabilities developed in a buyer–supplier transaction specific may be of application outside of the supplier relationship in which it was developed. One possible explanation comes from the degree of homogeneity among public buyers. PDEs in Uganda are not highly specialized institutions. This finding puts to test the notion of asset specificity, which is beyond the scope of this study and introduces the superiority of dynamic capabilities. Suppliers that fail to develop dynamic capabilities fail to access and maintain business relationships with PDEs. The fact that limited access to market research has been listed as one of the main reasons for not winning contracts suggests that businesses need to develop dynamic capabilities aimed at accessing more market information.

The findings revealed that transaction specific relationships are significant positive predictors of supplier performance confirming H2. These findings are consistent with earlier studies which have revealed that transactional processes at the buyer-supplier interface are positively linked to companies' overall profitability (e.g. Joseph and Rasheed 1995), the speed of new product developments (e.g. Dyer 1997) and customer satisfaction (e.g. Gunasekaran et al. 2001). Meira et al. (2010) have stressed that inter-firm relationships in general provide information flows and other competitive tools used to achieve performance in a dynamic and globalized business environment. A supplier's ability to best exploit relationship potentials within buyer-supplier relationships has become a critical success factor in securing and improving a company's overall performance. Suppliers are continuously forced to find new ways of improving cross-company material and information flows which act a precursor to supplier performance (Perea et al. 2000). The move from a company-specific view on the buyer-supplier relationships to a more integrated perspective on the relationship has been emphasized by Lambert and Cooper (2000). This finding contributes to literature by answering the concerns raised by Toole and Donaldson (2002) calling for more studies that establish the link between business-to-business relationships and performance.

Contrary to H3, Contractual Governance Mechanisms is not a significant predictor of Supplier Performance. This finding is surprising since contracts govern business relationships and failure to meet contractual obligations may lead to increased litigation costs. Extant literature suggests that if contracts are explicitly written, evaluated and monitored regularly, supplier performance is significantly increased. Use of well-designed contracts influences supplier performance significantly. However, it is the role of PDEs to implement strategies of periodic contract monitoring (Ntayi et al. 2010b) to facilitate better results as regards to supply of quality products and services on time. This would imply that suppliers should be involved in contract management so that they are aware of the consequences in cases of breach of contract. The absence of the significant prediction between Contractual Governance Mechanisms and supplier performance could be attributed to the weak enforcement mechanism of the Contractual Governance Mechanisms. Collusion among Suppliers and PDE officials to defraud the PDEs has increased thereby making the enforcement of contracts difficult. The absence of a strong enforcement mechanism creates no incentives for respecting contracts thereby affecting supplier performance. Collusion among suppliers has become an informal but highly institutionalized practice (Ntayi et al. 2012a)

Conclusions

Generally, the study shows that the transaction specific relationships and dynamic capabilities are significant predictors of the Supplier Performance. Although results revealed that the contractual governance mechanisms are not significant predictors of Supplier Performance, a significant positive relationship existed with between the two constructs.

Theoretical, Policy and Managerial Implications

This study contributes to literature by testing the dynamic capability theory to explain supplier performance. In a highly dynamic and competitive environment, suppliers would perform better if they redesign their internal processes with an aim of building relevant dynamic capabilities. All policy documents of supplying firms should emphasize the development of dynamic, adaptive and innovative capabilities. Special emphasis should be placed on developing transaction specific relationships especially through routine meetings and continuous communication during bidding and execution of procurements. Suppliers and buyers should be engaged in collaborative, cooperative and innovative processes that deliver value for quality procurements. PDEs and suppliers should create new systems and processes in procurement to increase their capabilities and competencies so as to improve supplier performance. This can be achieved through learning and adapting new methods of operation which are more efficient, encouraging continuous transformation of processes and systems in procurement, and implementing employees' ideas and suggestions. Special committees comprising of well experienced and competent individuals should be formed to write and manage contracts that are necessary to achieve better supplier performance.

Limitations to the Study

The study suffers from the weaknesses of a cross sectional study. Item scales were derived from literature and adapted to suit the requirements of this study. It would have been better to use context specific item scales. The parameters of the study were confined to those already utilized in previous studies which implied that big sample sizes were needed to detect these relationships.

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Chapter 9 Explaining the Policy-Practice Gap in U.S. Federal Contracting: Institutional Isopraxism and Performance-Based Acquisition

Bryan F. Mansfield and Keith F. Snider

Introduction

Performance-based acquisition (PBA; see, for example, Maddox et al. 2014) has been an important element of U.S. federal public procurement policy for over thirty years. The underlying rationale of PBA is that the government should not tell contractors how to perform, because doing so would stifle industry's creativity. Instead, the government should define its requirements in terms of the outcomes contractors must achieve without specifying the "how to" details. Such an approach, its proponents argue, improves competition and empowers industry to innovate and accomplish desired objectives more efficiently. Further, greater reliance on performance specifications in contracts should allow for reductions in government contract oversight processes and personnel, with concomitant cost and schedule savings. (Wehrle-Einhorn 1993, p. 10). Over the years, procurement policy-makers have pursued PBA's benefits through progressively prescriptive measures, ranging from (1) initial policy preferences for PBA in the Federal Acquisition Regulation (FAR) to

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(2) statutory preferences with mandatory reporting requirements and implementation goals to (3) high-level approvals for certain types of contracts not classified as PBA (Government Accountability Office (GAO) 2002).

At first glance, data suggest that this policy push had its desired effect. For example, in 2005, the Department of Defense (DOD; the US government's largest agency) reported using PBA techniques for 29% of total obligations for services contracts; in 2014, this had increased to 57% (Avramidis 2012). In practice, however, PBA's promise has sometimes gone unrealized. In 2002, the GAO found that several agencies that claimed to have applied PBA did not actually do so. Over half of the sampled contracts that were reported as PBA did not actually meet PBA criteria (GAO 2002, p. 2).

Of course, such "policy without practice" (GAO 2008; Rendon 2013) appears not only in the realm of federal contracting but rather wherever policy-makers' intentions fail to materialize in action. The policy sciences literature on implementation (see, for example, Pressman and Wildavsky 1984) calls attention to unwarranted assumptions that policy-making entities and policy-implementing agencies share common interests and have similar motivations. Institutional theory (Meyer and Rowan 1977) focuses on an organization's concerns with accommodating and responding to its external influences, such as competition with other organizations for political power and legitimacy, as well as for resources and customers (Kanter 1972; Aldrich 1979). Thus, an expectation that a policy pronouncement will lead to implementation with the desired policy outcome fails to account for differences in the institutional influences on policy-makers and policy-implementers and, more importantly, differences in the organizational responses of each to those influences.

Purpose and Method

In this paper, using PBA as a vehicle, we explore the policy-practice gap from the perspective of institutional isomorphism (DiMaggio and Powell 1983), which describes how an organization comes to resemble others under the influence of various external environmental forces. Rather than organizational form, however, our focus is on organizational actions or behaviors; thus we use here the term *institutional isopraxism*. Specifically, we describe policy-making entities as exhibiting *mimetic isopraxism* in their preferences for certain private sector practices and their desires to transfer those practices to government operations. Policy-makers may also employ *coercive isopraxism* to force subordinate implementing agencies to adopt those practices.

Institutional isopraxism provides a means to illuminate the origins of the policy-practice gap. Specifically, the very different sets of influences acting upon policy-making and policy-implementing organizations lead to different but rational and predictable organizational responses to those influences. We see this perspective as enriching the theoretical understanding of the policy process (Kingdon 1984; Stone 1988). Further, heightened awareness of and appreciation for the differences

in external influences on policy-making entities and implementing agencies may give each a better understanding of the other's actions and help lessen the distance between policy and practice.

The paper begins with a background description of PBA policy and its evolution within US federal contracting. It then presents an analysis of a sample of US Navy service contracts to illustrate the gap between PBA policy and PBA practice. This leads to the central arguments of the paper which explain the policy-practice gap from the perspective of institutional isopraxism, as well as some of the unintended consequences and deleterious effects of the gap. The paper concludes by describing a policy approach that acknowledges institutional influences and may help narrow the gap.

Background of PBA

The underlying rationale of PBA is that by describing the work in clear, specific, and objective terms with measureable outcomes, the government can focus a contractor's attention on desired outcomes rather than "how to" details (which are presumably not important). This approach, its proponents argue, unleashes private industry's creativity, resulting in both higher quality performance and cost savings. Other purported benefits include maximizing competition, promoting the use of commercial services, and shifting risk from government to industry (DOD 2012, pp. 8–9). In theory, the government can establish the performance outcomes, then step away and let the contractor perform. This rationale relies on the assumption that the requirement can be defined in terms of clear, specific, and objective terms with measureable outcomes.

While Edwards and Nash (2007, p. 354) note several attempts to use PBA prior to 1980, the first US federal PBA policy statement was issued by the Office of Federal Procurement Policy (OFPP) with OFPP Pamphlet Number 4 titled, "A Guide for Writing and Administering Performance Statements of Work for Service Contracts" (Avramidis 2012, pp. 7–8).

In the early 1990s, PBA gained momentum from several important initiatives. First, Osborne and Gaebler's (1993) influential book titled, *Reinventing Government*, promoted the view of government as focused on "steering rather than rowing"; that is, focused on policy outcomes rather than execution details. Second, the Clinton Administration's National Performance Review (later the National Partnership for Reinventing Government) advocated an orientation of government toward results and outcomes rather than on "red tape" details (Gore 1993). Third, Secretary of Defense William Perry's initiative to move away from military-unique specifications and standards led to an emphasis on performance-based and commercial standards in contracting (Fox et al. 2012). Finally, the general trend toward privatization, outsourcing, and the decline in the federal workforce (Nagle 1999; Abramson and Harris 2003; Gansler 2011) appeared to validate then-President Clinton's (1996) declaration that "the era of big government is over." Under such

constraints, government could manage outcomes but not details. Outsourcing the provision of government services so that there is less government influence on and interference with normal business activity is one political strategy. Such a strategy reduces the size of the government workforce under the philosophy that less government is better government (Pegnato 2003).

Under such conditions, the PBA concept grew from a policy preference in 1991 to a statutory preference carrying mandatory reporting requirements and implementation goals. Several agencies created guidebooks on using PBA, including OFPP, DOD, and an Interagency-Industry Partnership (Avramidis 2012, p. 9).

Origins of the PBA Policy-Practice Gap

The popularity of PBA is reflected in the growth of DOD's PBA implementation goals. In 2001, the Office of Management and Budget (OMB) created a goal of using PBA for 20% of total eligible services dollars obligated. OMB raised this goal to 40% in 2004, to 45% in 2006, then ultimately to 50% in 2008 (Avramidis 2012, pp. 59–61).

The National Defense Authorization Act for Fiscal Year 2002 required higher level approvals of contracts that were not performance-based. This rule was implemented in DOD as an interim rule in the Defense Federal Acquisition Regulation Supplement (DFARS),^{1,2} and although Congress later abandoned the higher level approval requirement in favor or more general urgings to use PBA to the maximum extent practicable, the requirement was never removed. As implemented in the Navy,³ a contracting officer faced with a complex services requirement would have needed the approval of an official at least two levels higher in the chain of command before awarding a contract that did not use PBA techniques.

The PBA policy initiative, including the implementation goals, certainly had an impact. Contracts identified as having used PBA techniques increased substantially from fiscal year 2005 to 2014. In 2005, DOD reported using PBA techniques for 29% of total obligations for services; in 2014, this had increased to 57%.⁴

¹In this paper, all references to the Federal Acquisition Regulation (FAR), the Defense Federal Acquisition Regulation Supplement (DFARS), and the Navy and Marine Corps Acquisition Regulation Supplement (NMCARS) are available at http://farsite.hill.af.mil.

²See DFARS 237.170-2(a) and DFARS 237.170-3(a). This requirement was later consolidated into DFARS 237.170-2(a).

³DFARS 237.170-2(a) provides flexibility to the agency to determine the specific approving official. Prior to 19 March 2015, the Navy had assigned the Head of the Contracting Agency or the Deputy Assistant Secretary of the Navy for Acquisition and Procurement as the approving official, depending on the dollar value of the contract (NMCARS 5237.170-2(a) through Change 13-04). Per NMCARS 5237.170-2(a)(S-90), only architect-engineer (A&E) services and personal medical services were exempt from the approval requirements.

⁴According to data from the Federal Procurement Data System—Next Generation (FPDS-NG), available at https://www.fpds.gov/.

However, as noted in a 2002 GAO report entitled, "Guidance Needed for Using Performance-Based Service Contracting," several agencies that claimed to have applied PBA did not actually do so. Over half of the contracts sampled by GAO (16 of 25) did not actually meet the minimum criteria for PBA (2002, p. 2); this indicates a gap between what policy-makers intended and what contracting agencies did in actual practice.

The Policy-Practice Gap: Level-of-Effort Services Contracts

To investigate the PBA policy-practice gap further, an exploratory analysis of a sample of US Navy contracts was conducted to investigate whether contracts that are designated as PBA reflect a proper application of PBA criteria. The sample focused on level of effort (LOE) contracts, a category of services acquisitions which is inconsistent with PBA's rationale. Thus, if a significant proportion of contracts designated as PBA is found to be LOE, the analysis helps confirm the existence of a PBA policy-practice gap.

Generally, services contracts define the contractor's obligation in one of two ways: by describing the required work, either in terms of the *completion* of one or more specified tasks, or by describing the required amount of *effort* (LOE, typically measured in labor hours) that the contractor must expend in performing one or more specified tasks (Cibinic et al. 2011, p. 1317). In US federal contracting, there is a regulatory preference to use the completion type, because it contractually obligates the contractor to produce an end product or result. However, regulations recognize that not all requirements can state a definite goal or target, or specify an end result, which is why LOE contracts exist. LOE includes time-and-materials (T&M) contracts, labor-hour (LH) contracts, cost-reimbursement term contracts, and firm-fixed-price LOE term contracts (FFP-LOE) (Cibinic et al. 2011, p. 1318).

PBA and LOE approaches are fundamentally incompatible: If one cannot define the work in terms of a definite goal, target, or end product—thus suggesting the use of an LOE contract type—one cannot establish meaningful performance outcomes as required under PBA. Therefore, a requirement that meets the conditions for LOE does not meet the conditions for PBA, and a requirement that meets the conditions for PBA does not meet the conditions for LOE. This incompatibility is reinforced in US federal acquisition policy [see, for example, OUSD(AT&L) 2014, p. 2; FAR 37.602(b)(1)].

This analysis examined a sample of Navy services contracts that were identified as performance-based, determined whether these contracts were completion or LOE, and then evaluated the LOE contracts more closely to determine whether PBA was applied according to US federal standards. Observations were also made regarding the supposed performance results, acceptable quality levels, and planned methods for evaluating performance.

The Federal Procurement Data System (FPDS) provided a list of all contracts with relevant characteristics (e.g., categorized as PBA; awarded by Navy sources)

from a 12-month timeframe (1 March 2014–1 March 2015); this population totaled 4785 contracts. A sample size of 50 was judged to provide a sufficiently large number to establish trends; statistical significance was not pursued. The 50 contracts for detailed examination were selected randomly from the total population.

As a first step, each contract in the sample was evaluated to determine whether it should be categorized as LOE or completion. Of the 50 contracts in the sample, 22 were identified as LOE, and 9 contracts were identified as completion. For a variety of reasons (e.g., inadequate documentation), the remaining 19 contracts could not be classified as either completion or LOE. Because this analysis focused on LOE contracts, contracts that were identified as completion or that could not be classified were not further analyzed.

The 22 LOE contracts were then evaluated according to four criteria listed in the FAR and the DOD Guidebook for the Acquisition of Services to determine whether PBA was applied correctly. Additionally, observations were made regarding the performance results, acceptable quality levels, and planned methods for evaluating performance; these suggested several trends which are discussed further below. The four criteria and the results of the evaluation are given in Table 9.1.

Based on the standards listed in the FAR and the DOD Guidebook for the Acquisition of Services, all minimum criteria must be met for a contract to be defined as PBA. Thus, if each of the criteria is met, PBA was properly applied; if at least one criterion is not met, PBA was not properly applied.

The evaluation above indicates that not a single LOE contract from the sample met all the minimum criteria for the proper use of PBA. Although some contracts included measureable, objective methods of evaluating performance, these methods were not tied to performance results. Notably, not a single LOE contract specified a performance result instead of a number of hours to be provided. The implication is ironic: The Navy could not properly apply PBA techniques to LOE contracts, yet it labeled LOE contracts as PBA. How can this be explained?

Incentives for Labeling LOE Contracts as PBA

Agencies, including the Navy, seem compelled to identify contracts as PBA whether or not this approach is proper. What incentives does the PBA policy initiative give to contracting activities? Aside from the preferential treatment given to PBA in the regulations, the PBA policy initiative motivated the contracting community to adopt PBA techniques in two key ways: (1) goals and reporting, and (2) required waivers for non-PBA contracts. Taken together, these strongly incentivize contracting commands to identify contracts as PBA, regardless of whether a PBA approach is used.

Some exemptions from PBA reporting are provided for certain types of services contracts (OUSD(AT&L) 2006); however, these exemptions do not include many types of services where PBA is not appropriate. Edwards and Nash, for example, argue that PBA is not practical for long-term and complex services (2007, p. 355),

Criterion	Evaluation result
The contract's performance work statement (PWS) describes a required result rather than either "how" the work is to be accomplished or the number of hours to be provided [FAR 37.602(b)(1)]	Of the 22 LOE contracts, 21 did not specify a performance result. All 22 specified a required number of hours to be provided
The contract includes measureable performance standards [FAR 37.601(b) (2)]	15 contracts did not include measurable performance standards. In 5 contracts, it could not be determined whether measureable performance standards were given
The contract includes a method for assessing performance against performance standards (FAR 37.601(b)(2))	1 contract did not include a method by which to measure performance against the standards. For 19 of the contracts, it was not clear whether this criterion was met; this was mainly due to inaccessibility of the Quality Assurance Surveillance Plan (QASP) for these contracts
The contractor's performance against the required standards is measureable through an objective process (DOD 2012, p. 9)	1 contract did provide an objective process by which to measure performance. As with criterion 3 above, for 19 of the contracts, it was not clear whether this criterion was met, due to inaccessibility of the QASP

Table 9.1 Evaluation of level-of effort contracts labeled as PBA

which may be appropriate for the LOE approach, yet the reporting exemptions do not completely cover long-term and complex services. Because LOE services contracts are not exempted from PBA reporting, activities have an incentive to identify them as PBA in order to meet PBA goals.

The second motivation, requiring higher level approvals for non-PBA contracts, may have also contributed to the misapplication of PBA. As noted earlier, The National Defense Authorization Act for Fiscal Year 2002 required higher level approvals of contracts that were not performance-based. In the US Navy, a contracting officer faced with a complex services requirement would have needed the approval of an official at least two levels higher in the chain-of-command before awarding a contract that did not use PBA techniques. Contracting officers were faced with a dilemma—either attempt to mask services requirements as PBA and report them as such, or submit a waiver to the approving official for every complex services contract. As demonstrated by the data, many contracting officers appear to have chosen to either misapply PBA or misidentify contracts as PBA.

Negative Effects of Applying PBA to LOE Contracts

This issue entails consequences more serious than a simple mislabeling. First, the examination of the sample of 50 contracts revealed that applying PBA to LOE contracts resulted in useless and distracting performance incentives. For example,

several sampled contracts contained a performance standard similar to the following: "100% of reports are timely, accurate, and complete." This standard should be obvious to any services contractor; it is hard to imagine a contractor altering its performance based on this standard. Other standards focused the contractor's attention on trivial elements of the overall performance, which may have distracted the contractor's attention away from important elements. For example, several contracts focused on grammatical correctness of reports. Describing a complex services requirement in terms of the number of grammatical errors ignores the inherent subjectivity in evaluating complex performance outcomes. Therefore, a contractor providing these services may have been incentivized to provide grammatically correct reports (which can be objectively measured), rather than, for example, an innovative solution to a complex engineering problem (which can only be subjectively measured). Employing such useless and meaningless objectives may distract attention away from truly important mission-focused standards, thus potentially risking harm to the government's objective.

Second, forcing the PBA approach on a complex services requirement requires substantial effort during both the procurement and administration phases. Because requirements that fit the LOE contract type do not have clear, specific, and objective terms with measureable outcomes, attempting to define such requirements in PBA terms has the potential to consume valuable time and create tension between the contracting officer and requirements personnel. The time and effort spent forcing the PBA approach on LOE services prior to contract award represents a cost to the government. Furthermore, the standards and acceptable quality levels, although meaningless or distracting, must be considered by the contractor in developing the proposal. This time and effort wasted prior to award represents a cost to industry.

During the administration phase, the contractor must perform to the required standards and acceptable quality levels, and the government must monitor this performance in accordance with the QASP. One sampled contract required that technical reports contain grammatical errors in no more than 2% of the lines. In this case, the contractor must review every line of these reports prior to submission to ensure that they contain no grammatical errors. Upon receipt of the reports, the government must also review every line, count the grammatical errors, and then record the number of reports meeting this acceptable quality level. Clearly, focusing on grammatical correctness not only distracts from truly important requirements; it also wastes time and effort.

Earlier we noted that the growth in PBA goals was accompanied by a growth in PBA obligations. This suggests that the PBA policy push was strong, and that the acquisition community responded to this pressure. However, the results reported above support the conclusion, shared by the GAO (2002), that this growth has been achieved, at least in part, with pseudo-PBA contracts; obviously, this was not what PBA policy-makers had in mind.

Insights from Institutional Theory

Institutional theory offers a conceptual grounding to make sense of this narrative of the PBA policy-practice gap. Specifically, the ideas of institutional isomorphism (DiMaggio and Powell 1983) highlight environmental influences that cause organizations to take on similar forms. Rather than form, however, we are concerned in this analysis of policy and practice with *action*, and so we use *institutional isopraxism* to highlight influences that drive organizations to act similarly.

DiMaggio and Powell (1983, pp. 150–154) propose three types of isomorphism —coercive, mimetic, and normative. The following discussion adapts their descriptions of these isomorphisms to develop the parallels in isopraxism:

- Coercive isopraxism occurs when an organization receives pressure (formal or informal) from another organization on which it depends, as in governmental or corporate hierarchical relationships. The dependent organization is pressured to take actions espoused or prescribed by the higher-level entity, as in the case of policy-makers directing the actions of implementing agencies.
- Mimetic isopraxism occurs in environments of uncertainty when, in order to resolve ambiguity about what to do next, organizations take actions that model those of other organizations—particularly other organizations that are perceived to be successful or legitimate.
- Normative isopraxism occurs mainly through professionalization. Organizations tend to act in increasingly similar ways as their members share common educational, occupational, and professional needs and experiences.

Regarding the PBA policy-practice gap, Fig. 9.1 provides a conceptual mapping of these isopraxisms in terms of various environmental influences that have been discussed earlier in this paper.

Mimetic isopraxism occurred when, amid calls for acquisition reform throughout the 1980s and '90s, policy-makers saw the PBA practices of the private sector as more efficient and effective—thus institutionally more legitimate—than the public



Fig. 9.1 PBA institutional isopraxisms

sector. The private sector's influence on policy-making entities was subsequently reflected in laws and regulations that promoted business-like, outcomes-based approaches in government, even to the extent of preferring private sector solutions through increased out-sourcing and privatization.

We see this mimetic influence as having been sufficiently strong that policy-makers pushed the adoption of PBA without first understanding some key implementation details—for example, the use of PBA in different types of contracts. Thus, PBA policy consistently lacked the nuances of practice that would enable effective implementation. DiMaggio and Powell note two aspects of politically constructed environments such as that in which PBA policy was made: "[P]olitical decisionmakers often do not experience directly the consequences of their actions; and political decisions are applied across the board to entire classes of organizations, thus making such decisions less adaptive and less flexible" (DiMaggio and Powell 1983, p. 150).

Early (roughly 1980s) PBA policy simply reflected a preference for PBA and thus had little coercive influence. We interpret this restraint as policy-makers' early intent that procurement agencies would similarly recognize the benefits of PBA and adopt—mimetically—the PBA best practices of their private sector counterparts. Normative influences might grow in the forms of such as training and educational programs in PBA. However, several years passed with no apparent widespread adoption of PBA, which suggests that agencies were not significantly influenced by private sector practices.

As perceptions of acquisition's problems continued, policy-makers began taking more directive and prescriptive approaches to pressure agencies to implement PBA, such as establishing goals, reporting requirements, and high-level approvals for non-PBA contracts. This resulted in coercive isopraxism with agencies aligning their actions to accommodate higher level pressures from the entities that control their resources and define their missions. Ironically, as Fig. 9.1 indicates, this coercive isopraxism apparently outweighed any significant mimetic and normative influences from the private sector, which over the longer term might have informed a more appropriate and effective PBA practice. (The dashed outline of the mimetic and normative influences indicates their weak or non-existent effect on agencies.)

Under this coercive policy influence, the message to implementing agencies was clear: Use PBA, or pay the costs of added effort. More precisely, the operative pressure on agencies was to label actions as PBA whether they were suitable or not. Under these circumstances, the motivations and incentives of the actors were clear, and the reactions were predictable. Braithwaite (2008) uses the term *regulatory ritualism* for the "tendency toward compliance in terms of data collection and reporting but where the regulatory impact on behaviors and outcomes is less clear" (Jarvis 2014, p. 249). Agencies displayed ritualistic compliance with policy by labelling non-PBA contracts as PBA.



Fig. 9.2 The policy push toward application

Figure 9.2 illustrates details of this policy practice gap in a 2×2 matrix with the variables suitability and application on the two axes. Policy makers are concerned with the *application* of PBA: If PBA is not applied to contracts, the benefits of PBA cannot be realized. In the practice of acquisition, however, agency contracting officers are concerned with details of individual contracts and whether a particular contract is *suitable* for PBA application. Ideally, of course, all contracts would fall in quadrants I and III; all suitable contracts and no unsuitable contracts would apply PBA. Past PBA policy, however, had the effect of pushing agencies to apply PBA to all contracts regardless of suitability, and thus toward Quadrant II the realm of the policy-practice gap. By implication, increasingly coercive policies will only widen the gap.

Quadrant IV, which represents cases of not applying PBA to PBA-suitable contracts, merits comment. Quadrant IV cases would presumably occur for reasons related to inadequate agency contracting capacity, such as inadequate training of personnel to recognize PBA-suitable requirements, or inadequate resources to apply PBA techniques. Ideally, the number of such "missed opportunities" would be low and so maintained through attention to agency contracting capacity. Agency capability may be enhanced through normative isopraxist influences such as training and education, as discussed earlier. As suggested in Fig. 9.2, however, the past PBA policy push had effect of diverting attention away from Quadrant IV cases and toward blanket application of PBA, regardless of agency capacity or other influences.

Narrowing the PBA Policy-Practice GAP

Consider the revised PBA policy push in Fig. 9.3. Here policy-makers' emphasis is on PBA suitability, specifically, on maximizing the number of PBA-suitable requirements. Considering our prior discussion, this seems proper for at least two reasons: first, only PBA-suitable contracts can actually yield PBA's benefits; and second, this push avoids the costs and wastes of ritual PBA compliance.

Past PBA policy emphasized application over suitability, which had the effect of discounting practitioner expertise in favor of what amounted to a numbers game with the objective of maximizing PBA awards. A new PBA policy emphasizing suitability would place a premium on practitioner involvement in terms of professional expertise and judgment as to whether a particular action was suitable for PBA or, perhaps more importantly, whether an action could be made to be PBA-suitable. Achievement of PBA-related reform would thus lie substantially in the realm of agency practice. Significant re-structuring of public procurement requirements toward wider PBA suitability would arguably represent more substantive reform than mere increases in numbers of PBA contract awards.

This suggests that policy-makers' desires for meaningful acquisition reform might be achieved by reducing reliance on coercive policies. With less coercive influence from higher, agencies might look to a greater degree to the private sector for best practices to model. They may be open to a greater extent to cultivating practitioner judgment and expertise through normative influences from the private sector via training and educational opportunities, as well as other professional interchanges. Figure 9.4 depicts this revised mapping of institutional isopraxisms.



Has PBA been applied to this contract?

Fig. 9.3 The policy push toward suitability



Fig. 9.4 PBA institutional isopraxisms to narrow the policy-practice gap

Summary and Conclusion

In this paper we have described the PBA policy-practice gap in terms of various institutional influences that drive organizational actions in response. The coercive influences from policy-making entities which emphasize goals, reporting, and high-level approvals have driven procurement practitioners to respond with ritual compliance, which jeopardizes the full realization of PBA's benefits in federal acquisition. Narrowing this gap between policy and practice, according to institutional theory, will require policy-makers to take a less coercive approach and promote instead polices that open agencies to mimetic and normative influences from the private sector.

In closing, we note two recent developments that may suggest movement in this new direction. First, in March 2015, the Navy removed the higher-level approval requirement by designating the contracting officer as the approval authority for non-PBA actions. Second, executive educational programs on performance-based logistics (PBL, the manifestation of PBA in the context of logistics support) have been established at the University of Tennessee.⁵ These programs are open to attendees from both the public and private sectors and use teaching materials that are developed from PBL cases in both sectors. Additionally, an international textbook on PBL has recently been published (Essig and Glas 2014). This suggests the presence of mimetic and normative influences in the PBL arena. Whether this relaxing of coercive influence in the Navy and the emergence of mimetic and normative influences in PBL will affect the current configuration of institutional isopraxisms remains to be seen.

⁵See http://globalsupplychainemba.utk.edu/exec-programs/strategy-relationships/pbl.asp.

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Chapter 10 A Price Review Framework for Maintenance, Repair and Operations Procurement Contracts in the Public Sector

Lian Kiang Tan and Shao Hung Goh

Introduction

Procurement is a vital clog in the supply chain of most organizations. Improving the performance of the purchasing function can make a significant contribution to the overall performance of an organization. In mature organizations especially, improved procurement performance has been shown to have a positive impact on financial performance (Schiele 2007).

Not unlike the typical arrangements in private enterprises, the public sector establishes various long term contracts to acquire services (such as maintenance of equipment). Due to the nature of such contracts that may span several years, cost escalation is usually included in the contractual terms for adjustment of manpower unit rates periodically to take into account inflation and targeted productivity gains. Manpower unit rates are usually priced in various tiers. The price adjustment methodology is generally straightforward, in that benchmarks against labour cost and productivity indices can be conducted, then applied to the various tiered rates.

On the other hand, cost escalations for indirect materials are more complex to handle within a contractual relationship. Indirect materials, also commonly referred as known as Maintenance, Repair and Operations (MRO) materials, are those parts that are not used directly in the production of goods or provision of services. Compared to direct materials, MRO materials have demand that is more internally driven, have order sizes that are small and account for a small percentage of dollar spend (but a large percentage of purchase orders) (Eisenmann 2001). Moreover, MRO parts come in a wide variety of forms. MRO has long been viewed as one of the least systematic and most problematic areas of purchasing (Barry et al. 1996).

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MRO material costs are typically managed using the fixed-price model or the cost-plus model. The former generally favors buyers who would bear little risk of price fluctuations in a volatile market. However, such benefits apply only if the unit rates are appropriately priced to reflect the true price of the material at the time the rates are fixed. The latter (cost-plus) model generally benefits service providers and is often linked to the "principal-agent" problem (Soudry 2007; Yukins 2010, among others). Conflict of interest arises when the agent seeks to increase its commissions through higher purchase prices, contrary to the principal's objective of seeking prices that are as low as possible. The agent has little motivation to reduce costs and this is unfavourable to the principal.

This research seeks to develop, via a case study, a price review framework for the procurement of MRO parts in public sector organizations where there has generally been a lack of attention on expenditures on such supplies. The secondary objective is in assessing whether the Singapore-based public sector organization in the case study had been cost effective in its MRO procurement.

Singapore has a hybrid centralized model of public procurement (Jones 2002). Government Procurement Entities (GPEs) are provided with the ground rules of procurement which must be followed, but are given discretion to interpret the rules in light of their operational needs and the type and amounts of goods and services to procure. Approval of lower value procurements is typically decentralized for greater efficiency and responsiveness (Singapore Parliamentary Report 2015). Under such a model, Singapore public sector organizations retain a large degree of autonomy in MRO procurement.

This research is centered on Department M, which has been selected as the subject of a case study, not least because internal historical data is reliable and well-archived within an Enterprise Resource Planning (ERP) system (SAP). In addition, Department M makes for an interesting case study, as it is a progressive organization that has adopted e-procurement for many years and procures through the Singapore Government Electronic Business (GeBIZ) system (www.gebiz.gov. sg). It is also not averse to procurement outsourcing and continuous improvement initiatives.

Department M is responsible for providing comprehensive maintenance services to public Organization A's entire fleet of vehicles. The former is measured on two key performance indicators (KPIs):

- a. Vehicle Serviceability Rate (SR)—Percentage of the fleet that is in serviceable status
- b. Repair Turnaround Time (TAT)—Percentage of maintenance service jobs that are completed within a targeted number of workdays

Factors that can affect SR and TAT include vehicle breakdown rates, repair lead times and very crucially the availability of MRO parts to support maintenance activities. While Department M has a pool of skilled technicians to maintain the motor vehicles, the procurement and supply management functions are deemed



Fig. 10.1 Flow of MRO parts along the supply chain

non-core competencies. As such, the procurement and supply management of MRO parts have been outsourced to Supplier L, a third-party logistics and sourcing company. Figure 10.1 shows the flow and management of MRO parts along the supply chain.

The working relationship between Department M and Supplier L is intended to be highly collaborative. Information sharing, joint forecasting and supply base development are critical success factors to achieve the desired outcomes of the collaboration. In theory, Department M practises Just-In-Time (JIT) inventory and practically holds zero inventory of MRO parts, while Supplier L is responsible for the transactional execution of initiating purchases from original equipment manufacturers (OEMs), performing quality inspections, warehousing, stock keeping and delivering MRO parts to the maintenance depots that are strategically located in various parts of Singapore.

At this point, it may appear that outsourcing procurement would be an easy way for Department M to achieve efficiency gains, but the reality is not that straightforward. While the literature does suggest that procurement outsourcing can potentially reduce operational costs by 15–20% (Brewer et al. 2014), a Deloitte (2014) global study found that the adoption of procurement outsourcing has been very slow. The main barriers include the need to gain a deep understanding and control of spend categories, as well as a shortage of skills. As this paper will also demonstrate, the re-pricing mechanism for the procurement of MRO parts is another area that requires careful examination. Prior to this study, it was not clear how effectively Department M had been managing its contract with Supplier L, and to what extent price escalations put forth by Supplier L for MRO parts had been well-justified. It should be noted that under the existing arrangement, Supplier L and Department M are both agents of Organization A, which could in theory exacerbate the principle-agent problem.

Literature Review

This literature review is organized into three mains parts. Recent developments in public procurement and management of public procurement performance are first discussed, followed by a survey of research on public contract renewal mechanisms. Finally, relevant research in the area of MRO procurement and the Linear Performance Pricing approach are reviewed.

The topic of public procurement has been dominated by e-procurement strategies in the past 10 to 15 years (e.g. Panayiotou et al. 2004; Croom and Brandon-Jones 2005, 2007; Gunasekaran and Ngai 2008). The benefits are numerous. For example, Neupane et al. (2012) studied fifty countries to explore the role of public e-procurement technology in reducing corruption in public procurement and found that transparency and accountability is the most important benefit from public e-procurement. Other benefits include increased competition among bidders, improved quality of work and services, and greater consistency in government procurement, which ultimately reduce corruption in public procurement.

Yet, despite the proliferation of e-procurement, there have been few discussions in the literature on public procurement performance management (Murray 2009). One example is Raymond (2008)'s paper which argued for the necessity of benchmarks for effective implementation of government procurement policies in a case study on Sri Lanka. Another example is Parker and Hartley's (2003) study on the role of transaction costs and the importance of trust in relational contracting in public private partnerships (PPP). The theoretical framework developed in that study was applied and illustrated through a case study of UK defence contracting, in an attempt to assess whether the use of PPPs will necessarily lead to improved economic efficiency. The case study highlighted a number of major potential transaction costs in defence procurement, arising from incomplete information, asset specificity and the resulting scope for opportunistic behaviour, which cannot be obviously offset by developing trust relationships. PPPs can be distorted by the incentives within the Armed Forces. Military personnel will not necessarily behave efficiently, since they neither share in any profits from efficient behaviour nor experience losses from poor performance. The conclusion of the analysis is that the use of PPPs will not necessarily lead to improved economic efficiency in defence procurement and that considerable care will need to be taken in negotiating PPPs, monitoring their performance, and handling their renewals.

The optimal way for long term relationships is to write long term contracts to which all parties commit, but the initial contract may no longer remain optimal and may need to be renegotiated (Laffont and Tirole 1990). Some researchers have even proposed that a systematic non-renewal of public sector contracts would be necessary to spur suppliers to provide good quality services. For example, Dalen et al. (2006)'s research suggests that in public procurement contracts, suppliers' incentives to produce high-quality services are maximized if 50% of the contracts are renewed, although the optimal rate of renewal rate has to be balanced against the cost of entry for new suppliers.

Jones (1997a) surveyed 53 public sector organizations in the UK and Republic of Ireland and found that about 70% of them always (or almost always) used fixed price contracts for their procurement activities. Jones (1997a) noted that the concept of a fixed price contract, often in the traditional form of a "bidding pool", is flawed. The process requires bidders to assess all the costs they may face at the outset of the contract and to predict the possible fluctuations in the market. In these circumstances, all or most of the risk is passed onto the suppliers. However, buyers will be aware that sellers will generally tend to have more information than buyers, in

trying to match and predict upward price movements. This information asymmetry itself may add to buyers' difficulties in correctly predicting and managing contractual risk. Incentivization within public sector contracts was suggested as a way forward for developing government purchasing. In a subsequent paper, Jones (1997b) described the pre-requisites and a methodology to enable government practitioners to secure an incentivized contract. Yet, one limitation of that study was that it didn't address how public organizations should handle contract renewals, to ensure that the re-tendered price represents a "fair" price.

In a study on the US defence industry, Rogerson (1994) pointed out that fixed price contracts create a type of "regulatory lag" such that firms may discover a way to lower production cost and keep profits created by such reductions until new negotiation takes this new efficiency into account and lower prices on future contracts.

Gautier and Yvrande-Billon (2013) studied operators in the French urban transport industry, whose incentives to reduce costs come from profit maximization during the current contract and from the prospect of contract renewal. They constructed a dynamic incentive scheme within a regulation model that captures these features. The authors showed that both the level of cost reducing effort and its repartition during the contracting period depend on the contract-type (cost-plus, gross cost or net cost contract) and specific incentives for renewal. They then estimated a cost frontier model for French bus companies to test their predictions.

While the literature review to this point has discussed public procurement and public contract renewal in general, past research papers uncovered have not made distinctions between procurement for direct materials, indirect materials (MRO parts) or services. As Wendin (2001) observed, although purchases of indirect goods may outpace spend on direct materials, acquisition of MRO goods has heretofore not been looked upon as a strategic issue. This attitude probably holds true as well in the public sector.

Barry et al. (1996)'s study of 58 firms suggests that there are three stages of evolutionary growth in MRO acquisition practices, which are accompanied by specific purchasing activities and processes, as well as common user interfaces and perceptions. Compared to private sector firms, public organizations appear to have a "preponderance" of Phase 1 activities which are basic purchasing processes, as various regulations prevent quick adoption of new procurement techniques. In comparison, Phase 2 organizations have enhanced procurement practices that streamline existing MRO purchasing in an effort to reduce price and enhance delivery flow, while Phase 3 ("world-class" MRO procurement) is characterized by the existence of a broad purchasing strategy that support overall corporate and product strategies.

Some researchers also distinguished between various strategies in handling MRO activities, but along the dimension of in-sourcing versus outsourcing. For example, Al-Kaabi et al. (2007) noted that outsourcing MRO procurement is not risk free and may make a company vulnerable to supplier opportunism. They identified four models of MRO procurement (fully-integrated, partially outsourced, mostly outsourced and wholly outsourced) in the context of the airline industry.

However, typical levels of performance in each model were not reported in that study.

Le Sueur and Dale (1998) studied the problems associated with MRO supplies, which include non-compliance with policies, lack of process standardization, absence of proper data management, mismanagement of data transfer systems and poor logistics management. They suggested that it is critical to establish expected service levels and translate them into procurement performance criteria. Croom and Johnston (2003) likewise argued that in the context of indirect (MRO) purchases, reduction in non-compliant buying by users is critical to the achievement of cost and efficiency gains from electronic procurement, and that internal customer satisfaction should be a key concern for e-procurement implementation.

The Linear Performance Pricing (LPP) strategy is one approach that has been used widely in the automobile industry to achieve focused cost reductions in the supply base. Yet, LPP has attracted only limited attention in academia (Newman and Krehbiel 2007; Proch et al. 2013). In LPP, a technical cost driver that is crucial for the product price of a sourcing category is first identified and it then serves as the basis of objective target prices (A.T. Kearney 2016). Regression analyses can then competitively link tier-one purchased component content and performance attributes to their cost drivers and subsequent tier-two supplier component cost.

Newman and Krehbiel (2007) examined the application of Linear Performance Pricing (LPP) by an automotive manufacturer that applied LPP models on over 50,000 stock-keeping units (SKUs). It was estimated that LPP models had directly and/or indirectly affected 85% of the SKUs. Benefits gained by using LPP include transparency of cost drivers, internal/external resource optimization, design optimization leading to lower cost of goods sold, better communication between tiers, and more focused negotiations throughout the entire supply chain network.

Proch et al. (2013) further extended the LPP concept and proposed a seven-step approach, which includes: definition of a suitable product group; identification of a performance parameter; collection and analysis of data; identification of potential cost reductions; classification of the supplier base; detailing of performance parameter and defining common measures. The first four steps take place within the company while the latter three are in cooperation with suppliers.

To round up, review of literature has suggested that research in MRO procurement in public sector organizations is practically non-existent. Although there is a wealth of literature on public sector procurement, only Barry et al. (1996)'s paper attempted to point out public sector organizations' lack of maturity in MRO procurement. While e-procurement has been widely practiced by governments in the past 10 years, it should be noted that e-procurement is still just a tool and it does not necessarily reveal what the "fair" price of a procured product is. The approach used in LPP holds some promise for application in the MRO space. However, one limitation of LPP appears to be that it does not necessarily take into account actual prices in the intervening period between the starting and ending dates of a study period. As such, outcomes of LPP analysis can be very sensitive to the choice of reference time-frames. It is also not always easy to identify common technical cost drivers for a large portfolio of MRO parts.

Approach

This case study on Department M first examines procured MRO parts associated with several vehicle types by classifying them according to whether they were critical to effective operations and whether the spends were sufficiently large to derive value from an improved procurement process. Figure 10.2 depicts a portfolio matrix that was used to classify the 11 vehicle types operated by Organization A on two dimensions: "criticality" and "value potential".

Vehicle Type F was characterized by both high criticality and high value potential. It was thus selected for this case study. Both qualitative and quantitative data were collected to support the research.

Qualitative data was obtained from standard operating procedures (SOP) documented in the Operating Manual (OM) and through interviews with Department M's key personnel who managed the contract with Supplier L. This helped in gaining an in-depth understanding of Department M's work processes and in recognizing the challenges faced in managing the contract.

Figure 10.3 shows the "as-is" internal process as adopted by Department M and Supplier L. Under existing guidelines, a price review was conducted every two years and bids were invited for all MRO SKUs. Should the best quote received for each SKU be deemed competitive, this quote would be accepted and the corresponding SKU placed within a "fixed-price" list. For other SKUs with unacceptable quotes (e.g. due to a lack of competition or reluctance of suppliers to commit to competitive multi-year fixed rates), these SKUs would be separately procured via a "cost-plus" contract with the lead procurement agent (i.e. Supplier L) and purchased on an "as-needed" (ad hoc) basis with short term rates. Based on the observations of this process, we can probably classify Department M as having Phase 2 "enhanced procurement practices", according to Barry et al. (1996)'s development model for effective MRO procurement. However, it should be noted that the fixed-price contract (as practised in the "as-is" process) passes nearly all risks onto the



Fig. 10.2 Portfolio matrix on MRO supplies by vehicle type



Fig. 10.3 Management of purchase prices of MRO parts ("as-is" process)

suppliers (Jones 1997a), who may buffer the risk by applying conservative price mark-ups. This results in the possibility that prices tendered may not be as market competitive as they could have been, even at the onset of the contract.

Quantitative data was collected from Department M's SAP system. SKU inventory data and past purchase records of these SKUs were retrieved. The data collected spanned the period from March 2013 to February 2015, during which 433 SKUs associated with Vehicle Type F were purchased at a total value of S\$3.79 m (Note: S \$1.40 = US\$1 as of Feb 2016). The purchase value for individual SKU ranged from S \$1.40 to S\$945,000. It must be emphasized that the spend analysis did not include certain high-value motor vehicle components such as engines and transmission/gearboxes. This may be explained by the "replace-and-repair" strategy adopted by Department M to maintain a float of such components termed "repairables". Faulty repairables were then repaired and recirculated back into the float pool.

A Pareto chart was constructed to rank the MRO SKUs according to spend in descending order (Fig. 10.4). The Pareto 20/80 rule suggests that top 20% of items would typically account for about 80% of the total value. However, in this case, it was observed that 80% of the total spend was attributable to only 5% of the SKUs (about 21 SKUs). Analysis of just the top-21 SKUs was insufficient as it would not cover an adequate range of SKUs required to provide insights on price trends. The scope of the study was therefore extended to the top 10% of SKUs that accounted for 88% of the total purchase value.



Fig. 10.4 Pareto analysis on MRO parts

43 SKUs were consequently selected for analysis and the existing pricing method for each SKU was identified (see Table 10.1). It was found during the study that while the "as-is" process guidelines seemed to be sound, they were not always adhered to and the pricing methodology selected for an SKU may at times appear to be haphazard, without any clear strategy or justifications.

External data on commodity price indices (Department of Statistics Singapore, 2015) was obtained to support data analysis and to benchmark the effectiveness of managing the purchase prices of MRO parts. Three price indices were considered:

- a. Imported Price Index (IPI) is an indicator that monitors price trends of imported goods into Singapore. Import price is valued at CIF (cost, insurance and freight).
- b. Singapore Manufactured Products Price Index (SMPPI) is an indicator that measures price fluctuations of manufactured goods in Singapore.
- c. Domestic Supply Price Index (DSPI) is an indicator that measures prices fluctuation of goods manufactured in Singapore or imported which are retained for use in the domestic country. Import price is valued at CIF while locally manufactured goods are ex-factory prices.

Among the three indices, DSPI is the most appropriate as it measures price fluctuation of goods retained for use in the domestic economy. In addition, supply chain costs have already been factored into these indices. DSPI thus provides this research a suitable platform to conduct benchmarking on price fluctuation of MRO parts. Major MRO parts can be categorized into various commodity groups, each

SKU	Description	Existing pricing method	DSPI CG	2-yr Qty	2-yr value	Value (%)
SKU01	Car battery	Fixed price	CG01	2008	\$944,587	24.92
SKU02	Tyre	Fixed price	CG02	1202	\$426,487	11.25
SKU03	Valve for tyre (Plastic)	Cost-plus	CG05	265	\$348,990	9.21
SKU04	Lubricating oil (Hydraulic)	Cost-plus	CG04	4550	\$207,120	5.46
SKU05	Actuating cylinder assembly	Cost-plus	CG08	198	\$164,796	4.35
SKU06	Steering system	Cost-plus	CG08	649	\$124,835	3.29
SKU07	Air drier	Cost-plus	CG08	97	\$120,776	3.19
SKU08	Lubricating oil (Engine)	Fixed price	CG04	1,900	\$91,960	2.43
SKU09	Propeller shaft assembly	Cost-plus	CG07	71	\$73,891	1.95
SKU10	Transmitter	Cost-Plus	CG09	157	\$72,731	1.92
SKU11	Lubricating oil (Gear)	Fixed price	CG04	1,250	\$66,250	1.75
SKU12	Electric motor	Fixed price	CG06	96	\$57,523	1.52
SKU13	Speedometer	Cost-plus	CG08	82	\$56,835	1.50
SKU14	Anti-lock brake control	Cost-plus	CG09	22	\$55,194	1.46
SKU15	Drag link-tie rod, 52 mm	Cost-plus	CG08	107	\$39,055	1.03
SKU16	Warning buzzer	Fixed price	CG09	76	\$30,590	0.81
SKU17	Shock absorber	Cost-plus	CG08	321	\$30,322	0.80
SKU18	Drag link-tie rod, 33 mm	Fixed price	CG08	110	\$27,830	0.73
SKU19	Vehicle light unit (Rear)	Cost-plus	CG01	118	\$26,760	0.71
SKU20	Air brake chamber	Fixed price	CG08	131	\$24,918	0.66
SKU21	Brake disc (Front Wheel)	Cost-plus	CG08	132	\$22,614	0.60
SKU22	Transmitter (Pressure)	Fixed price	CG09	118	\$22,391	0.59
SKU23	Starter motor	Cost-plus	CG06	8	\$21,064	0.56
SKU24	Fuel lid filler opener	Cost-plus	CG08	109	\$18,863	0.50
SKU25	Plastic light lens (Red/Yellow)	Cost-plus	CG01	458	\$16,624	0.44
SKU26	Vehicle light unit (Front)	Cost-plus	CG01	64	\$16,555	0.44
SKU27	Vehicle seat frame (Rear, Right)	Fixed price	CG08	21	\$15,263	0.40
SKU28	Vehicle seat part kit	Fixed price	CG08	108	\$14,656	0.39
SKU29	Single-pointed bar face knob	Fixed price	CG08	636	\$14,628	0.39
						(

Table 10.1 Contract pricing method for top-43 SKUs

(continued)

SKU	Description	Existing pricing method	DSPI CG	2-yr Qty	2-yr value	Value (%)
SKU30	Wiper arm	Cost-plus	CG08	44	\$14,307	0.38
SKU31	Wiper blade (Front, Std Length)	Cost-plus	CG03	1,601	\$13,859	0.37
SKU32	Fan switch	Cost-plus	CG09	216	\$13,288	0.35
SKU33	Clutchmaster cylinder	Cost-plus	CG07	83	\$12,997	0.34
SKU34	Switch	Fixed price	CG09	324	\$12,931	0.34
SKU35	Vehicle seat belt (Front)	Cost-plus	CG08	60	\$12,782	0.34
SKU36	Vehicle seat frame (Rear, Left)	Fixed price	CG08	16	\$11,629	0.31
SKU37	Wiper blade (500 mm)	Cost-plus	CG03	1,331	\$11,521	0.30
SKU38	Wiper blade (Rear)	Fixed price	CG03	524	\$11,450	0.30
SKU39	Groove pulley	Fixed price	CG07	47	\$11,023	0.29
SKU40	Clutch plate	Cost-plus	CG07	24	\$10,924	0.29
SKU41	Power cable	Cost-plus	CG10	10	\$10,884	0.29
SKU42	Reverse warning sensor	Cost-plus	CG09	49	\$10,732	0.28
SKU43	Change over tap (Fuel tank)	Cost-plus	CG08	64	\$9996	0.26

Table 10.1 (continued)

with its own sub-index. Table 10.2 shows the commodity groups that are relevant for subsequent benchmarking.

Each of the 43 SKUs identified earlier was further examined to determine the most appropriate DSPI commodity group (CG) that it belonged to. The actual purchase price in March 2013 was rebased to an index of 100% and purchase prices in the subsequent months were converted as a percentage of March 2013s purchase price. Exceptions were made for every SKU without a purchase price in March 2013. For such cases, the first available purchase price between March 2013 and February 2015 was used and rebased to 100%. Similarly, the corresponding DSPI for the same period was rebased to 100%. These adjustments are essential for effective benchmarking on a well-defined baseline (New Zealand Government Procurement Development Group 2010).

Figure 10.5 shows (after the SKUs have been classified by commodity groups) a portfolio representation with three dimensions—"Purchase Volume (Quantity)" on the x-axis, "Critically" on the y-axis and "Total Spend" represented by bubble size.

From Fig. 10.5, SKUs from commodity groups CG01, CG02 and CG04 are clustered in the region characterized by high purchase quantity and high critically. These SKUs should be prioritized if improvement actions are to be taken.

DSPI	Commodity group description
CG01	Electrical machinery and apparatus
CG02	Rubber tyres, interchangeable tyre treads, tyre flaps and inner tubes for wheels of all kinds
CG03	Articles of rubber
CG04	Petroleum oils and oils obtained from bituminous minerals
CG05	Tubes, pipes and hoses, and fittings therefor, of plastics
CG06	Power-generating machinery and part
CG07	Transmission and crank shafts; housings and plain shaft bearing; gears; ballor roller screws; gearboxes and speed changers; flywheels and pulleys; clutches and shaft couplings; articulated link chain; parts and accessories of the motor vehicles
CG08	Parts and accessories of the motor vehicles
CG09	Elec app to switch protect connect to or in elec circuits; elec resistors and potentiometers excluding heat resistors; bases with 1 app for elec ctrl
CG10	Equipment for distributing electricity

 Table 10.2
 DSPI commodity groups



Fig. 10.5 Portfolio of MRO SKUs by commodity groups

Findings and Recommendations

Figure 10.6 shows the plot of the 43 SKUs on the scales of an actual price paid index versus an expected price index, where expected price was based on the DSPI. The "market-aligned performance" line represents the cases in which Organization A paid exactly (or almost exactly) the same rate as what would be expected. As shown in Fig. 10.6, a majority of SKUs fall below the "market-aligned performance" line. As such, it appears at first glance that the MRO



Fig. 10.6 Actual versus expected price for top-43 MRO parts for vehicle type F

pricing efficiency at Department M had been fairly good, with actual price paid generally below the expected price. This analysis is however not weighted by volume or by spend, nor does it take into account data points between the start and end of the study periods. As will be explained shortly, such an approach may overstate or understate actual procurement performance.

The 43 SKUs that were selected for analysis were classified into the 10 commodity groups as listed in Table 10.2. For each SKU, a time-series analysis was plotted to compare item purchase price and DSPI while regression analysis was added to test the correlation between these two variables. The R-squared values (i.e. the coefficient of determination that ranges between 0 and 1) derived from regression analysis denote the strength of the correlation between item purchase price and DSPI.

This analysis is similar to the LPP (Linear Performance Pricing) method, in that it tracks the actual price paid against an expected price, except that the DSPI is used as a proxy for a technical cost driver. Moreover, the time series analysis takes into account not just the price paid at the end of a period, but also price changes that may have taken place in the intervening period. This distinction is important, as (for example) prices may have reset to market rates at the end of an analysis period, but inefficiencies and over-charging could still have occurred prior to a "mark-to-market" re-pricing event. To address the shortcoming of the method of

Rating	Definition
1	Very poor-purchase price is not responsive to decreases in benchmark
2	Poor—purchase price declines at a slower rate than decreases on benchmark; OR Purchase price increases at a faster rate than increases in benchmark
3	Neutral-purchase price is consistent with benchmark
4	Good—purchase price increment is generally lower than increases in benchmark
5	Very good-stable purchase price despite highly volatile benchmark
NA	Inconclusive—purchase price is uncorrelated with the underlying benchmark, due to various factors such as "end-of-life", scarcity and exclusivity

Table 10.3 MRO procurement performance rating scale

analyzing end-of-period actual versus expected prices, a spend-weighted trend analysis needs to be conducted and a rating system established.

A simple rating system (Table 10.3) has been designed to rate the effectiveness of Department M in managing Supplier L's performance. This rating system enables performance to be quantified, simplifies the presentation of outcome analysis and facilitates the benchmarking of SKUs from different commodity groups on a common measuring scale.

For illustration, Fig. 10.7a, b show the times series and regression analysis conducted on two MRO parts (SKU05 "actuating cylinder assembly" and SKU32 "fan switch") that belonged to commodity groups CG08 and CG09 respectively. Both SKUs were sourced by Supplier L under the cost-plus method in the time period studied.

It can be observed from Fig. 10.7a that the DSPI for the relevant commodity group trended up and the price paid (Px%) for SKU05 had followed suit (albeit with a lag, which can probably be attributed to the time needed to work through the lower-cost inventory in the supply channel). The R-squared value is 0.7077, indicating a good correlation between the two time series. In this case, it can be concluded that the purchase price had been well-managed and Organization A was likely to have paid "fair" market rates. A rating of "3—neutral" is assessed.

On the other hand, the variability of price for SKU32 was well above that for the underlying DSPI and the two time series show poor correlation (Fig. 10.7b). The re-pricing events appear to have led to price increases that were excessive, suggesting a poor sourcing outcome. The trends for this SKU also perhaps underscore the limitation of the approach of comparing expected and actual prices, for the conclusion would be highly dependent on the time reference point at which the comparison was conducted. Using March 2013's price as a baseline, a snapshot of price taken in December 2014 would not have detected the excessive price increase that occurred between April and September 2014.

The Appendix summarizes the trend analyzed for each SKU and benchmarked with the DSPI trend for the same period. The R-squared value is also presented and an overall rating for each commodity group is assigned. It could be observed that after rate reviews, four commodity groups (CG01, CG02, CG04 and CG09) saw higher prices than what the relevant benchmarks could reasonably justify, while five





Fig. 10.7 a Price trend analysis for "actuating cylinder assembly" (SKU05). b Price trend analysis for "fan switch" (SKU32)

groups saw prices that were in line with or better than expectations. The procurement performance for one commodity group (CG08) is inconclusive (due to the wide range of SKUs within this group). This is a weakness of the proposed method, which does not work well for commodities or spend categories that have numerous underlying cost drivers that may have poor correlations with each other or for unique parts that may command a scarcity premium.

Commodity group	% Total spent (A)	Weight (B = A/T \times 100%)	Rating (C)	Weighted rating $(D = B \times C)$
CG01	26.51	39%	1	0.39
CG02	11.25	17%	1	0.17
CG03	0.97	1%	5	0.05
CG04	9.64	14%	1	0.14
CG05	9.21	14%	4	0.56
CG06	2.08	3%	4	0.12
CG07	2.87	4%	3	0.12
CG08	NA	NA	NA	NA
CG09	5.75	8%	2	0.16
CG10	0.29	0%	5	0.00
Total (T)	68.57	100%	-	1.71

Table 10.4 Performance measurement using weighted-average point system

Table 10.4 shows how a final spend-weighted performance measurement indicator is derived.

The final weighted-average rating is computed as 1.71 (out of 5) for 68.57% of the total spend analyzed. As a result, procurement performance for this group of MRO parts is assessed to be poor. The weighted-average point system is a flexible system that enables an organization to derive performance easily. Different weights can be assigned to each commodity group while rating scales can be refined as necessary. While the weighted-average point system is not the most precise approach, it nonetheless provides a basis to quantify the purchasing performance of an organization. It should also be clarified that while the proposed rating system is on a 5-point scale, it is not always realistic (nor desirable) to set a rating of 5 as an organizational target, for the achievement of such a high rating would likely have been at the expense of suppliers who bear the full brunt of price increases/volatility in the market. Therefore, such a high level of procurement performance would probably not be sustainable. For the organization in the case study, a one-time adjustment (e.g. via an open tender) could be made to correct for past deviations from DSPI. An estimated one-time savings of S\$0.11 m (or 12.4%) could potentially be reaped if the proposed pricing framework is adopted.

The "to-be" process to manage contract price is proposed in Fig. 10.8, with the steps added represented by the dashed boxes. Department M's rationale for deciding on using fixed-price or cost-plus methods for individual SKUs remains generally sound and should be retained. However, it is recommended that in a steady state, price reviews, renegotiations and adjustments should be conducted at fixed intervals. The suggested adjustment factors would be based on quarterly percentage price escalations/declines of the underlying commodity groups in the market, which can be obtained from the respective DSPIs. This enables purchase prices for MRO parts to be more responsive to changes in market prices. Additionally, for SKUs placed in the fixed-price list, by designing windows of



Fig. 10.8 Management of MRO contract prices ("to-be" process)

opportunity for which prices can be realigned periodically (e.g. if a deviation from an expected price exceeds 5 or 10% in either direction), incidences in which suppliers take on an outstanding proportion of risk or take advantage of information asymmetry (Jones 1997a) can be reduced, leading to better MRO procurement outcomes. Likewise, to incentivize the procurement agent to persuade suppliers to pass on savings from efficiency gains, a system can be introduced to co-share (under a pre-agreed formula) with the agent any savings that can be achieved during the quarterly reviews.

Conclusion

Purchasing performance measurement systems play a central role in the alignment process of the purchasing function (Pohl and Förstl 2011). In private enterprises, MRO procurement performance can be measured by expressing MRO spend as a percentage of sales. A low percentage suggests good performance and that the purchasing department has ensured purchase prices are competitive. Yet, the same method cannot be applied to the public sector, since the latter does not directly generate revenue from its operations. As Rogerson (1994) puts it, the board of directors of a profit maximising firm can delegate authority to management and can monitor results using measures such as profits. There is however no similar analogy in the public sector, which makes the delegation problem more challenging.

This paper has contributed to the literature in three ways. First, based on our review of literature, research on MRO procurement has been found to be scarce and those related to MRO in public organizations are even more so. As such, this paper is one of the few that have focused on MRO procurement practices and performance in the public sector. Second, a price review framework for MRO parts has been proposed and it allows for an objective comparison of MRO procurement performance over time and between public sector organizations. MRO sourcing in public sector organizations is arguably more complex from a procedural/approval perspective and involves a wider variety of supplies than in most private enterprises. While it may not always be realistic or cost-effective to conduct frequent open tenders to bring actual MRO prices back in line with expected prices (as proposed by Dalen et al. 2006), the adoption of a price review framework can at least serve as a deterrent to the principal-agent problem. Agents to whom procurement has been outsourced would then be firmly aware that their performance in price reviews with suppliers is regularly scrutinized and that periodic rate

adjustments cannot (and must not) be exploited opportunistically to increase their own commissions. The proposed price review framework therefore demonstrates how an "incentivized contract" as advocated by Jones (1997b) might be applied in the case of MRO procurement in the public sector. Lastly, this paper has contributed a case study to the body of literature on procurement outsourcing, on which there is a dearth of research (Brewer et al. 2014). It describes the MRO procurement process at a progressive public organization in Singapore which has outsourced its procurement of MRO parts and can probably be classified as having "enhanced procurement practices" (Barry et al. 1996).

The purpose of this paper is certainly not to assert that Department M has been efficient or otherwise in the area of MRO procurement. Rather, it is to describe the MRO procurement experience from the perspective of a public sector entity and hence propose ways in which pricing for MRO parts can become more efficient and systematic. The findings from the case study suggest that in addition to having well-defined guidelines on the appropriate adoption of fixed price or cost-plus methods in MRO procurement contracts, there should be built-in mechanisms in these contracts to allow prices to be re-aligned with the market at regular intervals, since the original contract may no longer be optimal (Laffont and Tirole 1990).

The methods as presented in this paper are not without their limitations. This research uses a case study method that is based on data from just one vehicle type utilized by the selected organization. The case study method is inherently unable to generalize from a single case study beyond theoretical propositions, although multiple cases can be used to draw a single set of "cross-case" conclusions (Yin 2013). In addition, the proposed price review framework is unlikely to be suitable for MRO supplies that are scarce (such as those that are approaching end-of-life) or those whose costs of factor inputs are highly volatile. Furthermore, as the case study illustrates, it may not always be possible to assess procurement performance for a large disparate family of parts. More importantly, the proposed price review approach assumes that domestic supply price indices (or measures for alternative cost drivers) are available as a basis for prices to be benchmarked. Lastly, the greatest barrier to the proposed mechanisms to periodically renegotiate and realign long-term MRO contracts may well stem from circumstances in the political economy, in particular a resistance to change from vested interest groups (Chêne 2009), such as public officials and well-connected suppliers in privileged positions.

In conclusion, this paper has developed a framework for conducting price reviews on MRO parts, in the context of the Singapore public sector. While there is scope for public organizations in Singapore to improve on ways to assess supplier 192

performance, beyond the measurement of price and cost-savings (Jones 2007), having an assurance that procurement by public organizations represents value for money (Ministry of Finance, Singapore 2014) is a matter of public interest. Even as non-price factors are considered, there should be a way to measure procurement efficiency in the public sector (Raymond 2008). The methodology proposed in this paper should thus not be viewed in isolation from measuring other aspects of supplier performance, but rather can be part of a comprehensive scorecard on the procurement performance of a public organization, of which price is just one aspect. Finally, this study has found some instances of deviations from existing guidelines in the selection of pricing methods for some MRO parts at the subject organization in the case study. While the extent to which costs have been inflated is likely small, this is apparently not an uncommon problem (Le Sueur and Dale 1998; Croom and Johnston 2003). Hence, it is an apt reminder that for the proposed framework (or any sourcing framework for that matter) to be successful, adherence and organizational buy-in is critical to the achievement of targeted outcomes.

Appendix

Tables 10.5, 10.6, 10.7, 10.8, 10.9, 10.10, 10.11, 10.12, 10.13 and 10.14

SKU	SKU	Pricing	Trend analyzed	R-Squared	Rating
	description	method			
DSPI benc	chmarked: CG01; Ta	otal Spent: 26.	.51%		
SKU01	Car battery	Fixed price	Fixed purchase price vs declining DSPI	0	1
SKU19	Vehicle light unit (Rear)	Cost-plus	Increasing purchase price vs declining DSPI	0.3133	
SKU26	Vehicle light unit (Front)	Cost-plus	Increasing purchase price vs declining DSPI	0.4025	
SKU25	Plastic light lens (Red/Yellow)	Cost-plus	Increasing purchase price vs declining DSPI	0.0418	

 Table 10.5
 MRO procurement performance rating for commodity group 1 (CG01)

SKU	SKU description	Pricing Method	Trend Analyzed	R-Squared	Rating	
DSPI benchmarked: CG02; Total spent: 11.25%						
SKU02	Tyre	Fixed	Fixed purchase price vs	0	1	
		price	declining DSPI			

 Table 10.6
 MRO procurement performance rating for commodity group 2 (CG02)

 Table 10.7
 MRO procurement performance rating for commodity group 3 (CG03)

SKU	SKU	Pricing	Trend analyzed	R-Squared	Rating
	description	method			
DSPI benc	hmarked: CG03; T	otal spent: 0.9	97%		
SKU31	Wiper blade (Front, Std Length)	Cost-plus	Relatively fixed purchase price vs increasing DSPI	0.3353	5
SKU37	Wiper blade (500 mm)	Cost-plus	Erratic purchase price vs increasing DSPI	0.0703	
SKU38	Wiper blade (Rear)	Fixed price	Fixed purchase price vs increasing DSPI	0	

 Table 10.8
 MRO procurement performance rating for commodity group 4 (CG04)

SKU	SKU description	Pricing method	Trend analyzed	R-Squared	Rating
DSPI benc	hmarked: CG04	; Total spent:	9.64%		
SKU04	Lubricating oil (Hydraulic)	Cost-plus	Relatively fixed purchase price vs steeply declining DSPI	0.8619	1
SKU08	Lubricating oil (Engine)	Fixed price	Fixed purchase price vs steeply declining DSPI	0	
SKU11	Lubricating oil (Gear)	Fixed price	Fixed purchase price vs steeply declining DSPI	0	

 Table 10.9
 MRO procurement performance rating for commodity group 5 (CG05)

SKU	SKU	Pricing	Trend analyzed	R-Squared	Rating
	description	method			
DSPI benc	hmarked: CG05	; Total spent:	9.21%		
SKU03	Valve for	Cost-plus	Purchase price and DSPI	0.4014	4
	tyre		fluctuate in similar trends		
	(Plastic)				

SKU	SKU description	Pricing method	Trend analyzed	R-Squared	Rating
DSPI benc	hmarked: CG0	6; Total spent	: 2.08%		
SKU12	Electric motor	Fixed price	Relatively fixed purchase price vs increasing DSPI	0	4
SKU23	Starter motor	Cost-plus	Fixed purchase price, followed by one-time price increase vs increasing DSPI	0.4772	

 Table 10.10
 MRO procurement performance rating for commodity group 6 (CG06)

 Table 10.11
 MRO procurement performance rating for commodity group 7 (CG07)

SKU	SKU description	Pricing method	Trend analyzed	R-Squared	Rating
DSPI benc	hmarked: CG07;	Total spent: 2	.87 %		
SKU09	Propeller shaft assembly	Cost-plus	Purchase price and DSPI fluctuate in similar trends but purchase price changes at slower rate	0.0329	3
SKU33	Clutchmaster cylinder	Cost-plus	Relatively fixed purchase price vs fluctuating DSPI	0.0118	
SKU39	Groove pulley	Fixed price	Fixed purchase price vs fluctuating DSPI	0.0115	
SKU40	Clutch plate	Cost-plus	Relatively fixed purchase price vs fluctuating DSPI	0.0415	

 Table 10.12
 MRO procurement performance rating for commodity group 8 (CG08)

SKU	SKU description	Pricing method	Trend analyzed	R-Squared	Rating
DSPI benchmarked: CG08; Total spent: 19.27%					
SKU05	Actuating cylinder assembly	Cost-plus	Purchase price and DSPI fluctuate in similar trends	0.7077	N.A.
SKU06	Steering system	Cost-plus	Purchase price and DSPI fluctuate in similar trends	0.7763	
SKU13	Speedometer	Cost-plus	Relatively fixed purchase price vs increasing DSPI	0.1847	
SKU30	Wiper arm	Cost-plus	Relatively fixed purchase price vs increasing DSPI	0.1250	

(continued)

SKU	SKU description	Pricing method	Trend analyzed	R-Squared	Rating
DSPI ben	chmarked: CG08; 2	Total spent: 1	9.27%		_!
	Brake disc (Front Wheel)		Steeply increasing purchase price vs increasing DSPI	0.5562	
SKU43	Change over tap (Fuel Tank)	Cost-plus	Steeply increasing purchase price vs increasing DSPI	0.5100	
SKU07	Air drier	Cost-plus	Declining purchase price vs increasing DSPI	0.6508	
SKU15	Drag link-tie rod, 52 mm	Cost-plus	Declining purchase price vs increasing DSPI	0.6673	
SKU17	Shock absorber	Cost-plus	Declining purchase price vs increasing DSPI	0.7405	
SKU24	Fuel lid filler opener	Cost-plus	Declining purchase price vs increasing DSPI	0.0509	
SKU35	Vehicle seat belt (Front)	Cost-plus	Erratic purchase price generally in declining trend vs increasing DSPI	0.8523	
SKU18	Drag link-tie rod, 33 mm	Fixed price	Fixed purchase price vs increasing DSPI	0	
SKU20	Air brake chamber	Fixed price	Fixed purchase price vs increasing DSPI	0	
SKU27	Vehicle seat frame (Rear, Right)	Fixed price	Fixed purchase price vs increasing DSPI	0	
SKU28	Vehicle seat part kit	Fixed price	Fixed purchase price vs increasing DSPI	0	
SKU29	Single-pointed bar face knob	Fixed price	Fixed purchase price vs increasing DSPI	0	
SKU36	Vehicle seat frame (Rear, Left)	Fixed price	Fixed purchase price vs increasing DSPI	0	

Table 10.12 (continued)

SKU	SKU description	Pricing method	Trend analyzed	R-Squared	Rating
DSPI ben	chmarked: CG09	; Total spent:	5.75%		
SKU10	Transmitter	Cost-plus	Steeply increasing purchase price vs gently increasing DSPI	0.0944	2
SKU14	Anti-Lock brake control	Cost-plus	Steeply increasing purchase price vs gently increasing DSPI	0.0082	
SKU32	Fan switch	Cost-plus	Steeply increasing purchase price vs gently increasing DSPI	0.1917	
SKU16	Warning buzzer	Fixed price	Fixed purchase price vs gently increasing DSPI	0.0644	
SKU22	Transmitter (Pressure)	Fixed price	Fixed purchase price vs gently increasing DSPI	0	
SKU34	Switch	Fixed price	Fixed purchase price vs gently increasing DSPI	0	
SKU42	Reverse warning sensor	Cost-plus	Purchase price and DSPI fluctuate in similar trends	0.0756	

 Table 10.13
 MRO procurement performance rating for commodity group 9 (CG09)

 Table 10.14
 MRO procurement performance rating for commodity group 10 (CG010)

SKU	SKU description	Pricing method	Trend analyzed	R-Squared	Rating
DSPI benchmarked: CG10; Total spent: 0.29%					
SKU41	Power cable	Cost-plus	Purchase price and DSPI fluctuate in similar trends but purchase price decreases at a faster rate	0.6345	5

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Chapter 11 Institutional and Social Quality of Local Environment and Efficiency in Public Works Execution

Calogero Guccio, Domenico Lisi and Ilde Rizzo

Introduction

The public works sector is worldwide a matter of intensive discussion because of the large amount of public resources involved (about 15% of GDP in developed countries) and its inefficient performance. The most well-known expressions of this inefficiency are cost overruns and time delays in the execution of contracts, which not only represent a waste of public resources, but also have a negative impact on social welfare beyond the increase in expenditure. In this regard, the conventional wisdom considers the quality of institutional environment as being one of the relevant problems affecting the efficiency of public procurement fairly in all countries, so as underlined also by international organizations (e.g., Søreide 2014).

In the literature on public procurement, several studies analyse the role of many different factors in affecting the contractual performance of the contracting firms. Among the most relevant factors, we have the awarding procedures (Bajari and Tadelis 2006), firms' reputation (Spagnolo 2012), competition (Ganuza 2007) and subcontracting (Moretti and Valbonesi 2015). On the other hand, recent empirical papers (Finocchiaro et al. 2014; Coviello and Gagliarducci 2014; Baldi et al. 2016) investigate also the role of the quality of local environment, finding that the characteristics of the local area in which public works are executed, as captured by different dimensions (such as, social capital, corruption), are significantly associated

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with the outcome in the execution of public works, even after controlling for all other factors usually considered in the literature on public procurement.

Moving from this evidence, in this paper we wonder whether and why a debauched local environment might have a negative effect on the efficiency in the execution of public works. In this respect, many studies both in political science (Heywood 1997; Alt and Lassen 2003) and economics (Adserá et al. 2003; Hunt 2005: Dal Bo and Rossi 2007: Ferraz and Finan 2011: Nannicini et al. 2013: Giordano and Tommasino 2013; Drago et al. 2014) have argued that the characteristics of local environment (such as, the level of social capital, the environmental corruption) affect significantly the accountability of public officials and, thus, distort the incentives to behave efficiently in their mandated tasks. In the specific sector of public works, the purchasing officer has an important role in monitoring the evolution of works and, in turn, in leading to an efficient execution of the contract. In this perspective, we develop a theoretical model where a debauched environment reduces unambiguously the efficiency of the execution of public works, because purchasing officers have less incentives to pursue mandated tasks from the contracting authority. Therefore, our model establishes a rationale and clear interpretation of the empirical evidence found in the literature on public works.

The paper proceeds as follows. In Sect. "Empirical Background" we discuss the empirical literature on the characteristics of local environment and public procurement, which provides the background for the following theoretical analysis. Then, Sect. "The Model" presents the theoretical model and derives its main prediction concerning the institutional and social quality of local environment. Finally, we provide some concluding remarks on the policies in public procurement in Sect. "Concluding Remarks".

Empirical Background

The early literature on the determinants of public works efficiency focused especially on the incentives for firms under different awarding procedures, with the aim of identifying the procurement rules to reach the lowest awarding price and the best contractual performance (e.g., Bajari and Tadelis 2006; Bajari et al. 2009; Bajari and Lewis 2011; Corts 2012; Decarolis 2014). Besides the awarding procedures, however, many other factors have been showed to affect contractual performance, such as the role of relational contracting (Gil and Marion 2013), firms' reputation (Spagnolo 2012), degree of competition (Ganuza 2007), contract enforcement (Dosi and Moretto 2015) and subcontracting (Moretti and Valbonesi 2015). Overall, these studies look at some specific features of the procurement design, but they tend to not consider explicitly any role for the institutional and social quality of local environment in which public works are executed.

Differently, recent empirical papers consider explicitly the characteristics of local environment as an important factor in public procurement, finding empirical evidence suggesting that the public procurement performance is indeed related to the

Authors	Environmental factors	Main results
Bandiera et al. (2009)	Policy experiment in public procurement system which allows to distinguish <i>active</i> and <i>passive</i> waste	Both <i>passive</i> and <i>active</i> wastes are pervasive in Italian procurement system
Guccio et al. (2012)	Corruption index proposed by Golden and Picci (2005)	Higher levels of corruption are associated to higher adaptation costs
Guccio et al. (2014a)	Corruption index proposed by Golden and Picci (2005)	Higher levels of corruption are associated to lower DEA efficiency score
Guccio et al. (2014b)	Number of blood bags every 100 inhabitants Guiso et al. (2004)	Higher levels of social capital are significant and negatively associated with time delays
Finocchiaro et al. (2014)	Crimes against public administration Corruption index proposed by Golden and Picci (2005)	Higher levels of corruption are associated to lower efficiency score (DEA, SFA)
Coviello and Mariniello (2014)	Publicity requirement for public auctions exceeding a certain value threshold	Increased publicity requirement induces a higher number of bidders and lower costs of procurement
Coviello and Gagliarducci (2014)	Politicians' tenure in office in Italian municipalities	An increase in mayors' tenure is associated to fewer bidders per auction and higher cost of procurement
Coviello et al. (2015)	Duration of judicial civil trials in Italian provinces	In provinces where courts are more inefficient, public works are delivered with longer delays
Baldi et al. (2016)	Corruption index provided by Nifo and Vecchione (2014) Level of trust indicator provided by World Value Surveys	Higher levels of corruption are associated with larger use of negotiated procedures instead of competitive bids

Table 11.1 Empirical literature on the quality of environment and public procurement

quality of local environment. In Table 11.1, we report several studies investigating the effects of different environmental factors on the outcome of public procurement. Not surprisingly, the role of the quality of social and institutional environment has been largely investigated in the Italian procurement system, where the quality of local environment exhibits a large variation among Italian local municipalities (e.g., Nifo and Vecchione 2014).

Bandiera et al. (2009) analyse purchases of standardized goods made by Italian public bodies between 2000 and 2005. Exploiting a policy experiment in the Italian procurement system, they are able to distinguish between waste due to some malfunctioning of the regulatory system and waste due to corruption in procurement, finding that both sources of waste are relevant. Guccio et al. (2012) study the determinants of adaptation costs in Italian public works, finding that higher levels of corruption, measured by the Golden and Picci (2005) index, are associated to higher cost overruns. Similarly, Guccio et al. (2014b) study the determinants of time performance in the execution of contracts, finding that higher levels of social capital, measured by an indicator of blood donation, are associated to lower time

delays. Respect to previous studies, Guccio et al. (2014a) and Finocchiaro et al. (2014) analyse a more comprehensive measure of efficiency (that is, efficiency scores), including both cost and time overruns in the execution of public works. Nonetheless, they also find that higher levels of corruption, measured by the number of crimes against public administration and the Golden and Picci (2005) index, are associated to lower efficiency scores.

In a slightly different perspective, Coviello and Gagliarducci (2014) analyse the effect of a major transparency in public procurement, exploiting the different publicity requirement for public auctions exceeding a certain value threshold. Interestingly, they find that the increased publicity requirement induces a higher number of bidders in the auctions and, eventually, lower procurement costs. In a similar spirit, Coviello and Mariniello (2014) show that longer politicians' tenures in office tend to be associated to fewer bidders and higher procurement costs. On the other hand, Coviello et al. (2015) look at the effect of the judicial system in the time performance of public works execution, finding that public works are executed with longer delays in those provinces where the average duration of judicial trials is longer. Finally, Baldi et al. (2016) study the determinants of the choice between open auctions and negotiations in Italian municipalities, finding that higher levels of corruption, measured by the index proposed by Nifo and Vecchione (2014), are associated to a larger use of negotiated procedures.

Overall, all these studies share the same inspiration that the institutional and social characteristics of local environment in which public officials operate can affect and distort the incentives to behave efficiently in their mandated tasks, finding empirical results fully in line with this idea. However, none of them appear to offer a formal rationalization of this effect. Moving from this evidence, in the following section we develop a theoretical model where a debauched local environment distorts the incentive of the purchasing officer to pursue the mandated task from the contracting authority and, consequently, reduces the efficiency of the execution of public works. From this perspective, our model provides a microfounded rationalization of the evidence found in the abovementioned literature on public procurement.

The Model

In this section we lay out a model where a debauched local environment can affect the efficiency of public works. Differently from the previous literature (e.g., Aidt 2003; Auriol 2006; Mizoguchi and Van Quyen 2014; Dastidar and Mukherjee

2014; Hessami 2014),¹ we focus on the execution stage of contracts; therefore, in our model a low quality of local environment can affect the efficiency of public works even when the procurement has not been subjected to bribery and kickback.

There are three main actors involved in public works: the contractor, the contracting authority, the bureaucrat (i.e. the purchasing officer). The relationship between the contracting authority and the bureaucrat is designed in a principal-agent framework (Laffont and Tirole 1993; Laffont and Martimort 2001). whereas the decision-making of the bureaucrat is modeled as a career concern model (Holmstrom 1982; Dewatripont et al. 1999a, b). In particular, the bureaucrat is the agent of the contracting authority and, thus, pursues the mandated task to monitor the efficient execution of the contract. As standard in the principal-agent framework, the principal cannot see the effort of the bureaucrat in the monitoring activity, but can only infer his talent in performing this task from the observable outcome (Dewatripont et al. 1999a, b). On the other hand, the bureaucrat has not specific financial incentives to perform well this task; nonetheless, he is moved by career concerns and, thus, he has still the interest to signal to the principal (or to the market) his talent (Alesina and Tabellini 2008). However, the bureaucrat has the incentive to do so whenever the accountability of public outcomes is high; on the contrary, when the accountability of public outcome is low, the bureaucrat has less incentive to pursue mandated tasks (Yan and Oum 2014).

Looking at the role of the quality of the environment, many studies both in political science (e.g., Heywood 1997; Alt and Lassen 2003) and economics (e.g., Adserá et al. 2003; Lederman and Loayza 2005; Yan and Oum 2014) have shown that the characteristics of local environment (such as, the level of social capital, the environmental corruption) affect significantly the accountability of public officials. Based on this large literature, therefore, the main assumption of our model is that a debauched local environment reduces the accountability of public outcomes; as a consequence, in a more corrupt environment the purchasing officer has less incentive to signal to the principal his talent by a higher observable outcome.

The Contractor

The contractor is the winner of the public auction relative to a specific public work. Once the winning firm has been selected, the setting for the contractor of a public work is rather different respect to the competitive market, because the contract terms already define the product (\bar{q}) and the cost $(w_l l + w_m m)$ of the public work, as

¹To the best of our knowledge, almost all previous papers in the theoretical literature study the incentives for bribery and corruption, given by different public procurement regulations at the selection stage. Differently, in our model we focus on the execution stage of public works contracts and the potential effect of a low quality of the environment, even when the most efficient contractor has been selected. In another paper (Guccio et al. 2016) we develop the model further, disentangling the effects of efficiency and corruption, and provide an empirical test using data of Italian public works.

well as the revenue $(\bar{\pi})$ granted to the executing firm. Nonetheless, the contractor can be more or less productive in executing the public work and, in particular, he can afford to be more slacking, according to the specific environment.² Beyond the specific technology $F(\bar{k}, l, m)$, in fact, the total productivity of the contractor depends also on managerial effort (e_m) and a productivity shock (ε) following a normal distribution $\varepsilon \sim N(0, \sigma_{\varepsilon}^2)$. In particular, the managerial effort implies a managerial disutility $C(e_m)$ with increasing marginal disutility, that is $C'(e_m) > 0$ and $C''(e_m) > 0$.

Hence, the conditional expected utility of the contractor is the following:

$$E[W|a] = \bar{\pi} - w_l l - w_m m - C(e_m) - P(a) \max\{\bar{q} - [e_m F(\bar{k}, l, m)], 0\}$$
(11.1)

where w_l and w_m are the exogenous prices of variable inputs, labor (*l*) and non-labor (*m*) including outsourcing services, whereas capital inputs (\bar{k}) are fixed in the short run. Furthermore, the last part of (11.1) says that when the contractor is sufficiently productive, that is $e_m F(\bar{k}, l, m) + \varepsilon \ge \bar{q}$, then he get exactly what established by the contract; on the other hand, when the contractor is somewhat slacking, that is $e_m F(\bar{k}, l, m) + \varepsilon < \bar{q}$, then he might incur some kind of penalty proportional to the contractor slack. However, the penalty is not experienced for certain, but with probability P(a) depending on the monitoring activity (*a*) of the bureaucrat, with P'(a) > 0.

Therefore, the contractor maximizes his expected utility conditional on the monitoring activity (a) employed by the bureaucrat, that is:

$$\max_{e_m \ge 0} \bar{\pi} - w_l l - w_m m - C(e_m) - P(a) \max\{\bar{q} - [e_m F(\bar{k}, l, m)], 0\}$$

yielding the following optimal managerial effort:

$$e_m^* = \min\left\{C'^{-1}[P(a)F(\bar{k},l,m)], \frac{\bar{q}}{F(\bar{k},l,m)}\right\}$$
(11.2)

In particular, the optimal policy (11.2) says that, under the sufficient expected product \bar{q} , the contractor chooses the managerial effort such that the marginal disutility of effort is equal to the expected marginal penalty associated with the contractor slack, that is $C'(e_m^*) = P(a)F(\bar{k}, l, m)$. Once the contractor is sufficiently productive, however, he has no incentive to improve further his productivity and,

 $^{^{2}}$ To some extent, one could argue that being productive or slacking for an executing firm might have the effect of improving or worsening its reputation in the market and, therefore, this reputation effect should be somewhat considered by a contractor. Indeed, different studies in the literature emphasize the importance of reputation as a device to get more efficient execution of public works (e.g., Doni 2006; Dellarocas et al. 2006).

thus, the optimal effort remains the sufficient managerial effort $e_m^* = \frac{\bar{q}}{F(k,l,m)}$ to get the expected product \bar{q} established in the contract.

Not surprisingly, the optimal managerial effort (11.2) strictly depends on the monitoring activity (*a*) employed by the purchasing officer. Specifically, a higher monitoring effort increases the expected penalty of the slack and, consequently, increases the managerial effort up to the sufficient productivity $e_m^* = \frac{\bar{q}}{F(\bar{k},l,m)}$. In particular, in Fig. 11.1 we show the optimal managerial effort and the effect of monitoring activity under the simple and reasonable assumptions³ $C(e_m) = \frac{1}{2}e_m^2$ and P(a) = a.

The Contracting Authority

The aim of the contracting authority, as the principal, is the efficiency of the execution of public works. However, it operates through the purchasing officer, who acts as its agent pursuing the mandated task of monitoring the execution of public works. As standard in the principal-agent framework, the contracting authority cannot see the monitoring activity (*a*) of the purchasing officer in pursuing the mandated task, but can only infer his talent (θ) by the observable outcome (*y*) to take actions that result in benefit or reward for the bureaucrat (Dewatripont et al. 1999a, b).

In particular, in the specific sector of public works the outcome observed by the principal is presumably the actual product at the end of the work. Following the production process described, therefore, the outcome can be thought to be equal to $y = \theta e_m^*(a)F(\bar{k}, l, m) + \varepsilon$, where the purchasing officer's talent is assumed to be normally distributed $\theta \sim N(1, \sigma_{\theta}^2)$. This implies that an agent with an average talent simply does not affect the production process, whereas agents with a higher talent do affect positively the efficiency of the execution of public works. Accordingly, the outcome is also normally distributed $y \sim N(e_m^*(a)F(\bar{k}, l, m), \sigma_{\theta}^2[e_m^*(a)F(\bar{k}, l, m)]^2 + \sigma_{\varepsilon}^2)$.

Therefore, assuming that the principal expects a certain monitoring activity (a^*) , the contracting authority can infer the purchasing officer's talent and, in turn, take actions towards him according to the following expected talent:

$$E[\theta|y,a^*] = \int \theta f(\theta|y,a^*) \quad d\theta = \int \theta \frac{f(\theta,y|a^*)}{\hat{f}(y|a^*)} d\theta \tag{11.3}$$

³Indeed, many other explicit functional forms could be assumed without changing our results; nonetheless, these functional forms present the significant advantage to make the model algebraically more tractable. Finally, notice that these assumptions are without loss of generality, since other parameters in $C(e_m)$ and P(a) would not be identified with respect to the monitoring activity *a* in the equilibrium managerial effort.



Fig. 11.1 Optimal managerial effort

where $f(\theta|y, a^*)$ is the conditional density of the bureaucrat's talent, $f(\theta, y|a^*)$ is the joint density of talent and observable outcome and $\hat{f}(y|a^*)$ is the marginal density of the outcome.

The Purchasing Officer

The purchasing officer pursues the mandated task of monitoring the efficiency of public works. Although the purchasing officer has not specific financial incentives to perform well, he is moved by career concerns knowing that the principal (which, again, can also be the market) will somehow reward his talent. However, the purchasing officer has incentive to signal his talent to the principal whenever, in the field of public works, the accountability of public outcomes is high. In particular, the expected reward function considered by the purchasing officer is $R(y, \alpha) = \alpha E[\theta|y, a^*]$, where α is a measure of the accountability of public outcomes and the last term is the talent (11.3) inferred by the principal, implying that a higher accountability in the environment of public works increases the expected marginal benefit of signaling his talent (Yan and Oum 2014). As we argued above, the characteristics of local environment (such as, the level of social capital, the environmental corruption) affect significantly the accountability of public officials (Adserá et al. 2003; Lederman and Loayza 2005). Thus, in our model we interpret α as a measure of the quality of environment in which public works are executed.

Since the monitoring activity (a) is unobservable for the contracting authority, as standard in the principal-agent framework, the purchasing officer has an information advantage that he can exploit as an instrument to signal his talent to the principal. On the other hand, the monitoring effort (a) implies for the purchasing officer a

disutility C(a) with increasing marginal disutility, that is C'(a) > 0 and C''(a) > 0. Therefore, the problem faced by the purchasing officer is to choose the monitoring effort (*a*) to maximize his expected utility, taking the contractor's response to monitoring (11.2) into account:

$$\max_{a\geq 0} \alpha E[E[\theta|y,a^*]] - C(a)$$

where the first expectation is respect to outcome and the second is respect to talent,⁴ yielding the optimal monitoring effort as the following fixed-point:

$$\alpha \operatorname{cov}\left(\theta, \frac{\hat{f}_a(y|a^*)}{\hat{f}(y|a^*)}\right) = \mathcal{C}'(a^*)$$
(11.4)

where $\hat{f}_a(y|a^*)$ denotes the first-order derivative of the marginal density of the outcome (y) with respect to the monitoring effort (a) and "cov" denotes the covariance between the talent and the likelihood ratio. In particular, the optimal policy (11.4) says that the purchasing officer chooses the monitoring effort such that the marginal disutility of monitoring is equal to the expected marginal benefit of signaling his talent by inducing a higher outcome (e.g., Dewatripont et al. 1999a).

The intuition of this result is that the purchasing officer can signal his talent only by exerting a higher monitoring effort and, in turn, inducing a higher observable outcome; however, not all of the increase in observable outcome is attributed by the principal to the purchasing officer's talent, because both talent and outcome are intrinsically stochastic. Therefore, the optimal monitoring effort tries to make bigger the covariance between the talent and the expected marginal increase in the observable outcome, in order to make the outcome more informative for inferring the talent, until the marginal benefit equates the marginal disutility of monitoring.

The explicit form of the covariance between talent and likelihood ratio clearly depends on the explicit functional forms of the model. However, the specific form of the observable outcome $(y = \theta e_m^*(a)F(\bar{k}, l, m) + \varepsilon)$, suggests that the covariance should exhibits an inverted u-shape respect to the monitoring effort (*a*), especially for the strong complementarity between talent and monitoring effort (e.g., Dewatripont et al. 1999b). Moreover, given that the marginal disutility of monitoring effort is increasing (C''(a) > 0), under fairly general and harmless assumption, the optimal policy (11.4) exists and it is unique. Under the previous explicit functional forms, for instance, the optimal policy yields:

⁴Differently from the contracting authority (11.3), notice that when the bureaucrat chooses the monitoring activity the outcome is still uncertain and, in particular, it is stochastic for the presence of the productivity shock ε .



Fig. 11.2 Optimal monitoring and quality of local environment ($\alpha' < \alpha$)

$$\alpha \frac{F(\bar{k}, l, m)^{2}}{F(\bar{k}, l, m)^{2} a^{*} + \frac{\sigma_{\epsilon}^{2}}{F(\bar{k}, l, m)^{2} a^{*} \sigma_{\epsilon}^{2}}} = C'(a^{*})$$
(11.5)

where the covariance between the talent and the likelihood ratio exhibits an inverted u-shape respect to the monitoring effort (Fig. 11.2).

The first interesting aspect of the optimal policy (11.5) is that, not surprisingly, a higher quality of local environment (α) increases unambiguously the purchasing officer's monitoring effort (a^*), simply because it increases the accountability of public outcomes and, thus, the expected marginal benefit of signaling his talent. Looking at the other comparative statics of (11.5), they are quite reasonable and intuitive. In particular, a higher dispersion of productivity shock (σ_{ϵ}^2) decreases the expected benefit of inducing a higher observable outcome and, thus, decreases the optimal monitoring activity (a^*). On the other hand, a higher dispersion of purchasing officer's talent (σ_{θ}^2) increases the covariance between talent and observable outcome and, thus, the expected benefit of signaling his talent through a higher observable outcome, leading the purchasing officer to increase the monitoring activity (a^*). In particular, in Fig. 11.2 we show the optimal monitoring activity and the effect of a debauched local environment.

Finally, coming back to the optimal managerial effort of the contractor $(e_m^* = \min\left\{C'^{-1}[P(a)F(\bar{k},l,m)], \frac{\bar{q}}{F(\bar{k},l,m)}\right\})$, we can derive the main prediction of our model in terms of the effect of the quality of local environment on the efficient execution of public works:


Fig. 11.3 Quality of local environment and efficiency of public works $(\alpha' < \alpha)$

Proposition 1 In a more debauched local environment the lower accountability of public outcomes decreases the monitoring effort of the purchasing officer and, consequently, leads to a lower efficiency of public works execution (Fig. 11.3).

Concluding Remarks

This paper contributes to the literature on the effects of the characteristics of local environment on the efficiency of public works, offering a theoretical rationalization to the empirical results provided by the literature. The predictions of our theoretical model suggest that a low quality of local environment reduces the incentives for the purchasing officer to pursue mandated tasks and, therefore, his effort in promoting the efficiency of the execution of public works. In other words, in a debauched environment the purchasing officer tends "to look the other way" rather than monitoring the outcome of the contract.

In terms of policy implications, our theoretical prediction, obtained in a principal-agent framework such as the one characterizing the procurement process, suggests that there is a need to enhance the accountability of the purchasing officers, and to monitor the outcome of public contracts, especially in those area where the quality of local environment is low. In such a perspective, the use of standardized costs might be an effective tool for the *ex post* evaluation of his performance, providing incentives for the purchasing officer to "look the right way" and to control the private contractor activity. In fact, such a tool reduces the information advantage of the purchasing officer, and its effectiveness is not related to exogenous factors such as the quality of local environment.

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Chapter 12 Strengthening the Effectiveness of Exclusion Mechanism in Public Procurement: A Comparative Legal Study Between Indonesia and The Netherlands

Richo Andi Wibowo

Introduction

This chapter analyses whether the exclusion of corrupted economic operators has been implemented effectively in Indonesia and The Netherlands. The strategy to enhance the implementations in both countries is also elaborated upon. To do so, this paper will firstly distinguish between the terms direct exclusion and referred exclusion. The latter refers to exclusion based on a blacklisting system. Furthermore, the existing critiques and responses to the exclusion mechanisms will be discussed. Conclusions are drawn which suggest that Indonesia acknowledges both direct and referred exclusions, whilst The Netherlands only recognises direct exclusion. The direct exclusion has been implemented effectively only in The Netherlands, due to the fact the administration is supplied by information from the administration's intelligence unit; something that Indonesia may consider adopting. Besides, The Netherlands may consider the concept implemented in Indonesia regarding the referred exclusion. Establishing the blacklist system may give certain advantages to The Netherlands.

Corruption in Public Procurement: Indonesia and The Netherlands Context

As a government activity to purchase goods and services, public procurement has to be carried out effectively; the government is required to purchase the best quality for the best value (UNODC 2013). This is deemed relevant to the continuing

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© Springer International Publishing AG 2017 K.V. Thai (ed.), *Global Public Procurement Theories and Practices*, Public Administration, Governance and Globalization 18, DOI 10.1007/978-3-319-49280-3_12 evolution which presses the government to "do more with less" (Thai 2009). However, corruption undermines this concept by discrimination and favouritism for a particular candidate (Szarek-Mason 2010).

Research conducted in more than 170 countries shows that enterprises are keen on bribing the officials in order to be awarded a contract (OECD 2007; TI 2012). Therefore, it can be said that corruption in public procurement is a global phenomenon. Presumably, this happens due to the abundance of resources and funds in public procurement. This makes the contract desirable to any candidate. Furthermore, corruption in the public procurement sector exists because of its complex and evolving nature (Manunza 2012). This gloomy situation can also be observed at a national scale, both in a country which does not work that well in curbing corruption (Indonesia) and in a country that is perceived clean (The Netherlands), as is discussed below.

Indonesia has been suffering from corruption. According to the latest corruption perception index (TI 2015), Indonesia is currently ranked 88th out of 167 countries. Despite jumping rank from 114th in 2013, Indonesia's current rank still places in it in the top 50% of corrupted countries.

It is reported that 70% of the corruption cases are in public procurement (CNN Indonesia 2015). This number is quite coherent with data released by the Commission for the Eradication of Corruption (KPK). Since this commission has been established, KPK has been handling 411 cases in which a third of these occur in the public procurement sector (Wibowo 2015).

Moving to the discussion about The Netherlands, it is true that this country is perceived as one of the least corrupted countries in the world. According to the latest corruption perception index, The Netherlands holds the 5th position of the least corrupted countries in the world (TI 2015). This result looks similar to previous research on the EU Anti-Corruption Report which rates The Netherlands as the 4th least corrupted country in Europe (European Commission 2014a).

Nevertheless, according to the European Barometer, 45% of the Dutch population believe that corruption exists in public institutions whilst the majority of the Dutch population believes that the most suffered sector of public administration in terms of corruption is public procurement. About 70% of the Dutch population think that corruption is widespread among officials who award public tenders or issue building permits (European Commission 2014a, b).

To cope with corruption in public procurement, both countries have implemented the exclusion mechanism in their public procurement regulations. Therefore, the administration may exclude the economic operator (the natural or legal person which offers the execution of work(s), or the supply of products or the provision of services) whenever they have conducted or been involved in corruption. Pertaining this, two research questions are addressed in this paper: (i) has the exclusion mechanism for corrupted economic operators been implemented effectively in these countries? and (ii) how can these implementations be enhanced in both countries?

The Concepts of Exclusion

Exclusion and Blacklisting: Two Different Concepts

According to a commentator, the terms exclusion and blacklisting may be used interchangeably depending on the jurisdiction in which they are being used (Williams-Elegbe 2011). However, this paper regards that exclusion and blacklisting should be seen as two closely related, but differently defined terms.

Exclusion is the procedure by which economic operators are excluded from participating in tendering processes when they are involved (Martini 2013), or suspected of involvement in wrongdoings. The reasons for exclusion vary depends on the jurisdiction, *inter alia*, conducting tort, manipulating the competition, conducting corruption, participating in or supporting or acting as organised crime, drug offences, money-laundering, fraud and tax offences (Williams-Elegbe 2011). The function of such exclusion is as a preventive mechanism so that the taxpayers' money will not be wasted by giving the contract to the 'problem makers'.

Exclusion can be based on irrevocable court decisions or based on appropriate suspicion of the administration. Suspicion may be sufficient ground to conduct exclusion because exclusion is an administrative sanction rather than criminal sanction. The administrative sanction has a standard of proof which so-called "more likely than not true" (Schweizer 2012). To make a decision, the administration may weight various information and under this standard, the decision to exclude should be based on the greater proportion of the weight that to exclude is better than not to exclude. This standard of proof is lower than the "beyond the reasonable doubt", the standard of proof which is applied in the criminal sanction (Dennis 2013).

Slightly different to exclusion, blacklisting is the activity of listing the economic operators considered as 'problem makers' by a public body into an open-centralised database system for a certain period. By so doing, the fact that an economic operator has been listed by a certain public body, it can be a warning system to other parties or even grounds to conduct exclusion.

I shall underline the phrase "open centralised database system" in above. The word 'open' in here refers to citizens' accessibility to this list. In some countries such as Indonesia (LKPP 2016) and South Africa (NTSA 2016), the blacklists are exposed publicly on the internet. A similar situation can also be found in the World Bank (2016). However, not every country or institution decides to disclose this publicly.

In other words, to conduct exclusion, the administration may, in some cases, rely on the information provided by the blacklisting system. Hence, from the author's view, exclusion can be conceptualised into two folds, namely: *direct exclusion* and *referred exclusion*. *Direct exclusion* is taken by the procuring entity based on certain legal grounds after facing concrete facts. Besides, the *referred exclusion* is conducted by the administration after realising that the operator is listed on the blacklist system. In reference to a previous paragraph, the conceptual arguments enabling the citizen to access the blacklisted companies may be questioned. Such questions can be answered by a normative framework the "good public procurement approach." It is about the role of principles of good governance, such as the principle of transparency, in enlightening the area of public procurement law. Argumentations for this approach are as follows.

Conceptually speaking, the principle of transparency serves three categories. One of these is that serving the citizen by facilitating the public debate, participation, accountability, and legitimacy of a public institution (Buijze 2013).

It can be argued that publicly listing the 'trouble makers' will facilitate public awareness, so that the public may determine whether or not to cooperate with such troublemakers. The accessibility of the blacklist, therefore, will facilitate the public to participate in the fight against social problems (in this paper's context: corruption).

As a blacklist serves the citizen in general, the information should be available in an active manner; it should be publicly available without the necessity to request information (Darbishire 2011). Moreover, the presented information should be served by adhering to the concept of openness. This is indeed the most advanced concept under the principle of transparency. Openness not only embraces on the right to the access of information and the right to access official decisions and record activities (Birkinshaw 2006), but also ensuring that the information is using the accessible and understandable language for the sake of the non-specialist reader or listener: the public in general (Commission of European Communities 2001; Heald 2006).

Thus, if the concept of openness is utilised on the matter, this will provide a conceptual foundation from which to request the government to collect the irrevocable court decisions regarding the corrupted economic operators, extract the information, and publish those publicly in laypersons' language under the blacklist system.

However, the approach above may be slightly different with the 'susceptible' corrupted companies. Their names should not (yet) be listed, in order to avoid inhibiting the effectiveness of the criminal investigation.

Critiques on Exclusion and Its Replies

There is an intense conceptual debate about exclusion in its role to fight against corruption in public procurement. This section will discuss two main critiques and their responding counter arguments. Afterwards, it will be stressed that exclusion and blacklisting are two promising mechanisms to aid against corruption.

The main critique is the accusation that the concept of exclusion breaches the doctrine of separation of powers. The punishment for legal violations should be left to the criminal justice system (under the judiciary power) (Williams 2006). Another critique is that exclusion can hamper the quality of competition among the bidders,

and even it can stimulate bid rigging. This can happen particularly if the nature of a public tender is complex and complicated. It is believed that "the fewer the number of sellers, the easier it is for them to reach an agreement on how to rig bids" (OECD 2009).

Regarding the first critic, it is believed that its argument is inappropriate and perhaps out of date. The doctrine of separation powers has been considered leftover (Ackerman 2010). At the opening of the twenty-first century, executives (governments) "have become the most powerful organs of nation-states" (Craig and Tomkins 2006, p. 1). One of its main duties is to set priorities and to implement these. One example of this is the scenario in which a certain government has a stronger desire to control crime levels. To do so, the government may utilise its administrative law power to support the criminal law. The following are two concrete examples.

Facing the situation that the courts were overloaded by criminal cases, the UK government introduced the Anti-Social Behaviour Act (ASB Act 2003; Huismen and Koemans 2008). Those who behaved in an anti-social manner were sanctioned with an anti-social behaviour order (ASBO). This functions as an administrative measure which restrains the offender to act in a certain way. Whenever the ASBO is breached, then this will be considered a criminal offence. In The Netherlands for instance, before and during the 1980s, the country was characterised by an attitude of supporting criminal law sanctions against corruption and organised crime (Widdershoven 2002). Since the end of the 1980s, however, this attitude has been changed to one which promotes administrative sanctions with a punitive character (Addink and Ten Berge 2007; Widdershoven 2002).

Pertaining the second critique, it may be true that exclusion may reduce the quality of competition, in turn forcing the procuring entities to buy at higher prices or lower quality than what they would otherwise expect (Hjelmeng and Søreide 2014). However, this concern may only be relevant for a particular strict condition where there are only limited economic operators that may be interested in participating tender or capable of handling the required supply, work or service. After all, the administration may, or even should, be equipped by the discretion not to perform exclusion whenever the above situation applies. So that, exclusion can be still considered as a promising tool in the ordinary tender situation.

Besides the above responses, it is also worth highlighting a research result from Humboldt-Viadrina School. This explains that restricting business opportunities and operations, such as exclusion, is considered to be the most effective mechanisms to motivate businesses to counter corruption (Schöberlein et al. 2012).

Hence, in general, the above arguments and examples give robust rationalisation to advocate the role of administrative law to control crime. Consequently, this also gives conceptual justification for conducting exclusion to prevent the corrupted economic operator from participating in the public tender.

Implementation of Exclusion Mechanism in Both Countries

In Indonesia

This section will begin with some explanation on the legal foundations necessary for conducting an exclusion mechanism in Indonesia. Stemming from the rules, the Indonesian perspective on the exclusion mechanism will be conceptualised. Following this, it will be elaborated whether or not these rules have been implemented effectively in Indonesia. The rationalisations about the implementation result will also be provided.

The regulations on exclusion and blacklisting can be seen in the Article 118 (1) of the Presidential Regulation ('PR') 70/2012 on Public Procurement. It is promulgated that there are numerous reasons to sanction an economic operator, such as: (i) trying to influence any officer in the procuring entity to breach the laws; (ii) distorting the competition; (iii) misrepresenting information. Other reasons include (iv) the operator pulls out the bidding proposal without unreasonable reason; (v) the operator cannot finalise its contract (tort).

Referring to Article 118 (6) of the above regulation, whenever the officer at procuring entity finds the above situation(s), he may conduct the exclusion. This action shall be followed by listing the company into the blacklist system.

The system is managed by National Public Procurement Agency (NPPA). In order to put the company on the list, certain procedures embodied in Article 6 of the NPPA Regulation 08/2014 apply, as below.

First of all, the procurement committee recommends the head of the public body to blacklist certain operators by mentioning the reasons. The carbon copy of that recommendation should also be sent to the operator. The head of public body will then follow up the recommendation only when the inspectorate is also satisfied with the committee's recommendation. In this case, the head of public body will issue an administrative decision to blacklist the operator, and afterwards, ask the NPPA to put the operator on the blacklist system.

Referring to Article 4 (1) of that NPPA Regulation, the listed duration is indeed two years. Also, article 19 (1) PR 54/2010 promulgates that, during listed, the operator will not be able to meet the general requirements to participate in any local or national public tender. If that operator insists on applying, the procuring entity will consequently exclude its participation.

According to above discussions, it can be deducted that Indonesia has a mechanism to exclude corrupted economic operators. In addition, Indonesia recognises both *direct* exclusion and *referred* exclusion based on the blacklist system.

The blacklisted economic operators can be accessed online in NPPA ('LKPP') website. When this paper was prepared, there were 472 economic operators listed in the system. Nevertheless, none of these are listed under corruption.

The majority of the companies in the blacklist have been listed because of breaching public procurement contracts or due to their low performance in public procurement, whereas the rest of the companies in the system are listed because of other reasons such as drawback after the awarded contract. The same situation examined two years ago also finds the same result.¹

It is even more surprising that certain companies which have been affiliated to corruption are also not listed on the system. The followings are two examples.

On *Universitas Sultan Ageng Tirtayasa*, the court found that the winning company had manipulated the competition and bribed some officers at the procuring entity. Despite this, neither this winning company nor the companies which have been participating in bid rigging are listed on the blacklisting system.²

A similarly dismal situation can be seen on *Simulator for Driving Licence*. A company (MAS) got the contract at a Directorate of Traffic Affairs of the National Police. However, MAS is a sister company of CMMA. These two are led by the same director. This director has been found guilty of bribery in public procurement. Ironically, this corruption case had happened at the same directorate a year before MAS awarded the contract (Berita 2014).

Consequently, this is a strong indication that the implementation of the exclusion mechanism for corrupted companies does not work well. There are two possibilities which may cause this occurrence as discussed below.

First of all, the regulation is less clear regarding the power of the procuring entity in conducting exclusion. The author has conducted a personal discussion with two heads of procurement service units at two different procuring entities. They realise that there is an exclusion mechanism for corrupted economic operators incorporated in the regulation.³ However, they do not realise that they may conduct exclusion directly on the grounds of corruption, for instance if certain economic operators attempt to bribe them. They are under the impression that exclusion and blacklisting system pertaining corruption has to be based on the final court decision.⁴

It is also relevant to highlight that the Indonesian judges rarely sanction the company for corruption. This is because the legal enforcers have been too focused on convicting the guilty of the 'natural person'. Consequently, these court decisions are rarely compatible with the nature of blacklisting and exclusion which also embraces the sanction to the 'legal person': companies.⁵ Possible solutions to such

¹Based on the author's previous research, by mid 2014, there are 792 suppliers/contractors listed in the system. None of these were listed under corruption.

²Banten High Court Decision Number 5. Pid.Sus/2013/PT.BTN and Supreme Court Decision Number 1292/K/Pid.Sus/2013.

³Based on interview with the head of procurement service unit in an anonymous procuring entity in East Java, 20 December 2013. Similar substance has also been confirmed by another head of procurement service unit in an anonymous Ministry, February 18, 2014.

⁴Based on interview with the head of procurement service unit in an anonymous Ministry, February 18, 2014.

⁵The statement of a Supreme Court Judge, Prof. Komariah, in 6 March 2013. He said that he never heard of any company charged with corruption, as usually the director of the company is the one who is charged for the corrupt action. Skalanews, "Korporasi Dipidana Korupsi." [Online]. Available at http://skalanews.com/berita/detail/139833/Korporasi-Dipidana—Korupsi. (Accessed May 15, 2014). His statement seems to be the general opinion of the legal enforcer's perspective in Indonesia. This old fashioned practice is about to change.

an issue will be explored. Firstly, the particularities of exclusion mechanisms currently in existence in The Netherlands will be explained.

In The Netherlands

As one of the EU Member States, The Netherlands is subject to the EU legal framework for public procurement (Directive 2004/18/EC). This Directive is indeed repealed by Directive 2014/24/EC with effect from 18 April 2016. There is no significant change pertaining the exclusion on corrupted economic operators (Priess 2014). However, Article 57 of the new Directive embraces "the obligation to exclude an economic operator where the person convicted by final judgement is a member of the administrative, management or supervisory body of that economic operator or has powers of representation, decision or control therein". This new promulgation is based on the consideration that not all jurisdictions allow for a conviction of legal entities (Priess 2014).

This revision influences The Netherlands. The current Dutch Public Procurement Act (DPPA) 2012 will also be revised by the DPPA 2016 which is currently being discussed in the Dutch Parliament. It is predicted that the new Act will be ready to enforce in the 1st of July 2016 (Pianoo 2016a). Similar to above, the revision will not employ significant change on the issue of the exclusion on corrupted economic operators. The following discussion will use the combination of the current law and the future law.

Article 2.86 of the DPPA 2012 enables a contracting authority to exclude a candidate or a tenderer from a public contract. This happens when the authority has information that the candidate or the tenderer is subject to an irrevocable court decision or conviction for corruption. According to the explanatory memorandum for the DPPA 2016, this provision will be kept, but this will be added to the additional provision of the Article 57 of the new Directive as articulated above (Pianoo 2016b).

The DPPA 2012 also requires the contracting authorities to ask the participant to fill in a 'self-declaration' (Art. 2.84). In the self-declaration, the candidate indicates, *inter alia*, whether or not the grounds for exclusion apply. Furthermore, according to Article 2.89, any candidate or tender participant may seek a 'Declaration of Conduct' (*Verklaring Omtrent het Gedrag*) in public procurement. This is a declaration, valid for two years, indicating the integrity clearance of the holder as the tender participants as issued by the Dutch Ministry of Security and Justice. Regarding these articles, the explanatory memorandum of the DPPA 2016 explains that the provision of Article 2.84 will remain unchanged. In addition, the Article 2.89 will also embrace the issue of 'self-cleaning'; explaining that a candidate or tenderer may submit data to prove that the grounds for referred exclusion are not applicable to him based on evidence from another EU Member State, or from the country of origin or residence of the economic operator (Pianoo 2016b).

It is noteworthy also to discuss the possibility of the Dutch administration to evaluate the integrity of a candidate using the screening instrument of the so-called BIBOB. This stems from the Act for the Promotion of Integrity in Public Administration's Decision Making or *Bevordering Integere Besluitvorming Overheids Beslissingen* ('BIBOB') Act in 2002. This Act introduces the preventive measure undertaken by the Dutch administrative authorities to encounter organised crime and criminal activities such as corruption in particular Dutch industrial sectors which are considered as vulnerable, such as the hotel and catering industry, brothels, construction, transport, and waste management (Huisman and Koemans 2008).

To do so, public bodies may refuse an individual (or company) when applying for a permit, subsidy, or license, if there is a risk that this will be used to facilitate a criminal activity or utilise benefits with substantial financial value that have been gained via criminal acts (Nelen and Huisman 2008). To detect the involvement on criminal activities, the administrative authorities may request information from the BIBOB bureau which is under the Ministry of Justice. This bureau may then collect confidential information from sources which are scarcely accessible to the regular administrative authorities such as the confidential information stemming from judicial, financial and law enforcement institutions in The Netherlands, i.e. police departments or intelligence offices.

Two BIBOB officers who were met by the author provided a good illustration, as follows; "If a drug trafficker submits a license to open a restaurant, then his license will not be granted. By doing so, it helps the work of legal enforcers as they will not need to deal with the money laundering, and may focus on fighting the drug".⁶ Furthermore, they also explained that this may be implemented for a corruptor or corrupted companies which apply for a permit, subsidy, or license. However, as corruption rarely happens, they have not yet used BIBOB for this.⁷

The European Court of Human rights in *Bingol v. The Netherlands* indeed confirmed the substantive and procedural, administrative character of the BIBOB Act. According to the Court, investigating the integrity of an applicant for a permit or applying administrative sanctions does not constitute as a 'criminal charge'. Thus, "the refusal of a licence under the BIBOB Act was neither punitive nor deterrent, but merely preventive."⁸

A commentator had suggested that the Dutch legislators apply BIBOB Act for public procurement (Manunza 2001); however, the legislators decided not to provide rules for contracting authorities to refuse a contract to economic operators in public procurement (Article 5 and 9 of the BIBOB Act). This is the reason why these BIBOB officers never suggested that procuring entities exclude economic

⁶Based on the author's communication with two BIBOB advisors at Municipality of Amsterdam, April 16, 2014.

⁷Based on the author's communication with two BIBOB advisors at Municipality of Amsterdam, 16 April 2014.

⁸European Court of Human Rights, *Bingol v. The Netherlands*, Application no. 18450/07, para. 28.

operators in public procurement.⁹ Nonetheless, these officers do believe that the exclusion mechanism in The Netherlands has worked well, particularly because some contracting authorities have established the (internal) "screening unit."

They explained that the screening unit examines the structure of companies, particularly holding international companies which are very complex. This also assesses the relation among companies to understand who actually holds the control. The unit will deliver internal advice to the contracting authority to ensure that the government works with healthy companies. The screening unit works closely with the BIBOB bureau, as this bureau holds the data from the legal enforcers.

The above discussions have shown that The Netherlands only recognises 'direct exclusion', and does not recognise 'referred exclusion' empowered by the blacklist system. It is believed that the exclusion mechanism has been well implemented. To conduct (direct) exclusion, the procuring entities may obtain or request information from, which may be called, the administrative intelligence unit: BIBOB bureau and the screening unit. In addition, The Netherlands will soon have a provision to exclude an economic operator based on the final judgement of the (natural) person convicted of (in this paper context) corruption. This can apply as long as that person is a member of the administrative, management or supervisory body or has powers of representation, decision or control of that economic operator. This provision is based on the new EU Directive 2004/18/EC.

Strategy to Enhance the Exclusion Mechanism in Both Countries

Indonesia

Indonesia should consider the new promulgation of the DPPA 2016 stemmed from the EU Directive as discussed previously. The administration should be enabled to conduct exclusion of a legal person, or their affiliated company, based on conviction of final judgement of a natural person.

It is relevant to explain that Indonesia has been coping with a problem on the transparency of the court decisions. Previously, during the dictatorship regime, the court decision could not be accessed. Since this regime fell down in 1998, Indonesian judiciary has indeed become more transparent by uploading the court decision to the internet (Pompe 2005). However, the abundance of thousands of court decisions, the delay of uploading, and the lack of search engine mean the court decisions remain largely inaccessible to many.

To cope with this, the law should give additional power to the National Public Procurement Agency (LKPP) to receive carbon copies and to analyse the court's

⁹Based on the author's communication with two BIBOB advisors at Municipality of Amsterdam, 16 April 2014.

decisions. Following this, the LKPP should have the ability to list the supposed 'trouble makers' into the blacklist system.

The LKPP's 'analysis' of such decisions is understood as the right for the LKPP to make their own judgement of interpretation of the irrevocable court decision. If the decision determines a natural person guilty of corruption while he is a member of the administrative, management or supervisory body or has powers of representation, decision or control of a legal person (company), then the company may be blacklisted and excluded.

Besides the comparative law argument, the conceptual argument which may be used to embody this provision is that the blacklisting and exclusion is an administrative decision aimed at a preventive measure. It is based on "more likely than not" standard of proof—as explained in the conceptual argument above.

The LKPP is considered to be the most appropriate body to bear this power due to the fact that complexity will be minimised so long as the judiciary has only one partner to inform the carbon copy of the court decisions pertaining corruption. Also, this duty is coherent with one of the LKPP's current duties: uploading and maintaining the blacklist publication.

In addition, Indonesia may consider the practices employed in The Netherlands where the administration can request and utilise information from the government intelligence unit. Indonesia indeed has an independent administrative intelligence body, namely *Pusat Penelitian Analisis Transaksi Keuangan* (PPATK). As explained in Article 1 (2) Preventing and Eradicating Money Laundering Act 2010, this body is focused on preventing and eradicating money laundering. However, the regulations only allow this body to supply the information to legal enforcers and certain institutions which have authorities to supervise banking and financial transactions (vide: Article 26 (g) Money Laundering Act 2010). Consequently, if Indonesia is willing to transplant the practices in The Netherlands, the government should consider revising regulations on public procurement and *PPATK*.

The Netherlands

As The Netherlands currently only utilises the direct exclusion mechanism, the Dutch government may consider applying the *referred exclusion* by establishing a blacklist system which can be accessed publicly as seen in Indonesia. This will create a central and publicly available information-sharing mechanism which effectively traces the corrupted actors, and that can be used broadly by all levels of public administration (Ware et al. 2011).

To apply so, the Dutch administration should analyse the irrecoverable court decisions pertaining corruption, and then list the companies on the blacklist. It may be true that corruption cases in The Netherlands are few. It may also be true that the accessibility of court decisions is not an issue in The Netherlands. However, applying an accessible blacklist mechanism is still important, as argued below.

By implementing the accessible blacklist mechanism, The Netherlands respects the concept of openness which has been discussed in the conceptual discussion. Furthermore, this will give a greater opportunity for Dutch citizens to participate in the anti-corruption policy. It is believed that the business sectors would be in support of utilising the blacklist system as a reliable lesson learned source because they also want to undertake business only with reliable partners. Pertaining this, it is noteworthy to consider the subsequent practices in international organisations; once an economic operator has been blacklisted by a certain institution, other institutions can also refer to the blacklist system (by conducting cross-blacklisted). Thus, the deterring effect will be boosted (Nesti 2014).

Lastly, the blacklist system can provide data for the contracting authorities not only in The Netherlands but also in other EU member states. A commentator explained that the obstacle to implement exclusion mechanism is the lack of information or data (Arnaiz 2009). Hence, this should be seen as an alternative solution.

Conclusion

This paper has argued that exclusion can be conceptually classified into two folds: *direct exclusion* and *referred exclusion*. The former refers to exclusion which is straightly taken by the procuring entity based on certain legal grounds after facing concrete facts. The latter refers to exclusion conducted by the administration after realising that the operator is listed on -centralised and publicly accessible- blacklist system. Therefore, exclusion and blacklisting should be seen as two different concepts, although these are closely related.

Indonesia acknowledges both direct exclusion and referred exclusion whereas The Netherlands only acknowledges direct exclusion. These two countries have various grounds for exclusion, including to exclude corrupted economic operators.

It has also been explained that exclusion and blacklisting are an administrative decision based on 'more likely than not' standard of proof. Therefore, it should not be seen as a punitive criminal sanction, but as a preventive measure of corruption.

Answering the first research question, the implementation of the direct exclusion and referred exclusion mechanism for corrupted economic operators has not been effectively implemented in Indonesia. This may be due to the fact that the judiciary hardly punishes the company. The Indonesian legal enforcers tend to focus merely on convicting legal liability of the natural person. As a result, the administration is in doubt whether that court decision can be used to blacklist and exclude the legal entity affiliated with that person. As a consequence, none of the corrupted companies have ever been listed, and therefore, these are not excluded from the public tender.

It is believed that the direct exclusion mechanism has been implemented effectively in The Netherlands despite no similar blacklisting system like that of Indonesia. However, some Dutch procuring entities have established the screening unit to ensure that the procuring entity only deals with the healthy companies. In practice, this unit works hand in hand with BIBOB bureau. It is a bureau which has access to confidential information from sources which are hardly accessible to the ordinary administrative authorities.

Relating to the second research question regarding the strategy to enhance the effectiveness of the exclusion mechanism, both countries may learn each other. On the one hand, Indonesia may learn from The Netherlands about the role of administration to collect data for conducting exclusion. Indonesia may also consider the new provision which will be embodied in the DPPA 2016 (stemmed from the EU Directive 2004/18); to interpret the court decision which sanctions the natural person as the ground to exclude company. It has been argued that this power should be given to the National Public Procurement Agency (LKPP).

On the other hand, The Netherlands may consider creating the blacklisting mechanism which can be accessed by public as exercised in Indonesia. By so doing, the Dutch government respects the legal concept of openness. This concept not only embraces on the right to the access of information and documents; but also immerses on the right to obtain information in accessible and understandable language. Moreover, attainable blacklists allow a greater opportunity for the public, and particularly the business sectors, to participate in the anti-corruption policy. Furthermore, an accessible blacklist system can be an effective solution to the problem of the supply of data for the contracting authorities across EU member states.

Finally, it may be true that this paper discusses problems and solutions of public procurement in two selected countries. Nevertheless, the conceptual frameworks and lesson learned derived from this paper may also relevant for other countries.

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Part III Other Public Procurement Issues

Chapter 13 Public Procurement in TTIP: An Opportunity to Set Global Standards

Eleanor Aspey and Nicolette Butler

Introduction

The Transatlantic Trade and Investment Partnership (TTIP) is a proposed free trade agreement between the European Union (EU) and the United States (US). Negotiations were launched in June 2013, and are currently ongoing. The procurement chapter has the potential to be a hugely important part of the final agreement, given that public procurement represents a large percentage of economic activity on both sides of the Atlantic; 13% of US's gross domestic product (GDP) and approximately 17% of EU's GDP respectively, according to the Organization for Economic and Cooperation Development's (OECD) 2013 data (European Parliament 2015). The procurement relationship between the EU and US is currently governed by the World Trade Organisation's (WTO) Government Procurement Agreement (GPA) (Agreement on Government Procurement 2012). As a result of this agreement, the EU procurement market is largely open to US firms as much of the EU's procurement is subject to GPA obligations. Indeed, the EU Commission has argued that 95% of its procurement is above the GPA thresholds (European Parliament 2015). However, the same cannot be said of the US procurement market, which is more heavily protected from foreign firms. Much less of the US procurement market is covered by the GPA, with the EU Commission claiming that the US only commits 32% of procurement as being over the GPA thresholds (European Parliament 2015). This is primarily because around 65% of US procurement takes places at the sub-federal level, and much of this procurement is excluded from the GPA (see below). This lack of reciprocity has led

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to the EU according less comprehensive access to US firms (through various GPA carve outs) than it accords to other nations. Additionally, the US is constrained in its negotiations on procurement to some extent by its 'Buy American' policies and the Berry Amendment (1994) which require public spending authorities to favour American firms and producers in certain circumstances.

In contrast to the EU Commission statements, other studies have suggested that the EU and US markets are fairly equally open, based on the rate of penetration of public sector markets by imports, which stand at 4.5% for the EU and 4.4% for the US respectively (Messerlin and Miroudot 2012). Even if this study is reflective of an equity in "open-ness" between the US and EU, these relatively low figures of import penetration suggest that there are gains to be had when it comes to transatlantic procurement, and TTIP is the mechanism by which such gains can be realised.

Accordingly, the primary aim of this paper is to provide suggestions as to what the content of the TTIP procurement chapter should include in order that the procurement provisions are as progressive and forward thinking as possible. The procurement chapter of TTIP could serve as a model in future negotiations on procurement (at the bilateral, regional and even multilateral level). Thus, the EU and US have a unique opportunity to contribute to the future of global governance of procurement. In order to make suggestions as to the content of the TTIP procurement chapter, the paper will firstly examine the existing procurement arrangements between the EU and US under the GPA, highlighting that more of the EU procurement market is subject to GPA obligations, and therefore more accessible to foreign firms (including US firms). In light of this, the paper will go on to consider what the respective aims of the EU and US might be as regards the procurement chapter of TTIP, evaluating both publicly available statements from the EU and US and leaked documentation from the negotiations. It will conclude by making specific suggestions as to what should be included in the procurement chapter itself.

Current Arrangement Between the EU and US—The GPA

The primary agreement which currently regulates public procurement between the EU and US is the GPA of the WTO. The GPA has its origins in the Government Procurement Code agreed in the 1979 Tokyo Round which established some basic procedural obligations for the award of government contracts, though coverage was limited to goods contracts and central government bodies. Coverage was expanded with the agreement of the GPA 1994 at the Uruguay Round, which also amended some of the procedural rules (Arrowsmith and Anderson 2011). Revision of the GPA 1994 began relatively soon after its conclusion, in 1996–1997, with a revised text agreed in 2006 and the negotiations on coverage finally concluded in 2012 (WTO Committee on Government Procurement 2012). This paper will consider this revised agreement (GPA 2012).

The GPA is a plurilateral agreement and is therefore only binding on those WTO members which have chosen to sign up to it. As of March 2016, the GPA has 17 members: Armenia, Canada, the European Union (covering all 28 Member States), Hong Kong, Iceland, Israel, Japan, Republic of Korea, Liechtenstein, Montenegro, the Netherlands in respect of Aruba, New Zealand, Norway, Singapore, Switzerland, Chinese Taipei and the United States (World Trade Organisation 2016). The GPA 2012 has been ratified and is in force for all parties with the exception of Switzerland, which remains covered by the GPA 1994.

Obligations Under the GPA

The GPA is focused on preventing the use of government procurement as a tool for national protectionism and fills the gap left by the exclusion of procurement from the national treatment and 'most favoured nation' (MFN) obligations of GATS (Art. XIII.1) and GATT (Art. III.8). Comparable obligations are set out in Art. IV.1 GPA 2012, which requires that all Parties accord to goods and services from every other Party treatment which is "no less favourable" than that accorded to domestic goods or services or to another Party. Article IV.2 supports this with a prohibition on treating locally established suppliers less favourably because they have a degree of foreign affiliation or ownership or because they supply goods or services from another Party.

In order to support these non-discrimination principles, the GPA sets out a number of procedural obligations for the conduct of a procurement process, intended to ensure transparency in the process (Arrowsmith and Anderson 2011: 15). These include, for example: requirements to advertise procurement (Art. VII); to hold a transparent tendering procedure (except in exceptional circumstances) (Art. IV.4); rules regulating the types of technical specifications (the details of what is to be purchased) which can be required (Art. X); and requirements relating to the types of award criteria which can be set (Art. XV). The changes made to these obligations in the GPA 2012 reforms were relatively minor, mostly covering issues such as explicit consideration of e-procurement methods and changes to timescales (Reich 2009; Arrowsmith 2011; Anderson 2012). Relevant substantive obligations where there is potential for development in TTIP will be discussed in more detail below.

Remedies—Dispute Settlement and Supplier Challenge

The GPA sets out two methods of enforcement in the case of breach of any of the substantive obligations. Firstly, under Art. XX GPA 2012, Parties may have recourse to the Understanding on Rules and Procedures Governing the Settlement of Disputes ("the Dispute Settlement Understanding", or DSU). The DSU provides

a state-to-state dispute settlement mechanism, whereby a member state who believes another member has breached their WTO obligations can initiate proceedings against the offending member. Initially, the parties enter into consultations and attempt to mediate their dispute. If the parties fail to reach agreement, a panel is established and panellists are appointed to hear the case. The panel considers the evidence (documents, hearing and expert evidence) submitted and produces a report within six months of appointment, which is distributed to WTO members and subsequently adopted by the Dispute Settlement Body.

The WTO DSU appears to be utilised very sparsely for procurement related cases. Only three cases have been brought to the Dispute Settlement Body:

- Japan: Procurement of a Navigation Satellite (WT/DS73);
- United States: Measures Affecting Government Procurement (Massachusetts State Law prohibiting contracts with firms doing business with Myanmar) (WT/DS88); and
- Korea: Measures Affecting Government Procurement (Procurement Practices of the Korean Airport Construction Authority) (WT/DSB/M/84).

And only one of these three (Korea) concluded with a panel report. This could be reflective of the fact that the GPA is a relatively weak agreement, which requires a low threshold of open-ness when it comes to government procurement to ensure compliance with the agreement. On the other hand, it could signify a procedure that is ill suited to procurement disputes. After all, it would be the state itself that would need to espouse the case on behalf of aggrieved firms who are not allowed to compete in foreign states. There is no direct right of action for such aggrieved firms, and states would often have little incentive to take up the case on their behalf.

Secondly, Art. XVIII GPA 2012 requires Parties to establish a domestic review procedure for aggrieved suppliers. The review procedure must be "timely, effective, transparent and non-discriminatory" and should enable a supplier to challenge either a breach of the GPA directly or the failure by a procuring entity to comply with a Party's domestic measures implementing the GPA (Art. XVIII.1). The procedure can include an initial review of complaints by the relevant procuring entity but must allow an appeal to an impartial and independent review body (Art. XVIII.2 and 4). Where the review body is not a court, the body must either satisfy certain minimum procedural requirements set out in Art. XVIII.6 or its decision must be open to judicial review.

The precise powers of the review body are somewhat unclear, however. Under Art. XVIII.7, the body should have the power to order interim measures but there is no real indication of what this can include, beyond the fact that it may cover the suspension of the procurement process. The body should also have the power to award compensation, though that compensation may be limited to costs for tender preparation and/or costs of bringing a challenge, significantly limiting the incentive to bring a case. This is a particular problem where the contract has been concluded, as there are no explicit powers set out in connection with this situation and a supplier may therefore be restricted to only this limited compensation (Zhang 2011, pp. 492–497).

Overall, the system is hampered by lack of clarity and there is some evidence that these problems have led to a low level of use by suppliers for the GPA system (Reich 2009: 1015). As regards the EU-US procurement relationship specifically, the effectiveness of the domestic review system is also hampered by limitations imposed by the EU in response to US protectionist policies (see below).

Coverage of the GPA—Market Access

The coverage of the GPA is negotiated separately for each signatory, with each country's agreed coverage set out in Appendix 1. Each coverage schedule identifies the procuring entities which are covered, the goods and services covered, threshold values for a contract to be covered and any exceptions to coverage. Coverage of the GPA was expanded greatly with the negotiations for the 2012 revised text, with the additions to coverage agreed there estimated at being worth US \$80–100 billion annually (World Trade Organisation 2011: 3). Not all coverage set out in the schedules is available to all signatories, however. It is open to each party to negotiate different levels of coverage with each GPA signatory. This is particularly important for the EU-US relationship, with significant disparities in the general GPA coverage for the two countries.

In contrast to the general expansion of coverage with the 2012 revisions, the US had little change to its coverage from the 1994 agreement. The main contentious sector is that set out in Annex 2 of the US Coverage Schedule, which covers sub-central government entities. Within the US, each state must accept the provisions of the GPA separately and as a result there is wide variation in coverage (McNiff 2015 p. 329). As with the previous 1994 agreement, only 37 US states have accepted the GPA and even for those states there remain some significant restrictions. The number of entities covered within each state is often very small and limited only to executive branch agencies (contrast Annex 2 in the EU Coverage Schedule, which includes not only local and regional contracting authorities but also bodies governed by public law). As an additional restriction, each covered state is able to apply preferences in procurement for programmes "promoting the development of distressed areas or businesses owned by minorities, disabled veterans or women" (Note 2 Annex 2, US Coverage Schedule, Appendix 1 GPA 2012). Finally, the procurement by those state entities contains many restrictions on the type of supplies and services covered. The major restriction here is set out in Note 1, which maintains the pre-existing restrictions in 12 states excluding all procurement of construction-grade steel, motor vehicles and coal, but there are also a number of additional individual restrictions attached to particular states.

Whilst sub-central entities are the major restricted area in the US coverage, there are other limitations which also concern the EU. A very small number of public utilities are covered under Annex 3, limited predominantly to energy providers and

port authorities. There are also a number of general exceptions set out in Annex 7 to the US Coverage Schedule, which apply to all covered procurement, including federal procurement. Of particular concern for the EU is the restriction in Note 1, which excludes the operation of the GPA from any set-aside on behalf of small or minority-owned businesses and which therefore significantly limits the application of the GPA in practice.

In response, the EU's Coverage Schedule, whilst generally providing very broad access to other parties, contains some key restrictions specific to the US until the EU is satisfied that the US provides "satisfactory reciprocal access" to EU goods, suppliers, services and service providers (see Note 1 Annex 1, Note 1 Annex 2 and Note 6 Annex 3, EU Coverage Schedule, Appendix 1 GPA 2012). In particular, Annex 2 excludes services procurement by sub-central bodies within the EU from US providers and Annex 3 similarly excludes all utility sectors with the exception of those in the electricity sector. As a response to the set-aside exclusion in the US coverage (and equivalent provisions for Japan and Korea), the EU also includes a specific limitation on the application of the domestic review procedures considered above (Note 2 Annex 1, Note 2 Annex 2 and Note 7 Annex 3, EU Coverage Schedule, Appendix 1 GPA 2012):

The provisions of Article XVII shall not apply to suppliers and service providers of Japan, Korea and the US in contesting the award of contracts to a supplier or service provider of Parties other than those mentioned, which are small or medium enterprises under the relevant provisions of EU law, until such time as the EU accepts that they no longer operate discriminatory measures in favour of certain domestic small and minority businesses.

The TTIP negotiations therefore provide a valuable opportunity to develop the coverage commitments for the EU and US given the failure of the GPA 2012 to make any major changes to the relationship between the two.

Potential Aims of the EU and US for TTIP

At the 12th round of TTIP negotiations in February 2016, it was intimated in several stakeholder presentations that the respective offers on procurement of the EU and the US would be somewhat scaled back compared to what had originally been planned. Given the high economic value of procurement to the two states (see above), it was expected that procurement might be high on the list of the EU's negotiating priorities. However, the EU may make concessions as to its demands on procurement in order to secure gains in other areas that it deems more significant. During stakeholder discussions, it was suggested that procurement may be scaled back on the part of the EU as a compromise to the Americans for their acceptance of their newly proposed Investment Court System, which has proved contentious (Corporate Europe Observatory 2013; European Commission 2016).

Both the EU and the US published their stated objectives for each chapter of TTIP when the negotiations began (European Commission 2015; Office of the

United States Trade Representative 2013). An additional indication of each state's aims—and what they are likely to be willing to accept—can be seen by examining the treatment of procurement in other free trade agreements recently agreed by the EU and the US. For the US, the most important recent agreement is the Trans-Pacific Partnership, a regional agreement with a number of states agreed in 2015, whilst the EU has signed a number of agreements with individual states. In all cases, both the agreed coverage and specific obligations are heavily based on the GPA, but consideration of the differences can be enlightening.

The EU's Offensive Interests: GPA Plus

The EU's original aims for procurement in TTIP were ambitious, with the Initial Position Paper establishing that the EU was looking for the TTIP procurement chapter to be a "GPA plus" agreement, with significant developments in both coverage and the substantive obligations (European Commission 2013b: 1). The leaked Commission Non-Paper made clear, however, that the main focus was on increased coverage, with access to procurement by sub-central bodies in the US being the key target (European Commission 2014: 4). The only changes to sub-stantive obligations mentioned in the Commission Non-Paper are in relation to prevention of protectionist policies such as Buy America (discussed below) and are designed to boost market access.

An equivalent focus on coverage is also evident in the recent Comprehensive Economic and Trade Agreement (CETA) between the EU and Canada. Here, the EU appears to have been very successful, with coverage greatly increased from that available under the GPA. As with the US, a key target for the EU was the low level of sub-central coverage offered under Canada's GPA commitments. Under CETA, in comparison, Canada has included procurement by "regional, local, district or other forms of municipal government" for all provinces and has also removed exemptions set out in the GPA for a number of provinces in relation to procurement for the benefit of school boards, publicly-funded academic institutions, social services entities and hospitals (Annex 19-2 CETA). The General Notes for CETA also contain no mention of the SME exception Canada retained in the GPA, similar to that maintained by the US (Annex 19-7 CETA). Success here suggests the EU will likely be equally as ambitions when dealing the USA, aiming for full (or as close to full as possible) coverage at all levels of the state.

In other agreements, the EU has been less successful. For example, the EU-South Korea Agreement simply sets out scope by reference to the Party's Annexes in the GPA, with no change to the covered sectors (Article 9.2). Equally, for other agreements, there has been relatively little scope for development. For the recent EU-Singapore Free Trade Agreement, for example, there was little change in coverage as both states had already provided very high levels of coverage under the GPA 2012. These agreements nonetheless provide an indication of the potential substantive obligations which the EU might seek to develop in TTIP either in

addition to any coverage increase or, alternatively, as a fall-back should coverage negotiations fail.

The common trend in changes to substantive obligations in EU free trade agreements is that the amendments from the GPA obligations are relatively minor; the changes are slight edits rather than major restructuring or development. One requirement common to CETA, the EU-Singapore agreement and the recent EU-Vietnam agreement is the switch from allowing a choice of either paper or electronic contract notices when a procuring entity is advertising potential procurement to mandating electronic notices (Art. 19.6 CETA; Art. 10.6.1 EU-Singapore Agreement; Art. VI.1 EU-Vietnam Agreement). These notices must also, for central government bodies at least, be accessible through a single point of access and be available free of charge, increasing the transparency of available procurement. This has long been the method in the EU, which requires notices for contracts within the scope of the procurement directives to be placed on Tenders Electronic Daily. A similar requirement therefore seems likely to be an aim for TTIP.

Beyond this, the only other common trend is the extension of the substantive obligations to contracts known as public works concessions in EU terminology or "Build-Operate-Transfer" (BOT) contracts in other jurisdictions, with both the EU-Singapore and EU-South Korea agreements including such contracts (Art. 9.2 EU-South Korea Agreement; Art. 10.2 EU-Singapore Agreement). The EU-Singapore agreement also refers to public-private partnerships (PPPs) more widely (Art. 10.2). The potential methods for and benefits of including such contracts within TTIP will be considered in the section below.

Overall, then, it is difficult to determine what the EU intends to include within TTIP to make it a "GPA plus" agreement, particularly if the negotiations on extension to coverage are not successful. The Commission's Initial Position Paper mentions developments in areas such as allowable technical specifications, qualification procedures and acceptable award criteria (European Commission 2013b: 2). No details are provided on what this would involve, however, and no similar developments can be seen in any other recent EU free trade agreement, which are predominantly GPA standard. Sect. "Procurement in TTIP—A Model for the Future" below considers potential options to ensure TTIP genuinely advances from the GPA.

The US: Maintenance of the Status Quo?

The US has a long history of enacting legislation which requires the giving of preference to US made products in procurement decisions. The Buy American Act 1933 applies to all US federal agency purchases of goods (services are not covered) over the minimum contract price threshold. Such goods which are intended for public use must be produced and manufactured in the US, using US materials (unless one of the exceptions applies). Many states and municipalities have similar

requirements when it comes to public procurement. The federal law has three main exceptions which enable federal agencies to purchase from foreign firms: (i) the public interest exception; (ii) the non-availability exception; and (iii) the unreasonable cost exception. This Act clearly contravenes the WTO's GPA, though the US can waiver the provisions of the Buy American Act by entering a waiver on the Federal Register. Each time the US signs a new relevant Free Trade Agreement or a new country signs the GPA, that new country is added to the list of waivers on the Federal Register.

Further restrictions come from the Buy America Act and the Berry Amendment. The Buy America Act was enacted in 1982 as part of the Surface Transportation Assistance Act and requires that transit related procurement purchases of over \$100,000 which are funded by the Federal Transit Authority or Federal Highway Administration make use of 100% American manufactured iron, steel and manufactured products. The Berry Amendment requires the Department of Defense to give preference to the purchase of US manufactured products in its procurement activities. Both are subject to a number of limited exceptions.

The US has shown little inclination to move away from such protectionist policies in recent agreements. For example, the Trans-Pacific Partnership (TPP) maintains all the exclusions currently set out in the GPA, including the relevant Buy America/n exclusions for certain states. It equally retains the exclusion set out in the GPA enabling measures for the promotion of SMEs (Note 1, Section G). Nor has the US displayed any willingness to increase the scope of its coverage for any of the TPP countries, with sub-central entities excluded entirely from the agreement and the level of central government bodies and other entities included being similar to that in the GPA. The general indications, then, are that the US is content to maintain the status quo in relation to procurement coverage. However, this lack of willingness to extend coverage within the TPP should not be necessarily viewed as the US "position" in all procurement negotiations. The TPP is an agreement between twelve nations that represent very different economies and states at different levels of development. The US may have different goals for procurement when it comes to other agreements e.g. TTIP. Nonetheless, TPP procurement provisions should not be entirely overlooked when it comes to examining the current thinking on procurement within the US.

Procurement in TTIP—A Model for the Future

An agreement between the EU and the US is important not only for the direct benefits of the agreement itself, but also given its potential to set standards for future agreements between other states (and potentially also its influence on domestic policy). For this reason, it is important that the agreement be not only soundly designed but also ambitious, establishing a high base line for regulation for others to follow. This section will consider the benefits of striving for a GPA plus agreement, as well as considering specific target areas for TTIP to develop to ensure it is indeed a "GPA plus" agreement, and fulfils its potential for high level standard setting in procurement.

Economic Benefits

General Economic Benefits

International procurement agreements such as the GPA and the procurement chapter of TTIP are designed to ensure liberalisation of the procurement market. As with free trade more generally, this is primarily based on economic theories such as the theory of competitive advantage (Arrowsmith et al. 2000). Following this theory, liberalisation of procurement would enable the EU and US to specialise in those industries for which they have a competitive advantage, providing economic benefits to both states. It is therefore to the state's benefit to restrict protectionism in procurement.

However, it would appear that the USA has not been convinced by this argument. Linarelli (2011) recently evaluated the Buy America/n policies. He notes that the theory of competitive advantage is not always convincing because, "economic efficiency is not the only value at stake" because procurement liberalisation is often requiring a government to "spend taxpayer funds to stimulate the economies of other countries" and there will be little political incentive to do so (Linarelli 2011, p. 801). It is therefore important for TTIP to not focus entirely on the issue of trade liberalisation, but rather, to ensure that the methods for ensuring that liberalisation contains sufficient safeguards for the protection of other sensitive interests, including social and industrial benefits such as promotion of SMEs and worker protection. This will allow for gaining the majority of the economic benefits of liberalisation, crucially, without compromising values in other areas.

It is also worth noting that reciprocity is important when considering the potential economic benefits of TTIP. Detractors of the agreement, and particularly those of strong procurement provisions, would undoubtedly bemoan that the US (federal, and possibly state and municipal government bodies) will potentially be spending money to stimulate the growth of EU companies. However, it is crucial to remember that, in turn, EU states will also be spending money which will stimulate the US economy and growth.

Value for Money

Increased Value for Money (VFM) when it comes to procurement could also be achieved with TTIP. As set out in the previous section, protectionism is not economically beneficial. By reducing the use of protectionist policies and promoting more competitive procedures for procurement, TTIP can potentially increase VFM in contracts, thus providing greater benefit for the taxpayer. This would, however, require a change of approach from the current system based on the GPA. As with most international procurement regulations, the GPA is not directly concerned with VFM, but rather, is concerned with limiting national discrimination and, whilst often this will also promote VFM given the reliance on competitive procedures to limit the potential for discrimination, it is not per se designed to do so.

The European Commission has previously claimed that VFM is an integral part EU legal regime on procurement (2011, p. 39). It is likely that the EU will push for TTIP to be developed along the same lines as the EU regime, which, if the Commission is correct, would naturally encourage the promotion of VFM. There is little evidence to support the Commission's claim, however, and little legal support for promotion of competition and VFM in the EU directives (Arrowsmith 2011–2012, pp. 36–40). In practice, the EU regime can sometimes run entirely counter to VFM principles. In particular, the overly detailed obligations in the directives (particularly the limited scope for negotiation) can limit the ability to gain the best commercial deal. It is therefore important that TTIP does not similarly over-regulate to the extent that VFM becomes difficult to achieve. Rather, TTIP should focus on the establishment of general principles to promote competition and enhance transparency obligations could bring benefits in this area.

Linked to this, the procurement provisions of TTIP will necessarily overlap considerably with its competition provisions. The TTIP negotiations on competition provisions have attracted little attention thus far, probably because the EU and US competition regimes are similar enough to enable the avoidance of contention. The EU textual proposal on Competition is predictably based on EU Competition Law contained in Articles 101 and 102 on the Treaty on the Functioning of the European Union (TFEU) and the merger regulation. The US has not published its own textual proposal, but it is likely that it will be based on US anti-trust legislation as contained in the Sherman Act and the Clayton Act. Although there are many similarities and crossovers with the EU and US competition regimes, there are some notable differences which will presumably need to be addressed in TTIP e.g. differing approaches to enforcement issues (public vs. private enforcement). Such issues may be significant for public procurement in TTIP when it comes to collusion, bid rigging, corruption and fraud.

Build-Operate-Transfer Contracts

Coverage of BOT contracts/public works concessions and other PPPs in TTIP is likely to be an important part of the procurement chapter and one which could bring significant economic benefits to both states and bidders. BOT contracts have been included in the EU-Korea (Art. 9.2) and EU-Singapore (Art. 10.2) agreements, along with TPP on the US side (Art. 15.2.2). Following the definition in TPP, such contracts are defined as any contractual arrangement for construction for which the consideration for that construction includes the grant to the supplier of "temporary ownership or a right to control and operate, and demand payment for the use of those works" (Art. 15.1). Including such contracts within TTIP offers a widening of

coverage even at the federal level and could therefore be a more realistic target for the EU than other options. Limiting coverage only to BOT contracts may also make the agreement less likely to be challenged by stakeholders. The EU has encountered some political difficulty with its recent extension of the procurement regime to services concessions due to public fears of hidden privatisation and similar problems would be likely to occur with such an extension in TTIP (Craven 2014: 191). Works concessions such as those covered by BOT contracts have, however, been covered by the EU legal regime for much longer without concerns being raised, making them the safer option for TTIP.

Social and Industrial Benefits

Labour

Labour benefits could be expected under a carefully crafted TTIP procurement chapter. Such benefits could include both greater protections for workers, as well as increased employment. Liberalisation in the procurement market is often seen as damaging to the national workforce, who lose contracts to suppliers from other states with lower labour standards and therefore have a competitive advantage (known as social dumping). It can, however, lead to greater opportunities for work, with a wider range of contracts available to an existing workforce and innovative contracts helping to develop new jobs. In order to develop this benefit and limit the risk of social dumping (and thus making TTIP more attractive to individual US states), TTIP should be designed to enable procuring entities to not only guarantee minimum labour protection standards on contracts (e.g. through limiting participation in the tender process subject to qualification criteria such as limiting participation to those suppliers which meet set labour standards). Additionally, TTIP should promote the development of higher labour standards or improvement of the workforce (e.g. by including labour issues as a criterion for tender evaluation). This could push up employment standards in both the EU and the US, and avoid the "race to the bottom" feared by many.

SMEs

SME development is an important aspect of both the TTIP negotiations and public procurement generally. As noted above, one particular area of contention is the use of procurement policy to promote the development of SMEs, for which the US currently has an exclusion under the GPA. There is, however, conflicting evidence on the economic efficacy of set-asides as a method of developing SMEs (Yukins and Schnitzer 2015: 114–117). It is possible instead for SME participation in procurement to be promoted through methods which are consistent with the general principle of non-discrimination and one compromise for the EU and US could be to

include explicit provisions dealing with non-discriminatory protection of SMEs in TTIP. For example, large public procurement contracts could be split into smaller ones in order to make them more attractive to SMEs. Some similar protection is set out in TPP, suggesting the US might (at least in principle) be amenable to the suggestion. Here, Art. 15.21 of the TPP establishes that any preferential treatment of SMEs must be transparent and sets out a number of methods which could be used to facilitate SME participation without a domestic preference, including providing tender documentation free of charge and conducting procurement electronically. Similar provisions should be included in TTIP with the extra step (absent in TPP) of removal of the set-aside exclusion for the US, providing support for SMEs in a way which is consistent with free trade principles.

Environmental Benefits

The protection of the environment is obviously an important issue. Trade and investment agreements of the past have been criticised for failing to take into account the environmental impact of increased trade and investment activities e.g. greater levels of pollution owing to increased production of goods (Frankel 2008). The large size of the sector alone would make procurement an excellent target for promoting environmental protection but in addition many sectors are environmentally sensitive, particularly the construction and utilities sectors. There is strong potential for development here using the EU-Singapore Agreement as a model. Art. 10.9.7 allows procuring entities to set out environmental technical specifications using EU recognised eco-labels or green labels existing in Singapore. Additionally, Art. 10.9.10 of the agreement allows the setting of environmental conditions relating to the performance of the contract. The EU and US could also generally aim to enshrine "green procurement" within the TTIP agreement, by ensuring that the Green Directorate-General is actively involved in the TTIP negotiations in order to facilitate knowledge transfer between Green DG and DG Trade (European Commission 2011).

Compliance and Enforcement

As highlighted above, one of the major problems in relation to the remedies system for the EU-US relationship at the moment is the EU limitation of the system for certain US suppliers in response to the US SME exclusion. If, as recommended above, the parties can agree on a less protectionist approach to promotion of SMEs such that the exclusion is removed, the domestic review system can apply equally to all suppliers. There remain other areas for improvement, however—as noted above, the powers of the review bodies would benefit from clarification. CETA contains an agreement on the part of the EU to provide access to pre-contractual remedies to Canadian suppliers for 10 years under Annex 19-7, on the basis that during that period Canada and the EU will negotiate "to further develop the quality of remedies", including the issue of pre-contractual remedies (Art. 19.17). A similar arrangement in TTIP is arguably the minimum level which should be agreed. It also provides a valuable opportunity to clarify the powers in relation to concluded contracts (i.e. should the review body be able to set aside a concluded contract or should the state be able to limit remedies to damages in such circumstances?).

The EU Commission's recent review of the remedies system under the EU regime suggests that strengthening the supplier remedies system has led to reduction in breaches (European Commission 2013a, pp. 117–119). It also appears to improve stakeholders' perception of the effectiveness and transparency of the procurement process (European Commission 2013b: pp. 109–117). Improving the remedies system for TTIP may bring similar benefits to international procurement disputes.

Additionally, avoidance of WTO-style state-state dispute settlement (as discussed above in Sect. "Current Arrangement Between the EU and US—The GPA") should be sought. State-state mechanisms are reliant upon individuals being able to convince their home state to take action against the offending state. This can have wider ramifications for international relations between the two states in question, and effectively politicises the dispute. Instead, direct access to dispute settlement mechanisms should be granted to aggrieved firms who have encountered problems in procurement procedures when attempting to do business abroad.

Conclusion

As has been demonstrated, there is significant inequity in the procurement relationship between the EU and the US at present. The relationship is governed by the WTO GPA agreement, and the statistics demonstrate that the EU is much more open to US firms (as a much higher level of its procurement reaches the GPA threshold). The US is less open to EU firms for a number of reasons, including a US tendency towards protectionist policies and the federalist organisational system of the US (meaning that less procurement meets GPA thresholds). Going into the TTIP procurement negotiations then, it is clear that the EU and US are likely to have very different aims. The EU will surely wish to push for greater access to public procurement in order that its relationship with the US (as regards procurement arrangements at least) becomes much more reciprocal in nature. On the other hand, the US will likely wish to maintain the status quo in its procurement relationship with the EU, in so far as this is possible. At present, US firms enjoy fairly good access to the EU, and at the same time, the US is able to avoid granting the same level of access to incoming EU firms. How then will this chasm between the two negotiating parties be filled? Perhaps the more pertinent question is why it should be filled; why should the EU and US strive to negotiate a true GPA plus chapter on procurement in TTIP?

In short, TTIP could be an important vehicle of change for procurement on a broader level. TTIP has the potential to be an agreement that sets global standards for procurement, the provisions of which could, in turn, be replicated in other bilateral negotiations and/or used as a model for reform of the WTO GPA. Additionally, TTIP represents an important opportunity to examine procurement provisions closely, in order to ensure that they maximise benefits in terms of market access and financial opportunities for firms abroad. Beyond this, procurement provisions could contribute to broader public interest goals, such as the improvement of labour/employment conditions and protection of the environment. This would mirror the current trend towards trade and investment agreements furthering such public interest goals, as well as traditional economic ends. This trend towards the negotiation of more rounded and inclusive trade and investment agreements is a positive phenomenon; trade and investment policies can and do affect so many different things, such as labour/employment, the environment, infrastructure and human rights for example. It therefore seems sensible to incorporate the regulation of these matters in together, in context (in so far as this is possible). Clearly, for practical reasons, a trade and investment agreement cannot regulate every single issue upon which it may touch, however, consideration of some of these issues in a single treaty/agreement would enable greater integration of different regulatory regimes e.g. trade and the environment, which may in turn lead to increased consistency and better overall regulation.

If the will to negotiate a true GPA plus agreement is there, the US and EU negotiators could make use of the suggestions proposed in the preceding section in order to achieve that goal e.g. BOT contract and remedies provisions (amongst others). This will ensure that the TTIP agreement procurement chapter/provisions work for the benefit both the EU and the US, and promote the agreement as a model for future procurement negotiations.

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Chapter 14 Asymmetric Information: A Case Study in Potential Public Procurement Pitfalls

Sirilaksana Khoman

Introduction

Asymmetric information between buyer and seller, leading to adverse selection and moral hazard is well discussed in the literature, with the pioneering work of Akerlof (1970) bringing informational issues to the forefront of economic analysis. Information asymmetry creates an imbalance of power resulting in poor quality products (known as "lemons"), and is one of the major causes of market failure and inefficiency. The seminal work by Greenwald and Stiglitz (1986) shows that whenever markets are incomplete and/or information is imperfect, a competitive market is not efficient, failing to allocate resources in a socially optimal way.

Two primary solutions to the problem are proposed, namely signaling (Spence 1973), whereby otherwise unobserved quality can be transmitted to the buyer in the form of recognizable 'signals', and screening—compelling disclosure of information—in order to resolve the information asymmetry (Stiglitz and Rothschild 1976). In public procurement, the common recommendation is to pre-qualify suppliers based on certain characteristics, track record, and history, in order to screen prospective suppliers and weed out unsuitable candidates.

However, in the case of corrupt intent, where collusion occurs among the prospective suppliers, or between the procuring agency and selected suppliers, these conspiracies add another dimension that is fraught with additional information asymmetry, namely between law enforcement or watchdog agencies that could include civil society on the one hand, and the corrupt colluders that could include the agency undertaking the procurement, on the other. The situation is compounded if the procurement involves complex technical aspects so that mere disclosure of details is not sufficient for action by law enforcers and other stakeholders. Asymmetric information and the agency problem (as in 'principal-agent') at the

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firm level is well known, where the firm can 'plunder' itself (through stealing, withholding effort, spending money on pet projects, and so on). The problem is greater in a public or government agency or organization where accountability for the organization's performance is traditionally weaker than in the business sector.

Garoupa and Jellal (2002) establish a positive correlation between crime and asymmetry of information in the enforcement process. They conclude that the probability of apprehension and punishment is usually reduced in a framework with asymmetric information, leading to more offenses being committed. Dhami and al-Nowaihi (2005) explore the interaction of corruption, bribery, and political oversight of production. They conclude that under full information, an honest politician achieves the first best solution, while a dishonest politician creates shortages and bribes. Their model identifies a tradeoff between bribery and efficiency, and helps to reconcile some conflicting results on the implications of corruption for the size of the public sector, and provides support for improvements in auditing technology.

This paper discusses the case of procurement of public buses by the Bangkok Metropolitan Transport Authority (BMTA) and the opportunities for corruption that could arise due to asymmetric information. The chronology of the case is first presented and issues and concerns raised. The information issue, the role of pre-emptive auditing, and the collaborative efforts by the anti-corruption agency, the business sector, and members of civil society are then explored. Lessons learned are summarized and conclusions drawn in the final Section.

Methodology

The case study method is used to illustrate the potential pitfalls that can occur when information asymmetry abounds. The case is the Bangkok City Bus Project.

In 2009 the BMTA proposed the leasing of 4000 buses fueled by compressed natural gas (CNG) for 68 billion Baht (US1 = 32 Baht). The chronology is summarized in Table 14.1.

Pro-active scrutiny of procurement documents found that crucial steps were not properly undertaken, a fact known only by the procuring agency. Problems at each step of the project, right from its initiation, were detected. Proper economic feasibility studies had not been conducted, and documents contained only the financial considerations for the BMTA. There appeared to be no consideration or discussion of alternative modes of transportation, environmental and health analyses, only a crude break-even exercise for the BMTA.

The question was therefore raised regarding the project approval process, and NACC's working group was informed by the Secretary-General of the National Economic and Social Planning Board (NESDB) that since the project involved leasing, it was not regarded as an investment, and therefore the procedures for

2009	BMTA proposed leasing of 4000 CNG (NGV) buses for 68 billion Baht; Cabinet approved (Phase One)
	Public outcry over high cost of buses; media attention
	NACC Working Committee formed; studied 11 TORs, factory site visits, engagement of professionals
17 Nov 2009	NACC Working Committee presented recommendations to Cabinet
	Project effectively withdrawn
March 2013	New Cabinet approved BMTA proposal to purchase 3183 CNG (NGV) buses (Phase Two)
July 2013	TOR placed on BMTA website
July 2013–August 2014	Concerted efforts by NACC, citizen groups, ACT (13 TORs) to propose methods to increase transparency; mostly ignored by BMTA
Sept 2014	New Board Chairman of BMTA; all plans reviewed
March 2015	BMTA revised plan: currently purchasing 489 buses (Phase Three)

 Table 14.1
 Chronology of public bus procurement by BMTA (2009–2015)

Source Khoman et al. (2014) and public announcements by BMTA

Notes Further developments: May 2015, selection of bid winner; May–October 2015, anti-corruption intervention; December 2015 project suspended

project approval were not undertaken.¹ If this is the case, there is an enormous loophole and opportunity for impropriety to occur.

The Terms of Reference (TOR) were also problematic. The physical specifications, such as engine size, brakes, length of vehicle focused on physical characteristics, but had no mention of function or performance. Safety standards appeared to be minimal or outdated, pointing to the need to review the standards of the Ministry of Transport. Could there be a conflict of interest here, a veiled method to protect certain domestic producers, most of whom convert high-floor trucks into (sub-standard) buses that nevertheless meet Ministerial standards?

The size of procurement (4000 buses) also appears to favor only one specific supplier. Interviews of several reputable suppliers revealed that the sheer volume could not be produced by any of the suppliers, except for one, so that there was effectively no competition.

In analyzing the procurement documents, several additional issues were stumbled upon, such as the quality of natural gas used in Thailand. How is the quality of natural gas measured? Three indicators of natural gas quality were explored.

- 1. Wobbe Index: used to measure the combustion energy output when natural gas is used in external combustion or used in continuous internal combustion.
- 2. Methane Number: indicates the *knock tendency* of a fuel, comparable to the octane number for gasoline. It is a product of the different constituent gases within the natural gas, particularly the proportions of methane, ethane, propane and butane. Understanding the knock resistance is important when using natural gas in an Intermittent Internal Combustion engine. A low Methane Number

¹Interview of Secretary-General of NESDB on August 18, 2009.

increases maintenance and repair costs since major overhauls may be needed, resulting in greater expenditure and down-time.

3. Composition: natural gas can contain undesirable components such as sulphur, and this can affect the depreciation of important engine parts and the level of hazardous exhaust emission, if there is a high impurity.

If was found that both the quality and swing in quality of the natural gas produced in Thailand posed an additional concern that needs to be taken into account. The natural gas available in Thailand originates from two sources, namely the Gulf of Thailand and Mvanmar. As of August 2009², the average Methane Number of these two sources was 71.9 and 78.2, respectively. These Methane Numbers provide a level of confidence that the quality of gas will not cause significant damage to the engines, and are therefore acceptable as fuel for internal-combustion engines. However, when the composition is considered, gas from the Gulf of Thailand has a composition of methane of 75.08%, while gas from Myanmar is composed of 72.60% methane. If we compare this with other standards, such as that used by the California Air Resource Board (CARB), for example, we find that CARB requires that the natural gas used in vehicles contain a Methane level of not less than 88%. This means that the standard for natural gas used for vehicles in Thailand allows for potentially 'undesirable' content of up to 24.92 and 27.40% respectively, which is more than double the figure used by CARB of not more than 12%. In addition, this composition varies constantly, so that vehicles should ideally have Electronic Control Units that adjust the engines according to the quality of fuel received, and emissions need to be processed (through After Treatment) using such devices as, for example, Catalytic Converters to reduce toxic emissions. In addition, since the quality and swing affects emissions and maintenance costs, there needs to be explicit requirements for emissions and quality checks throughout the lifetime of the buses, or of the contract, and more accurate estimation of costs.

With respect to the financial estimates of the bus leasing project, several items were missing or inaccurate. First, there appeared to be no consideration of the location of the bus terminal or the gas filling stations. These locations need to be coordinated for efficient operation. For example, should at least one filling station be located at the bus terminal so that filling can be done before the daily route is embarked upon? How many additional filling stations would need to be constructed, and where? The Petroleum Authority of Thailand (PTT) estimates a cost of 5 million Baht per station, and each station would have to be within a one-kilometer radius from the main pipeline. With one bus taking 27 min to fill, and each pump working 20 h per day, each pump could serve 40 buses per day, so that 100 pumps would be required for 4000 buses. These costs would have to be included in the cost-benefit analysis of the project.

 $^{^{2}}$ Since the NACC Working Committee was formed in 2009, these were the latest figures available at the time.

The financial estimates of the BMTA, successive revisions, and estimates by the NACC Working Committee are presented in Table 14.2. The Working Committee concluded that there was a tendency to over-state revenues and under-state costs, arising from the projected number of passengers and the price of natural gas (which is kept artificially low), as well as omissions of indirect costs of the project.

It can be seen from Table 14.2 that several cost items had not been included or estimated, such as the costs of filling stations, land acquisition for filling stations, feeder pipelines, net health cost (or benefit) to bus and road users. Notably, the revenue estimates were challenged by at least two groups of people, namely a group of Members of Parliament (MPs) and the Senate Sub-Committee. In all, NACC'S Working Committee concluded that there was a tendency to over-state revenues and under-state costs. The omission of various indirect costs, such as pipelines and filling stations is a consequence of the silo characteristic of public administration. The BMTA regards these expenditures as the responsibility of the PTT, but a proper cost-benefit analysis would include them.

Cost of leasing (per bus per	TOR	BMTA	Submitted to	NACC
day)		revised 2	Cabinet 3 June	Working
		May 2009	2009 ^a	Committee
Vehicle lease	2195	2537	1885	
Repairs and maintenance	2250	1359 ^b	2250 ^c	
Electronic system	157	170	139	
Insurance	31	31	31	
Tax	8	8	8	
Management	136	417	129	
Total cost of lease	4780	4522	4442	
Fuel cost	8.50 Baht/kg			Shadow price ^d
(per bus per day)	1428 Baht ^e	1428 Baht	1428 Baht	2016 Baht
				2352 Baht
				4372 Baht
Cost of lease + fuel	6208	5950	5870	6458 (min.
				4442 + 2016)
				9152 (Max.
				4780 + 4372)
Other costs				
Construction of filling				50 million
stations				Baht per
				station
Feeder pipeline				20-30 million
				Baht per km
				(continued)

 Table 14.2
 Financial estimates: a comparison (Unit Baht, Unless Otherwise Indicated)

Cost of leasing (per bus per day)	TOR	BMTA revised 2 May 2009	Submitted to Cabinet 3 June 2009 ^a	NACC Working Committee
Opportunity cost of land required for filling stations				To be estimated
Compensation for 6129 workers ^f				4814 million Baht
Effect on private buses replaced				Not estimated
Effect on market structure (increased concentration)				Not estimated
Indirect costs (such as net health effects of emissions)				Not estimated
Benefits to society (passengers, pedestrians)				Not estimated
Revenue	10,500 ^g	6273.22 ^h	6780 ^j	

Table 14.2 (continued)

Source NACC Working Committee report (2009)

Maximum estimate of cost = Total cost of lease (highest) + highest fuel cost = 4780 + 4372*Notes*

^aInterest rate of 6.725%

^bActual average cost over three years between 2005 and 2009 equaled 1317.92 Baht per air-conditioned bus EURO2 (from BMTA Monthly Report)

^cTOR values, calculated from 7.50 Baht/km * 300 km/bus/day = 2250 Baht/bus/day. Repair and maintenance costs calculated by King Prachtibok Institute (March 2008: 33) equaled 4.55 Baht/km but the resolution of the BMTA Board at Meeting 8/2552 on 30 March 2009 increased the operating cost by 5% and profit by 3%, increasing cost to 7.54 (Minutes of the TOR Drafting Committee, Meeting 16/2552 on 9 April 2009

^dUsing gas price of 12 Baht per kg in 2009, increased to 14 Baht per kg in 2010 and 26 Baht per kg in 2011 from interview of PTT representative on 10 September 2009

^eCalculated from gas usage of 168 kg per bus per day, multiplied by the price of gas. 168 kg per bus per day is estimated from total gas expenditure in 2009 divided by 365 divided by the number of buses using gas, divided by the price of gas currently used by BMTA, that is 8.50 Baht

^fBMTA, Early Retirement Plan. Of course this should also be offset by the savings of wage costs in later years

^gCalculated from 350 passenger \times 30 Baht per passenger

^hCalculated from the composition of passenger categories as follows: (1) Daily ticket at 30 Baht: 26% (2) Single ticket at 12 Baht: 52% (3) Monthly ticket at 800 Baht (divided by 30): 5% (4) Secondary student ticket at 600 Baht (divided by 30): 7% (5) Primary student ticket at 300 Baht (divided by 30): 7%, and (6) Discounted monthly ticket at 450 Baht (divided by 30): 3% ^jCalculated from 226 passengers \times 30 Baht per passenger

The bus leasing project in 2009 was effectively dropped after the NACC Working Committee presented its report to Cabinet.

The project re-surfaced in 2013 as a bid to purchase 3183 buses. A total of 13 versions of the Terms of Reference (TOR) were produced. Responding to one of NACC's points made on the earlier leasing project, the BMTA divided the procurement into 8 parts to serve 8 service areas. Nevertheless, several issues remained that raise questions regarding transparency and governance. These can be divided into the following areas:

- Physical specifications and requirements,
- Safety considerations,
- Repair and maintenance costs,
- Selection criteria, and
- Reference price and committee.

Physical Specifications and Requirements

Greater scrutiny was given to the physical specifications in this purchase proposal than the former leasing proposal. The suitability of the physical specifications is viewed in terms of quality, value for money and usage, which is related to the opportunity for competition.

First, in the TOR, there was still no mention of requirements in terms of performance and function, only physical characteristics, such as length of vehicle, engine size, and specific mention that the buses had to be body-on-frame (to the exclusion of 'integrated structure'). The length of vehicle was stipulated as 12 m, to the exclusion of other lengths, such as 8 and 10 m. Having a fleet of varying sizes would seem to meet the different demands of passengers at different periods of the day (peak and off-peak), as well as provide more flexibility to cater to different physical road conditions, and reduce fuel and vehicle cost as well. Thus confining the length to only 12 m seems overly specific. The exclusion of 'integrated structure' for the bus frame effectively limits competition (from superior products) and favor certain suppliers (of lower quality products). If the price range corresponds to the lower quality, it would not be an issue, but the reference price specified in the TOR corresponds to higher-quality vehicles.

A further requirement that limits competition is that the vehicles bidding for the contract have had prior use of natural gas available in Thailand, and had previous business in Thailand.

With respect to unnecessary specificity (as opposed to functional or performance-related requirements), many areas can be pinpointed. For example, regarding motive power and the size of engine, the TOR specifies exactly 174 KW (or 237 horsepower) for air-conditioned buses and 155 KW (211 horsepower) for non-air-conditioned buses). This seems overly restrictive. Rather, some performance requirement, such as ability to accelerate from zero to 40 kph within 10 s for vehicles weighing 15–16 tons in total, for example, should be specified instead.

Another example is the drive-train. Specifying the number of gears (such as 4-speed Planetary) is too restrictive. Specifying 'automatic transmission' should suffice, to allow greater flexibility and competition.

A further example is the suspension system. Specifying the type of 'spring' such as air bag, is too restrictive. A more functional specification would be 'the strength value of the spring to the wheel rate' such as 5 kg per 1 mm, as a safety standard that is not specific to a physical characteristic.

As for wheel and tire, standard specifications do exist, but seem to be missing from the TOR. Transparency and competition would be promoted if the requirement simply states that the tires need to be radial, for smooth roads, conforming to international standards such as 285/80 R 22.5 for example.

For the brake system, physical characteristics should not be specified, such as disk brakes or air brakes, or size of disk or drum ("not less than 400 mm" as in the TOR). An example of a performance criterion would be 'ability to stop or become stationary, from a speed of 40 kph within 10 m, and repeatability every 30 s'.

Another contentious characteristic that could potentially serve the interests of certain producers is the specification that the non-air-conditioned buses be 'high-floor', and air-conditioned buses be 'low-floor'. 'Low-floor' buses allow wheel-chair access, and are more suitable for the elderly and children. An added point in favor of low-floor buses is that they cannot be converted from trucks—a common practice undertaken by low-quality producers. An addition advantage of low-floor buses is that the gas canisters would have to be placed at the back or on the top of the buses, rather than under the buses which is typically the case with high-floor vehicles. Back-loaded or top-loaded canisters reduce the danger to passengers in case of a gas leak.

More appropriate specifications would therefore enhance safety as well as potentially generate greater efficiency, competition, quality, and cost savings.

Safety Considerations

Mass transit systems involve a large number of people, and safety requirements should be paramount, and not confined to minimum standards that the Department of Land Transport seems to be adhering to. This is not even considering the problem of enforcement of standards that currently appears rather lax. Both 'Active Safety' and 'Passive Safety' or 'Post crash' safety standards need to be seriously reviewed, including factors relating to driver capacity, vehicle maneuverability, strength of vehicle structure and safety-inducing fixtures and materials, fire prevention, crash absorption, and air quality within the vehicle.

The safety requirements in the TOR leave much to be desired. There is no mention of 'crash safety' or 'air quality', only conformity to outdated standards. For example, for city buses, should there be a control system that does not allow speeds of over 80 kph which the driver cannot over-ride? Should we require that the structure should not be "deformed" by more than 10% on impact of, say, 5 G (force equal to 5 times of the weight of vehicle plus passengers or 50 tons momentum)? Should we require handles that are secure, for all standing passengers, at heights that children can reach? There is no mention of stability or road traction. Ministerial

regulations require only a tilt standard. Should there be an additional requirement for 'yaw' (when negotiating a curve), for example, centrifugal force of not less than 0.5 G? There are no provisions or requirements for Active Safety and Passive Safety or Post crash requirements, such as control of vehicle, structural strength, fire control, forced absorption on collision, gas detection, and so on.

It could be construed that these lower standards are designed to limit competition from high-quality producers. If industrial protection is the objective, then it should be made explicit, so that society can judge whether such protection (which has lasted for more than five decades, to the benefit of certain producers and at the expense of consumers and taxpayers) is still warranted.

Repair and Maintenance Costs

BMTA's TOR explicitly states that the 'winner' of the bid must provide for repair and maintenance of the vehicles according to the following schedule:

10.2 The prospective supplier who wins the contract must provide for repair and maintenance for a period of 3 years, from one day after the date of acceptance, according to the following schedule, specified by the BMTA:

10.2.1 Repair and maintenance for non-air-conditioned buses, using natural gas;

Year 1: 816 Baht per vehicle per day;

Year 2: 854 Baht per vehicle per day;

Year 3: 897 Baht per vehicle per day;

or repair and maintenance cost for 3 years, averaging not more than 855.57 Baht per vehicle per day

10.2.2 Repair and maintenance for air-conditioned buses, using natural gas

Year 1: 966 Baht per vehicle per day

Year 2: 1040 Baht per vehicle per day

Year 3: 1121 Baht per vehicle per day

or repair and maintenance cost for 3 years, averaging not more than 1042.33 Baht per vehicle per day

Source BMTA (2009, TOR #2)

At first glance, these conditions may seem to be motivated by the desire to protect the interests of the State, but why would these conditions have to be set by BMTA? Should the cost of repair and maintenance be included in the price of the bus, and competition based on 'lifetime costing'? Cheaper vehicles may require higher maintenance and repairs, whereas more expensive alternatives may incur less need for repairs. According to the above schedule, it appears that whoever wins the contract for 3183 buses would be 'given' another 3 billion Baht for a period of 3 years, during which time, repairs may be minimal.

Selection Criteria

BMTA's selection and evaluation of suppliers/bidders' proposals are based on 10 criteria with a maximum of 100 points that can be awarded. The breakdown of possible points is shown in Table 14.3. Criteria 1, 2, 4 and 5 had been revised somewhat in line with recommendations earlier made by the NACC Working Committee. However, the selection criteria appear unclear at best, and at worst could be used to favor or exclude certain bidders.

Technical details	Maximum points
Technical characteristics of vehicle and parts, country of origin, details of engine, and test reports according to the European Economic Commission of the United Nations or European Economic Community Directives, with name and address of testing agency ^a	15
Details regarding repair and maintenance schedules, including warranties for damage and depreciation related to normal usage, according to the supplier's standards	15
Name and address of service center	5
Details regarding parts center for engine, gears, chassis, undercarriage, transmission system and natural gas equipment, list of parts numbers, photographs, drawings, inventory storage, and letter of assurance of parts availability for a minimum of 10 years	15
History of sale of vehicles of 12 m in length (or not less than 11.40 and not more than 12 m) to government, state-owned enterprises, or private corporations in Thailand or other countries	5
Assembly plant in Thailand to be used, the assembly plan, as well as detailed history of experience in assembling buses of 12 m in length (length of at least 11.50 and not more than 12 m), with authentication from the assembly plant, which must be submitted with the bidding documents	10
Details regarding service, maintenance and repair of engines using natural gas available in Thailand, and history of efficient service to government, state enterprises, or businesses in Thailand	15
History of sale of engines used in assembling buses that have efficiently used natural gas available in Thailand	5
Balance sheets and profit and loss statements of their business for the years 2010, 2011 and 2012	5
Test report for driving and running of buses fully loaded with passengers, using natural gas available in Thailand for a period of 10 days	10
	Technical details Technical characteristics of vehicle and parts, country of origin, details of engine, and test reports according to the European Economic Commission of the United Nations or European Economic Community Directives, with name and address of testing agency ^a Details regarding repair and maintenance schedules, including warranties for damage and depreciation related to normal usage, according to the supplier's standards Name and address of service center Details regarding parts center for engine, gears, chassis, undercarriage, transmission system and natural gas equipment, list of parts numbers, photographs, drawings, inventory storage, and letter of assurance of parts availability for a minimum of 10 years History of sale of vehicles of 12 m in length (or not less than 11.40 and not more than 12 m) to government, state-owned enterprises, or private corporations in Thailand or other countries Assembly plant in Thailand to be used, the assembly plan, as well as detailed history of experience in assembling buses of 12 m in length (length of at least 11.50 and not more than 12 m), with authentication from the assembly plant, which must be submitted with the bidding documents Details regarding service, maintenance and repair of engines using natural gas available in Thailand, and history of efficient service to government, state enterprises, or businesses in Thailand History of sale of engines used in assembling buses that have efficiently used natural gas available in Thailand Balance sheets and profit and loss statements of their business for the years 2010, 2011 and 2012 Test report for driving and running of buses fully loaded with passengers, using natural gas available in Thailand for a period of 10 days

Table 14.3 Criteria for technical evaluation of proposals TOR #2

Source BMTA (2009) Draft TOR No. 2 from BMTA website Note

^aThe first criterion had initially merely echoed the physical characteristics in the TOR, and seemed superfluous, since these characteristics must already have to be met, to participate in the bidding process in the first place. Those not fulfilling these basic requirements should be excluded automatically. BMTA therefore revised the first criterion to include test reports

BMTA also imposes the condition that, to be eligible for selection, bidders/suppliers have to attain a score of at least 80%, and not less than 50% for each criterion. This condition seems innocuous enough, but careful scrutiny of the criteria raises a host of serious questions.

First, some of the criteria are extremely ambiguous and no scale or method of awarding points is given. Selection criteria should be based on differences in quality or performance. For example, the ability to stop the vehicle faster, or within a shorter distance, when travelling at the same speed. Such a performance criterion would be easy to demonstrate and verify. Performance criteria should be used where possible, and superior performance above the minimum specified, should be rewarded with additional points. Each criterion is considered in turn as follows:

Criterion 1	Technical characteristics of vehicle and parts, country of origin, details of engine, and test reports. It is unclear how many points would be awarded to country of origin. What 'details' of the engine would receive more points than others, or would every competitor fulfill the same requirements, in which case the 'marginal' points become crucial. How are 'test reports' considered and what is the conversion scale from test score to point score here?
Criterion 2	Details regarding repair and maintenance schedules, including warranties for damage and depreciation related to normal usage. Would this be a standard warranty for every supplier? What is the scoring scale if some warranties cover a longer period than others?
Criterion 3	Name and address of service center. What is the purpose of this criterion? Does location matter as long as service can be accomplished efficiently? How is this scored? What distance from where, or within a radius of how many kilometers of what, would receive full marks of 5? This criterion is easy to manipulate in order to exclude competitors, for example, by giving a score of 2
Criterion 4	Details regarding parts center for engine, gears, chassis, undercarriage, transmission system and natural gas equipment, list of parts numbers, photographs, drawings, inventory storage. Should this not be included just for information? What kind of scoring system would be used for the 15 points to be awarded?
Criterion 5	History of sale of vehicles of 12 m in length (or not less than 11.40 and not more than 12 m) to government, state-owned enterprises, or private corporations in Thailand or other countries. The phrase "or other countries" had been added here by BMTA after objections from the NACC, but other criteria below still restricted suppliers to experience in Thailand
Criterion 6	Assembly plant in Thailand and assembly plan. Again, what is the scale to be used for scoring? What characteristics of the assembly plant would be favored as opposed to others?
Criterion 7	Details regarding service, maintenance and repair of engines using natural gas available in Thailand, and history of efficient service to government, state enterprises, or businesses in Thailand. Again, very restrictive and discriminatory, as well as vague, leaving room for a great deal of 'discretion'
Criterion 8	History of sale of engines used in assembling buses that have efficiently used natural gas available in Thailand. This effectively excluding new foreign competitors

(continued)

Criterion 9	Potential bidders must submit balance sheets and profit and loss statements of their business for the years 2010, 2011 and 2012. 5 points are to be awarded, but how are these awarded, or should this just be part of the documents required for bidding, not a selection criterion?
Criterion 10	Test report for driving and running of buses fully loaded with passengers, using natural gas available in Thailand for a period of 10 days. How are test scores converted to points (10 points)?

Most easily manipulated, however, seems to be the requirement (in a footnote) that each bidder must obtain more than 50% score on each of the 10 criteria. A failing score on say, Criterion 3: name and address, would easily exclude a non-favored supplier, even though the technical qualifications may be outstanding.

Reference Price and Committee

A 'reference price' is a tool that is commonly used in public procurement, particularly in construction and medical and relief supplies, particularly by international aid agencies, to increase transparency of prices. UNICEF (n.d.) for example, approaches vaccine manufacturers and pre-negotiates prices, and has a supply catalog that can be accessed by self-procuring countries, or used as a reference point in future bilateral negotiations. Many governments also employ product lists and reference prices as benchmarks in procurement processes. The NACC law requiring public disclosure of information regarding reference prices (with method of calculation and quality and quantity breakdown) can be a useful tool to prevent inappropriately high cost (and corruption and kick-backs) in public procurement.

The concept is straight-forward, but often the practice is complicated and controversial. Reference prices work well for standardized products, but for technically complex products, it is extremely difficult to estimate in advance what the reference prices should be. It has also been argued that use of reference prices can be taken to be ceiling prices, leading to low quality products. Blomberg (2014) for example, feels that the use of reference prices is 'a contradiction to the whole purpose of competitive tendering', since they become the 'maximum price' in practice. However, the reference price as used in Thailand under the NACC law [Article 103 (7)] is not intended to be a maximum price, but a benchmark, which ideally can be exceeded if there is sufficient justification. In practice, because of the budgetary process, whereby a budget has to be pre-approved, it often becomes effectively a maximum price, and the case of the BMTA bus procurement is no exception. If some flexibility is allowed by law, the reference price would not be so restrictive; that is, if bidders quote a higher price, the burden is on them to show the quality differences, and this should be allowed. The problem is with the decision rule used, not the use of the reference price itself.

The proper use of reference prices should not lead to low quality and should not contradict competitive tendering, if technical specifications and prices are 'synchronized', that is price and quality must match. In addition, the reference price must be only a reference, not a ceiling—which means that budgetary process may have to be reviewed. But even given this limitation, it is clear that the process of obtaining this reference price by the BMTA was highly imperfect and non-transparent. NACC's law stipulates that the actual process by which reference prices are calculated by the procuring agency must be published, as well as the names of the actual persons who undertook the calculations, so that transparency and accountability would be fostered.

The BMTA however presented the method of calculation many months after the price was announced (in July 2013). Even in March 2014, the BMTA was still purporting to canvas suppliers for prices. And only in the last TOR#13 (September 2014) did the names of the persons calculating the reference prices appear. This was subsequently proven to be a false statement.

From Exhibit 1, it can be seen that even though the project was announced and the first TOR publicized in July 2013, the BMTA reports canvassing suppliers in February 2014, contrary to what is required by law. Also violating the law is the failure to name the persons responsible for calculating or determining the reference prices.

Exhibit 1: Announcement of reference price

Purchase of 3183 buses using natural gas as fuel

1. **Name of Project**: Purchase of 3183 buses using natural gas as fuel by Bangkok Metropolitan Transport Authority (BMTA)

2. Budget: 13,162,200,000 Baht

3. Date of reference price determination: 13,162,200,000 Baht, comprising 3,800,000 Baht each for non-air-conditioned bus; and 4,500,000 Baht each for air-conditioned bus (sic)

4. Source of reference price: Committee sent letters to 19 vendors of vehicle parts and completely assembled vehicles on 24 February 2014. Only two vendors responded as follows: 4.1 Winwin NGV Co. Ltd.

4.2 Cho Thavee Dollasien Public Company Ltd.

Both companies reported a price higher than the budget approved by Cabinet, so the approved budget was used as the reference price

5. Names of officials calculating the reference prices:

Committee to Draft the TOR and Bidding Documents for Procurement of 3183 Buses using Natural Gas, Order No. 454/2556 dated 18 June 2013

Source translated from BMTA TOR #8 circa March 2014 (Bold type indicates NACC's template)

Asymmetric Information and Pre-emptive Auditing

It is widely recognized that access to information fosters transparency and accountability. But access alone is not sufficient to establish democratic governance and integrity in the procurement process.



Fig. 14.1 Path from information disclosure to action

It can be seen from the above discussion that even though the procuring agency complied with the law by publishing the Terms of Reference and other documents regarding reference prices, the mere disclosure of information or its availability does not automatically lead to scrutiny or result in transparency. A great deal of technical knowledge is required, as well as motivation. Figure 14.1 summarizes the requirements and difficulties in utilizing information even when disclosed.

The stakeholders can be divided into four major groups: (1) competitors/ suppliers, (2) professionals, (3) the anti-corruption agency and related organizations, and (4) the general public (bus users and pedestrians, the corporate sector, media, and other interested parties). The players and difficulties in utilizing the information, as well as the incentive to use the information even it available, is summarized in Fig. 14.2.

Information asymmetry occurs both in terms of the technical requirements, as well as the behavioral aspects, which are related to the oligopolistic market structure. To be able to scrutinize the technical specifications, expert knowledge is required. Who possesses such expert knowledge? First, other suppliers. Other suppliers can be sub-divided into 3 groups: (i) high-quality suppliers not part of the select network, (ii) suppliers that have history and perhaps special rapport with the procuring agency, and (iii) other suppliers who may have a tacit arrangement with suppliers in group (ii). From various interviews, the high-quality suppliers in group (i) are not willing to participate in the bidding, as they believe that there will not be fair competition. Group (iii) may also not participate, or participate in a perfunctory, if not collusive, manner. The consequence is that there is no real competition.

The next group that possesses expert knowledge consists of the professionals. It was found that vehicle engineers in academic institutions and professional associations did not possess the motivation to get involved. Only when specifically invited by the NACC to meetings to scrutinize the TORs, did they offer their opinions. Anti-corruption work has the characteristic of what economists call a 'public good'. Once 'produced' everyone benefits from it, so it suffers from problems of non-revelation of demand (for integrity) and the 'free-rider' phenomenon. This is true of all forms of market intervention where benefits are dispersed and costs are concentrated (that is, incurred by individual persons or entities). The motivation for action is generally minimal. This contrasts with situations where benefits are concentrated, and costs are dispersed, such as various



Fig. 14.2 Players and motivation in the bus procurement case

forms of subsidies. The recipients of subsidies tend to be well-organized, since the benefits accrue to them, whereas the cost to society (such as in the form of higher taxes and inefficiency in resource allocation) are dispersed among the larger population (who tend to be less organized and incentivized, since the net benefits are small, and not easily recognizable).

For the rest of the groups—the non-experts—the first task was to ascertain whether the information was relevant and accurate, and even how accessible it was. In the case of bus procurement discussed here, it appeared that the procuring agency did its best to limit accessibility by publishing the TOR on Friday afternoon leading up to a long weekend, and requiring that written comments be sent by the following Friday, allowing effectively only three working days for interested parties to digest the information and submit their recommendations. For non-experts, this alone would be a daunting task. In addition, it was also found that some citizen groups have a specific agenda, and would not concern themselves with the overall integrity of the procurement process once their demands or needs are met.

It was the collaborative effort of the anti-corruption agency (NACC) and select professionals in Phase One, supplemented by pro-active involvement of the business sector with their collective action and Integrity Pact components, bus users (namely the disabled, wheel-chair-bound citizens group) in Phase Two, supported by media attention and initiative at both Phases, that led to substantial modifications in the procurement plan. It was perhaps a coincidental 'confluence of the minds' that allowed the anti-corruption effort and in particular, the pre-emptive, pro-active auditing and intervention, to succeed to a certain extent.

The number of buses was reduced, from 4000 to 3183, and currently only 489 buses are being purchased, at prices that are 20% lower than the reference price earlier set (with the same quality). Nevertheless, new questions have arisen in Phase Three, which at the time of writing, have not been fully resolved.³

While the anti-corruption effort took great pains not to interfere with the project itself, and concentrate mainly on the transparency aspect, it was difficult to ignore the larger question of the role of the BMTA as both regulator and operator of bus services, and their seeming fixation on the use of natural gas for fuel. Interviews with various engine experts reveal that diesel engines could be more economical, if fuel prices (natural gas and diesel) reflected market forces, and because depreciation and wear-and-tear in diesel engines is much less. Major overhauls of diesel engines would not be required as frequently as engines using natural gas, and emission levels can be comparable if the appropriate technology is used.

With rapid technological progress in both the vehicle industry and fuel sources, the State should allow itself flexibility and not commit to large fleets of thousands of buses, or limit the source of fuel exclusively to natural gas. In addition, co-ordination with all modes of transportation—road, rail, water, air—in a Transportation Masterplan would be a necessity.

Conclusion and Lessons Learned

Pro-active corruption prevention is a major component of fighting corruption. In order to do so, information dissemination to encourage discussion among all stakeholders before project implementation, is necessary. However, after disclosure, what are the tools that can be relied on? In Thailand at the present time, social sanctions are weak, and so is voluntary accountability. In societies that are rules-driven, rather than values-driven, careful project monitoring, as well as possible interception, to advance real competition and value for money, remains an

³Positive changes included a re-composition of the Reference Price Committee, a change of BMTA's Board Chairman, openness to suggestions by the new Board, observers appointed from the business sector and academia to take part in the new calculation of the reference prices. Transparency was enhanced and reference prices more rational at this stage. They were also invited to witness the process of reviewing the technical qualifications, disqualification of certain bidders, and ultimately the selection of the winner. However, concerns have been raised by the independent observers at the time of writing. Apart from some inconsistencies in the scrutiny of bid documents, the winner's share price almost doubled on September 3, 2014 and trade volume exploded ten-fold from 11.5 million shares on September 1, to more than 115 million shares on September 3, 2014, when the Board was re-constituted (see Appendix Fig. 14.3), raising questions about possible insider trading. In any case, more search and digging will be undertaken. Again, an information asymmetry problem.

important tool. Even with disclosure of information government agencies intent on favoring certain suppliers, can still do so with impunity, with the procurement process undertaken under a cloak of tacit collusion.

The above discussion shows that information asymmetry is a main obstacle that needs to be overcome for anti-corruption efforts to be effective. Not only does information need to be accessible, it also has to be relevant and accurate. Disclosure of information is not a stand-alone tool. It is not a case of "we require, they posted, we conquered". Requiring disclosure is simply the first and necessary step, but seeming compliance and receiving information can seem like being sprayed with a fire-hose, with no effort made by the disclosing agency to indicate any hierarchy of what is important and what is not. Albert Einstein said that information is not knowledge, and a great deal of effort is required for the transformation to take place. The devil really is in the details. In addition, without motivation and mandate to scrutinize the information, the mere availability of information, even if relevant, will not prevent corruption.

Collaboration and concerted efforts are extremely important in the case of procurement of complex products. Crucial factors were the Senate involvement, media attention, and NACC action in First Phase. It was important to have different organizations undertake fact-finding studies, so that information warfare can be avoided. In the case of the buses, there seemed to be a consensus of opinion from diverse groups, demanding greater integrity. In the Second Phase, business groups, the Thai chamber of commerce, and the private-sector Anti-Corruption Organization of Thailand (ACT), disabled persons, and media added impetus. ACT's initiative regarding Collective Action and use of Integrity Pacts among producers is a promising start, but the absence of major players, such as in the automotive and construction sectors, is a stark reminder that significant challenges remain. In the case of the bus procurement project, the integrity pact came after the reference price had already been re-calculated to be more transparent.

Asymmetric information between anti-corruption agencies and the government agencies undertaking procurement, requires concerted efforts among stakeholders. The problem is that anti-corruption work is a 'public good' (non-rival, non-excludable) and the odds are stacked in favor of 'free-riding'. 'Concerned groups', 'stakeholder involvement' can be over-rated, if motivation is absent. While not intending to disparage these attempts which are certainly essential, it is important to stress the need for a systematized approach to monitoring projects. The case of the public buses discussed here worked on an ad hoc basis, and a more systematic approach, or even an independent body, is needed. Concerned citizens need mechanisms through which they can participate in shaping policies and regulations, and hold government and government officials accountable on a regular basis.

The bus procurement case also shows that vibrant and independent media perform a vital role in reducing information asymmetry and enhancing transparency. But merely publishing and broadcasting public notices, articles, and announcements does not automatically lead to accountability, unless concerted efforts are galvanized to digest and analyze the information in a systematic way. This in itself is a



Fig. 14.3 Movement in share prices and trading volume of eventual bid winner. *Source* Stock Exchange of Thailand. Specific link not given, to avoid naming of company (for legal reasons)

Herculean task. Sustaining the effort is even more difficult, given that stakeholders can be plagued by fatigue, naiveté, loss of interest after certain goals are achieved, possible intimidation, or just succumbing to laurels after partial accomplishments. The danger of jumping from the frying pan into the fire is ever present. Entrenched interest groups—unknown to anti-corruption workers—need to be mapped in advance, since in-depth information is key. A more systematic approach and mechanism is therefore essential.

Appendix

See Fig. 14.3.

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Chapter 15 Identifying and Mitigating the Risks of Outsourcing a Public Health Service Function

Suvituulia Taponen

Introduction

Outsourcing to private providers is seen as a solution to various issues in public service delivery, thus there is a growing interest towards increasing private sector involvement in health service delivery in most European countries (Regan et al. 2015). Yet there has been little discussion about the risks of outsourcing or how these risks are best mitigated (Brown and Osborne 2013). A focus on risk management increases the likelihood of successful outsourcing and is likely to improve cost efficiency (Tsipouri et al. 2010). Managing the outsourcing process successfully requires identifying, then evaluating, the outsourcing risks and benefits (Roberts 2001). Due to an increase in outsourcing of services, the public sector's role as a service producer and owner has transformed to a purchaser of services (Regan et al. 2015). This transformation has increased dependencies between public and private organisations, making public organisations more vulnerable to the risks of private service providers (Hallikas et al. 2004), i.e. external risks.

The increased likelihood of external risks, a result of the current economic and financial crisis causing budget cutbacks and fiscal uncertainty, has encouraged introducing risk management to the outsourcing process, making it one of the key areas in public management (Bovis 2012; Blome and Schoenherr 2011; Stanton 2013).

Outsourcing a health service function increases the risks of public service delivery due to the complexity of contract management in comparison to managing internal service delivery (Schoenherr et al. 2008). Therefore, public organisations cannot solely focus on setting the service delivery objectives, they also need to consider the risks that might prevent achieving those objectives (Stanton 2013). The

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acceptability of identified outsourcing risks should not be evaluated only in the light of the likelihood of its occurrence, but also in relation to its expected benefits (Rouillard 2004). In this regard, the outsourcing consideration does not simply make the impact of a decision black or white, but a residual with shades of grey (Tsipouri et al. 2010). Thus structured decision making tools such as the Analytical Hierarchy Process (AHP) are recommended for the process (Boardman et al. 2008). Traditionally AHP has been implemented specifically to supplier selection decisions (Ishizaka et al. 2012) to break down the risk factors and benefits of each potential supplier (Boardman et al. 2008). In this study AHP is implemented to evaluate the risks of different outsourcing options by comparing their significance against each other r in order to identify the most significant outsourcing risk. The results of the AHP analysis are presented as a risk ratio, describing the overall risk factor of each outsourcing option.

In 2011 EU countries spend an average of 10% of their GPDs to providing health care (Eurostat 2012). In Finland the steep decline of GPD since 2009 has increased this ratio over the recent years (Kunnat.net 2015). The expenditure is only expected to grow within the following years due to an increase in health service demand (Grudinschi et al. 2014). The Finnish municipalities, responsible for commissioning primary health care, have traditionally relied heavily on in-house service production. Today, however, approximately 25% of the services are outsourced to private providers (Ministry of Social Affairs and Health Finland 2013). This trend, which has been ongoing for several years, presents a mature enough environment to identify the risks of outsourcing primary health care services and best practices in mitigating them. As the health care system in Finland is very similar to other Nordic countries, this study continues the line of research concentrating on the impacts of outsourcing public services in the Nordic countries (see for instance, Andersen and Jakobsen 2011; Petersen et al. 2015).

Public organisations worldwide are outsourcing a variety of health services (Wong et al. 2015) traditionally provided in outpatient clinics or local hospitals. Primary health care, provided in outpatient clinics, displays the complexity often related to health services as a variety of care is provided, from treating flu patients to home based care, covering approximately 90% of all patient interaction (Health and Social Care Information Centre 2016). In this study empirical examples are drawn from outsourcing outpatient clinics providing primary care in Finland. The variety in provided care increases the risks of outsourcing the service delivery and adds complexity to risk mitigation. This provides a rich source of information on identifying the most significant outsourcing risks and the tools to mitigate them. The objectives of the research are to initially identify the most significant risks of outsourcing a health care function, then to evaluate them in relation to different outsourcing options and finally identify the risk mitigation tools the purchaser has during the competitive tendering process. The aim is to achieve these objectives through a single case study combining various sources of data.

According to Scheider and Wallenburg (2013) the least researched area within the field of purchasing and supply chain management is the outsourcing consideration, although the overall value potential of the decision outcome should be considered in outsourcing considerations (Hallikas et al. 2014). A significant amount of research has been conducted within the field of supply chain risk management and global supply chain risk management (Blome and Schonherr 2011; Manuj and Mentzer 2008). However, previous research has mainly concentrated on existing supply chains and private sector organisations, especially in manufacturing (Manuj and Mentzer 2008). The effect of outsourcing on health service quality, and therefore the service quality risk, has been discussed in previous literature (see for instance Andersen and Jakobsen 2011; Marques and Berg 2011), but there seems to be a lack of research on more comprehensive risk evaluation and management in regard to public health service outsourcing. As a result of the lack of focus on the public services sector, research in, and analytical management of, the risks of outsourcing public services is relatively immature. This study is a step forward in filling the research gap in managing the risks of outsourcing in public organisations.

In the following, the literature is presented, supervened by the methodology and an explanation of the application of AHP in detail. This is followed by results and discussion. Finally, conclusions are presented.

Literature Review

In the context of this study an outsourcing risk is understood and defined as follows: "Risk is the expected outcome of an uncertain event, i.e. uncertain events lead to the existence of risks" (Manuj and Mentzer 2008, p. 196). The fact that risks exist in the future distinguish them from problems (Pontre et al. 2011). This uncertainty presents both threats and opportunities to the outsourcing organisation, as risks only become problems if their nature is misunderstood, mispriced, a mitigation plan is not made and risk is thus left unmanaged (Bovis 2012; Pontre et al. 2011). The public risk management focus is on mitigating negative impact of realised risks, i.e. the potential for problems and losses (Pontre et al. 2011; Hallikas et al. 2004).

There is a variety of risks related to outsourcing a public service function, such as the organisational risk, political risk, market risk, service quality risk and financial risk (Albrect 2011; Tsipouri et al. 2010; Uyarra and Flanagan 2010; Rouillard 2004). The organisational risk refers to the public organisation failing in the public procurement process (Tsipouri et al. 2010). The realisation of this risk is often the result of difficulties defining the service needs and transforming them into outcome-based functional requirements (Whyles et al. 2015). In the context of public health services outsourcing should be carefully considered due to the often high risks related to service quality (Albrect 2011; Roberts 2001). The service quality risk is caused by service complexity and tight linkages to internal service processes (Carboni and Milward 2012). The different dimensions of the quality risk are: service fragmentation, which arises from divided responsibility between internal and external providers (Wong et al. 2015); performance risk, related to a service provider not delivering adequate quality or available service availability; and demand risk related to unpredicted changes in need for public services (Bovis 2012; Schoenherr et al. 2008; Roberts 2001). The negative impacts of risks are typically financial or issues in service quality and/or availability (Tummala and Schoenherr 2011). The most significant risk related to health service outsourcing is the development of parallel functions and service fragmentation instead of comprehensive disease management (Albrect 2011).

There is no standardised risk mitigation protocol (Hallikas et al. 2004) as risks vary case by case depending on the outsourcing organisation's operating environment, liabilities, stakeholders and content of the outsourced service (Blackhurst et al. 2008; Manuj and Menztner 2008). However, the process phases of basic risk management are defined as: (i) risk identification and assessment, (ii) risk and cost reduction, and, (iii) risk monitoring (Hallikas et al. 2004; Tsipouri et al. 2010). Through these phases risk management becomes proactive instead of reactive (Bovis 2012; Hallikas et al. 2004). Steering public management focus towards risks can be very effective in improving service outcomes, cost efficiency and purchaser-provider cooperation (Bovis 2012; Marques and Berg 2011; Rouillaid 2004). An additional positive side effect of improved risk management focus are improved service processes and a clarified focus in operations (Stanton 2013). An effective risk management tool for risk mitigation is to study the conditions' previously realised risks and identify the key learnings (Eurofund 2015).

Risk identification is a recognised best practice in relation to all outsourcing considerations, regardless of their financial value, as even low value contracts might entail significant risks (Pontre et al. 2011). The identification process is a premise where they are contained and controlled (Tummala and Schoenherr 2011). Traditionally risk management has been executed in silos within an organisation as the responsibility of risk mitigation has been allocated to different units depending on risk type (Bovis 2012). However public organisations should establish that risks in fact are highly interconnected which increases the impact of their realisation to an organisation's overall service delivery and demand for a comprehensive approach to risk management (Bovis 2012; Manuj and Menztner 2008; Tummala and Schoenherr 2011). Hence, the inclusion of service specialists (clinicians) and personnel from different units, including senior management, to risk identification is crucial in achieving a true understanding of risks, their interconnections and the available means to mitigate them (Bovis 2012; Tummala and Schoenherr 2011).

The acceptability of identified outsourcing risks must be evaluated in the light of expected benefits (Rouillard 2004). A commonly achieved target in health services is better cost efficiency due to private providers' ability to optimise non-clinical factors such as managing waiting times (Andersen and Jakobsen 2011; Marques and Berg 2011). Before making a decision to outsource, the public organisation should evaluate whether pursued outcomes can be achieved through internal service process development (Roberts 2001) as outsourcing increases risks related to the service function (Eurofund 2015). Other key issues to consider are: (i) will outsourcing improve service quality (Rubery et al. 2013), (ii) what are the benefits and risks? And, (iii) what are the appropriate measures to mitigate the identified risks? (Roberts 2001).

Outsourcing a part of a public health service delivery also transfers some risks to the provider whilst increasing others (Hallikas et al. 2004). Thus risk allocation between the purchaser and provider is one of the main issues to be solved in the service contract; risks should be allocated to the party that is best equipped to manage it and claims the minimum risk premium (Barlow et al. 2013; Regan et al. 2015). The negotiated procedure offers an opportunity to agree on the most appropriate risk responsibility allocation with the providers (Tsipouri et al. 2010). Contractual instruments for shifting risks to service provider are payment plans linked to milestones, incentives linked to achieved outcomes and sanctions for not achieving outcomes (Tsipouri et al. 2010). In theory, risk sharing drives innovation and cost efficiency of the service delivery since the party bearing the risk is motivated to mitigate it (Barlow et al. 2013).

Provider selection, entailing the determination of the most suitable competitive tendering procedure under the EU legislation, is one of the most important phases in mitigating outsourcing risks (Mori and Doni 2010; Farneti and Young 2008). The tenderers need to comprehend the formality originating from regulation and the institutional context of public service operations which adds complexity to the delivery (Tsipouri et al. 2010). In relation to complex services, such as primary health care, a negotiated procedure, which allows an open dialogue with the tenderers, is highly recommended as a risk mitigation tool (Chever and Moore 2012; Tsipouri et al. 2010). This procedure allows the purchaser to develop service specifications with the tenderers which especially mitigates the market risk (Chever and Moore 2012; Tsipouri et al. 2010). Negotiated procedure is recommended over an open procedure as closer interaction and communication with the tenderers throughout the procurement process is required, whereas an open tendering procedure allows (Sekhri et al. 2011; Mori and Doni 2010). An open dialogue, during the negotiated procedure and even before initiating the formal procedure in the market engagement phase, allows a public organisation to estimate whether providers can meet required outcomes and whether requirements are formulated appropriately (Whyles et al. 2015). The negotiated procedure's dialogue phase with preselected tenderers is valuable in building adequate service specifications and contract terms that serve the purchaser's interests (Chever and Moore 2012).

Market engagement prior to the formal procurement procedure is highly recommended as it gives an opportunity to estimate the providers' ability to deliver the designated outcomes of outsourcing before resourcing the formal procurement process (Whyles et al. 2015). Market engagement helps to define the appropriate scope for the procurement to match the purchaser's needs, which are turned into functional requirements with the market's capabilities (Uyarra and Flanagan 2010; Whyles et al. 2015). Market engagement is also needed to evaluate whether selecting multiple providers should be used as a risk mitigation tool (Tsipouri et al. 2010). Eurofund (2015) recommends avoiding procurement contracts that centralise service production to big private organisations as a means to mitigate the market risk and encourage competition, but on the other hand in relation to health service outsourcing the risk of service fragmentation (see Wong et al. 2015) may weigh more in the comparison.

The contract, which is created during the competitive tendering process, is an essential risk mitigation tool for the outsourcing organisation. This is due to the possibility of applying different contractual models for incentivising service quality and inhibiting the service provider from charging additional costs (Tsipouri et al. 2010). In a comprehensive contract the service is specified, timetables are defined, and risks and responsibilities of both parties clearly defined and allocated (Bovis 2012). Additionally, procedures to deal with disputes, such as payment mechanisms, incentives and sanctions, should be included (Regan et al. 2015). Incentives and sanctions require continuous performance monitoring to mitigate performance risks by flagging issues early (Bovis 2012). For instance, the appropriate format of the contract terms, such as the length is dependent on the service content, identified risks and the market (Rubery et al. 2013). The service objectives and measures to evaluate whether the service delivery has met these targets must also be included in the contract (Bovis 2012; Roberts 2001). One of the most important tools in mitigating the performance risk is to ensure that the provider's finances are transparent and that the provider is not facing significant financial risks (Eurofund 2015).

Methods

In the previous section, the general nature of risks and risk management in the context of outsourcing public health services was described. It was identified that successful outsourcing of public services demands risk identification and mitigation during the procurement process (see for instance Hallikas et al. 2004; Rouillard 2004; Bovis 2012). There are several risks related to the outsourcing of health services. These risks should be evaluated in the light of the expected outsourcing benefits (Rouillard 2004). If the expected positive outcomes outweigh the potential risks then methods such as market engagement, negotiated procedure and contractual terms can be used to proactively manage and mitigate the risks (see for instance Tsipouri et al. 2010). This study aims to draw on these findings and answer the following questions: What are the most significant risks related to outsourcing primary care delivered in outpatient clinics? And, what kind of attention and procedures do these risks require during the outsourcing consideration and competitive tendering process? These questions are explored by using the methods and approach described next.

The objective of this study is to identify the most significant risks related to outsourcing a health care function and the means to mitigate them during the competitive tendering process. The aim is to achieve this objective through a single case study which focuses on the outsourcing process of primary health care. A single case study is selected as method since it provides an opportunity to thoroughly analyse the risks of the significant phenomenon of outsourcing health services (Eisenhardt and Gaebler 2007; Wong et al. 2015). The case selection process began by determining a service function in which risks of outsourcing are

highlighted, as this study aims to identify the most relevant risks and the means to mitigate them (Dubois and Araujo 2007). Primary care was chosen due to: (i) its significance in local government expenditure amounting up to 30% of their total expenditure in Finland, and, (ii) the importance of health services to citizens and, thus, policy makers. After determining primary care as the focus area, the goal was to find a local authority which would be in the process of considering outsourcing primary care. The case organisation was selected as it had outsourced two outpatient clinics delivering primary care earlier in 2015 and was currently in the process of considering outsourcing further clinics. Overview of the case organisation is presented below in Table 15.1. A more detailed case description is provided in a latter section of this study.

The data collection method comprises of a combination of archival data (and document) analysis, a survey and semi-structured interviews. The combination of archival data, a survey and semi-structured interviews was selected in order to build a comprehensive analysis by combining data from multiple sources (Yin 1981). Before conducting the interviews in December of 2015, a survey in which respondents were asked to identify the outsourcing risks, was completed by all respondents. In the survey the respondents also identified the significance and likelihood of each risk. The survey and interviews were conducted with the case organisation's project team of eight people. At the time of data collection the case organisation was in the process of considering outsourcing two local outpatient clinics providing primary care in addition to having outsourced two of them earlier in the year (contract term had been on for approximately two months at the time of the interviews). The respondents indicated their experiences from the previous outsourcing process while identifying the outsourcing risks and the means to mitigate them (see "Appendix 2: Interview Outline"). The project team and their responsibilities are described below in Table 15.2.

In a single case study, the importance of using multiple respondents is highlighted in order to get a holistic view of the complex issues causing risks (Dubois and Araujo 2007). Although the respondents were able to identify risks from the case organisation's perspective, their own responsibilities were naturally emphasised in the nature of the risks they identified. Thus, it is important to involve personnel from different units to risk identification (Tummala and Schoenherr 2011). In the survey, the respondents listed all the risks related to the outsourcing consideration at hand and were asked to assign a value to each risk based on the quantitative scales, detailed in Table 15.3.

Outsourced primary care	Case organisation	Budget/turnover 2015
Primary health care in 3 of 12 outpatient clinics	Population of 137,000	Total expenditure: 1017.8 M
10% of the case organisation's	5618 employees (2014) of	Expenditure on health
population lives in the areas	which 1395 work in health	and social services:
outsourced clinics are covering	and social services	305.5 M (30% of total)

Table 15.1 Overview of case organisation

Position	Role in the outsourcing process
Finance manager	Participated actively in the outsourcing of the first two outpatient clinics and the ongoing consideration. Focus on impact on service costs, but also viewed the impact of outsourcing as a whole
Controller	Participated actively in the outsourcing of the first two outpatient clinics and the ongoing consideration. Responsible for counting the costs of internal service function and setting the fixed prices for RFPs
Service manager 1	Participated actively in the outsourcing of the first two outpatient clinics. Focus on service specifications. Previous work experience as a nurse
Service manager 2	Participated actively in the outsourcing of the first two outpatient clinics and the ongoing consideration. Focus on service specification, change management and impact on internal service functions. Previous work experience as a nurse
Service manager 3	Participated actively in the outsourcing of the first two outpatient clinics and the ongoing consideration. Focus on service specification. Previous work experience as a nurse
Procurement specialist	Participated actively in the outsourcing of the first two outpatient clinics and the ongoing consideration. Focus on managing the competitive tendering process
Directing doctor	Participated in the outsourcing of the first two outpatient clinics. Focus on service specification and impact on internal health care personnel
Lawyer	Participated in the outsourcing of the first two outpatient clinics and the ongoing consideration. Responsible for the contract

Table 15.2 Overview of the respondents

Tuble 15.5 Quantitutive Seales	Table	15.3	Quantitative	scales
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Significance of risk (1–5)	Likelihood of risk (1–5)
1 = small impact, might cause alterations to scope or method of outsourcing	1 = highly unlikely
2 = impact, causes minor alterations to the outsourcing process and/or outcome	2 = unlikely
3 = great impact on the outsourcing process and/or outcome	3 = likely
4 = significant impact, pursued outcome will not be completely achieved through outsourcing	4 = likely, will partially realise
5 = very significant impact, pursued outcome will not be achieved through outsourcing	5 = highly likely to realise

Identifying the likelihood of the risk was more challenging to the respondents than identifying the existence of the risk. Respondents either did not estimate the likelihood at all, or remained indecisive after time was allowed to consider the issue. The challenge in estimating risk likelihood comes from the fact that risk is defined as a result of uncertain events (Manuj and Mentzer 2008).

All the identified risks were analysed and based on the analysis, similar risks (i.e. the same risk described in different words by respondents) were grouped together. The risks that were identified by three or more respondents were defined as

'significant'. The final impact values (presented in Fig. 15.1) of the most significant risks were calculated by using the averages of the respondents' values. Finally, the AHP-model was used to analyse all the identified risks in the context of the case organisation's different outsourcing options: (i) total outsourcing (outsourcing primary care in two outpatient clinics, (ii) internal service delivery, (iii) outsourcing only primary care, and, (iv) outsourcing only dental care. As a result of this analysis the risk ratios for each option (displayed in Fig. 15.2) were created. The interview



Fig. 15.1 Most significant identified risks



Fig. 15.2 The risk ratios of different outsourcing options

data was coded. The codes were created based on the literature review and then revised and updated during the data analysis (see "Appendix 3: Coding Categories"). The discussion part of this study combines the results of the AHP analysis described next as well as the interview data.

The Analytical Hierarchy Process (AHP) is a decision-making process that breaks complex problems down into levels of decision criteria that can be managed more easily (Boardman et al. 2008: 437). It is applied for choice problems such as the outsourcing consideration (Ishizaka et al. 2012). The basic approach to AHP contains two-levels: importance/significance of criteria and relative importance (Boardman et al. 2008). In the context of this study, risks being the decision criteria, the two-levels are significance and likelihood of the risk. At the core of AHP are pairwise evaluations of set choice alternatives and criteria, meaning that each identified risk was evaluated in pairs in the context of the four different outsourcing options. The AHP organises and quantifies the decision making process by capturing the most relevant criteria identified (Saaty 1994). The AHP helps to make pragmatic decisions in complex situations where successfully mitigating one risk factor leads to increasing the probability of another (Wu et al. 2006).

AHP's is a useful analysis method for decision-making because of how it structures the relevant criteria into a hierarchy (Ishizaka et al. 2012). The decision hierarchy displays the decision goal, the decision objectives, the sub-objectives, the risk factors and the decision possibilities (Schoenherr et al. 2008). In the hierarchy the focus of the problem is presented on the top level and decision options are at the bottom level (Wu et al. 2006). This hierarchy allows the decision maker to break the decision into easily processed smaller entities and compare two risk factors simultaneously (Ishizaka et al. 2012). An additional strength of AHP is that it allows a decision maker to combine qualitative criteria and uncertainties to an analysis which is especially useful in cases containing uncertain aspects such as risks (Schonherr et al. 2008). Hierarchic structures are prerequisites to comprehensive risk analysis (Saaty 1994).

Results

Similar to other local authorities, in the beginning of 2015 the case organisation was facing a situation in which its primary health care function was no longer sustainable. Complications began when the case organisation was unable to recruit doctors to outpatient clinics in more secluded areas, causing issues with service availability and inefficiency of internal operations. Combined, these issues caused severe problems with access to care, i.e. service quality. Thus a project was initiated to look into alternative methods of organising the delivery. In the first phase, the outsourcing consideration covered only two out of 12 of the outpatient clinics within the case organisation. In the spring of 2015 the case organisation decided to outsource primary care in these clinics. They implemented a pricing model in which the cost for delivering the service per person was set (in the same level as their

internal delivery) in the request for tenders and the tenderers offered value (i.e. service quality) for that set price. Later in 2015 the case organisation was able to identify significant improvements in access to care with the same service costs as internally; they achieved better value for less through outsourcing. Thus a new project was set to evaluate whether outsourcing would solve similar issues in access to care in two further areas. This new project is the primary scope of this paper. However, experiences from the first outsourcing consideration and the competitive tendering process are mirrored in the discussion and results, as the respondents reflected on the previous procurement process when identifying risks and defining the means to mitigate them.

The second time around, the case organisations had four different outsourcing options: (i) outsourcing primary and dental care in both areas, (ii) maintaining the service deliveries in-house, (iii) outsourcing only primary care, and, (iv) outsourcing only dental care. The risks related to these options (results of AHP-analysis) and the case organisation's final decision are described in the following, in Fig. 15.1. below the most significant risks (identified by three or more of the respondents in relation to all outsourcing options related to outsourcing are presented (see "Appendix 1: Summary of All Identified Risks"). The risks values in the diagram in Fig. 15.1. were created by counting the average of the weights for the identified risks, given by each respondent.

Likelihood of Risk

- 1. **Political**. Politicians make the final decision based on ideology rather than facts. This would place operative management into the wrong hands.
- Market. The service entity is too significant for one tenderer; lack of competition or viable tenderers or undesired tenderers are selected to negotiated procedure.
- 3. Service specification. The service specification in the final request for tenders is not detailed enough. The service quality suffers, primary care patients will burden internal service functions.
- 4. **Communication**. Inadequate communication to City's personnel and citizens during the outsourcing consideration and competitive tendering process. Critique towards outsourcing from local media affecting the City's working atmosphere in health care functions.
- 5. Service fragmentation. The outsourced service remains a fragmented part of the health service delivery.
- 6. **Service quality/availability**. Service availability and/or quality suffers. Provided primary care is not appropriate.

The political threat was seen as the most likely and significant risk. The other risks were closer to each other in terms of their likelihood and significance. The risks of service fragmentation and communication were identified as likely to be realised, but their impact was anticipated to be acceptable in the light of expected benefits from outsourcing (see Rouillard 2004). The political, service quality/availability and market risks are defined as 'most significant' and as such further analysis of this study concentrates on the characteristics of these risks and the means to mitigate them during the competitive tendering process. The risk of service quality/availability is closely linked to the risk of service specification as mitigating the risk of service specification will decrease the likelihood of issues with service quality, as demonstrated in the discussion.

Identification of the most relevant risks was followed through with pairwise comparisons of all risks by using a software (Web-HIPRE) enabling AHP analysis. All risks were weighted and compared pairwise within each outsourcing option (total outsourcing, internal service delivery, outsourcing only primary care or only dental care). The respondents weighted the risks related to total outsourcing, meaning that during the AHP analysis the weightings for the other options were created by lowering or increasing the weight according to interpretation of the interview data. In Fig. 15.2 below, the risk ratio, which is the result of the AHP analysis conducted separately for each option, are displayed. The higher the ratio, the higher the risks related to the option, and vice versa.

As displayed in Fig. 15.2 above, the risks of different alternatives do not vary significantly, based on the AHP analysis. This finding points strongly toward the alternative approach of "total outsourcing" since it has the most potential in offering solutions when the case organisation is struggling with service availability issues. Taking into account that maintaining the service function internally eliminate other significant risks within the service quality, its risk ratio is remarkable. Accordingly, the case organisation had identified that the risk of service availability had become a problem, i.e. a realised risk in the internal service delivery (see Pontre et al. 2011). Outsourcing only dental care would diminish the risks notably, but simultaneously it would not provide a solution to the problem of service availability in primary care.

The case organisation's social and health care committee (consisting of city council members) made a decision to outsource primary health care and dental care in one of the outpatient clinics under consideration. This decision was reached after voting two times. The primary reason for the vote was the threat of having to let go internal personnel if outsourcing was implemented in two outpatient clinics. An increase in unemployment in the area was a concern for the local politicians. In the first round of voting, participants voted on the suggestions from local politicians which differed from the project team's suggestion. The one suggestion was to maintain all services internally and the other suggestion was to follow through with outsourcing only one outpatient clinic. In the second round the project team's suggestion to outsource both outpatient clinics was voted against the suggestion to outsource only one.

Discussion

In this section the results of the AHP analysis are combined with the qualitative data from the interviews. The three most significant risks: political, service quality/availability and market, and the means of mitigating these risks during the competitive tendering process are discussed in detail, as are reflections on the results in a broader outsourcing risk management context.

The case organisation does not have a formal risk management approach nor is risk identification a separate process step in their outsourcing process. However, risks were identified and steps were taken to mitigate them during the process. The state of risk management in the case organisation had improved over the course of the last two years as the procurement unit had been integrated as a part of their operations. The procurement unit was previously a separate support function. There did not seem to be a need for a more formal risk management approach. Risks were discussed and considered as a part of the purchasing strategy formation within the project team (procurement procedure selection and documentation content) (see Whyles et al. 2015) and as a means to mitigate their implementation during the process. A very detailed approach to risk management demands resources and inflicts costs, however not nearly as high as the costs of realised risks (Tsipouri et al. 2010). Thus risk management should become a part of strategic purchasing in public organisations. Outsourcing risks should be acknowledged and identified (see Tummala and Schoenherr 2011; Pontre et al. 2011), but only to the extent that risk mitigation does not distract public managers from ensuring adequate service quality and availability to citizens. The actions taken to mitigate risks should be focused on the service quality risk. The realisation of the quality risk during the contract term has more negative consequences to the outsourcing organisation, its service costs and reputation, than the realisation of any other identified risk.

The main challenges that a public manager faces in outsourcing is the alignment of public values, political guidance and market conditions (Brown et al. 2006). Political risk was identified in relation to achieving the goals of better service availability and cost efficiency, triggering the outsourcing consideration in the case organisation. As their finance manager described the make-or-buy decision is continuingly seen as very black and white by the politicians rather than recognising outsourcing as an opportunity to: "Enrich the internal service delivery and balance some of the high expenses or optimising the utilisation of capacity. Its rather seen is an ideological issue, meaning that if the majority is more on the left (politically), we haven't gone through with outsourcing". At the time of both outsourcing decisions out of the 67 case organisation's city council members, 35 were part of political parties which traditionally favour public service provision (political left) and 25 belong to parties that traditionally favour competition, i.e. outsourcing (political right). These power relations were reflected in the voting process. The nature and likelihood of the political risk varies across Finnish local authorities according to power relations between parties in city councils. The realisation of the political risk would mean that the case organisation could not outsource its outpatient clinics even though it is seen as the best solution by the civil servants to mitigate the internally realised risk of service availability. As described above this risk realised partially as the political decision was to outsource only one of the outpatient clinics. This means that the case organisation has to come up with an alternative approach to solve the service availability issue internally. The case organisation's project team identified open communication and sharing information on the benefits of outsourcing to the politicians as a means to mitigate this risk. However simultaneously it was recognised that this risk cannot be controlled.

Service quality and service availability, both contributing significantly to the success of the health service delivery, were identified as an outsourcing risk by six of the eight members of the project team. This was the highest amount of identifications of a single risk. The respondents recognised that problems with the service quality and/or availability would inflict significant transaction costs as patients would have to be steered to internal services or the outsourced outpatient clinics would have to be returned in-house. The service specifications, i.e. functional requirements in the request for tender, were identified as key in quality risk mitigation according to previous literature (see for instance Uyarra and Flanagan 2010; Whyles et al. 2015). The case organisation's lawyer explained the reasons behind the specification's importance: "The service specification needs to be very detailed and simply written, it should contain the self-evident issues as well. Otherwise it can be very dangerous, because the way the other party reads or interprets a clause can be very different (from what was intended)". The case organisation ensures that the specification is comprehensive enough by using the negotiated procedure in their competitive tendering process. Additionally, the importance of discussing with service providers as early as possible was highlighted by several respondents: "We aim to decrease the risk by arranging technical dialogues [market engagement] prior to publishing the request for applications to participate to the negotiations". The case organisation published a preliminary notice to inform the market about their outsourcing consideration and invited all interested service providers to participate in the technical dialogue.

This decision to use the negotiated procedure was rationalised by the case organisation's sourcing specialist: "It (negotiated procedure) gives this certainty, it makes it easier to follow through with outsourcing this service which is hard to define in terms of service content, and is diverse and complex". The project team's health care professionals had previously gained a lot from the opportunity to have a dialogue with the tenderers during the negotiated procedure. The case organisation's managing doctor described the complexity of creating the service specification as follows: "It took many sessions to figure out all the specifics, what should be included, what should be the service hours, what should be the minimum amount of staff, what is the treatment criteria, how the emergency care should work and so on". The case organisation's lawyer continued by noting that: "The traditional model contains lot more risks than this modern way of using restricted procedure or negotiated procedure. It is unlikely that the service specification fails...The open procedure is without a doubt a big risk". The case organisation aims to specifically use the dialogue during the negotiated procedure to complete the service

specification and the following details in the contract: (i) sharing of responsibilities between the purchaser and provider, (ii) incentives and sanctions and the quality measures to evaluate them, and (iii) payment mechanisms. In terms of important procurement documents in risk mitigation, the contract was clearly the most important regulating document after the service specification (which will become a contract attachment after signing). The decision to include incentives and sanctions to the service contract was made to ensure the availability and quality of the outsourced service. However, the case organisation's lawyer emphasised that: *"These outsourcings or the contracts cannot be ruined by aiming to maximise security, for instance in sanctions"*.

The use of the negotiated procedure is identified as a best practice for complex health services within the case organisation and in previous literature (see Whyles et al. 2015; Tsipouri et al. 2010). Chever and Moore (2012) argued that the negotiated procedure's dialogue phase can be important in situations in which the purchaser struggles to define the service specification without a dialogue with service providers. Based on the findings discussed above, this argument can be put more strongly: an open dialogue during market engagement and negotiated procedure is crucial to achieving a detailed service specification and contractual terms which mitigates the most significant outsourcing risks. However, some European countries have restricted the use of the negotiated procedure in their national legislations implementing the EU directive on public procurement (Chever and Moore 2012). Chever and Moore (2012) speculate that the reason behind these restrictions is the presumption of increased risk of favouritism and corruption compared to the open procedure. Initiatives to give greater freedom to use the negotiated procedure build on existing arguments that the use of negotiations would improve outsourcing outcomes by linking public organisations' outsourcing goals with the market offerings (European Commission 2011).

As mentioned in the literature review section, market engagement is conducted prior to the formal procurement process whether it is the negotiated procedure or the open procedure. When outsourcing simpler services than primary care, adequate tools to mitigate the quality risk can include: following through with market engagement, open procedure and allowing the formal process of questions and answers during bid preparation. Although highly recommended, the use of negotiated procedure should be considered case by case as it increases the process cost for both the procurement unit and tenderers (see Chever and Mooore 2012; Tsipouri et al. 2010).

The case organisation engaged with the market prior to the formal procurement process is recommended to mitigate the market risk and define the scope for the procurement (see Uyarra and Flanagan 2010; Whyles et al. 2015). The market risk was recognised by five of the eight respondents. This risk was more specifically defined as 'the risk of not receiving tenders from service providers'. The case organisation's project team identified the following triggers for market risk: (i) defining a service specification which does not correspond with the providers' service processes, or, (ii) placing strict eligibility criteria (mandatory requirements) on selecting tenderers in the negotiated procedure. Tsipouri et al. (2010) have also

identified specifications that create too high risks for tenderers as market risk triggers. The negative impacts of this risk which have been realised as a lack of competition could cause the case organisation to receive lower service quality and/or inflict higher service costs. A complete lack of tenders would force the case organisation to interrupt the outsourcing process. These consequences would be less significant than the realisation of the quality risk as at this phase of the outsourcing process the case organisation still has internal service production in the outpatient clinic to rely on.

The case organisation's approach to risk mitigation differs from the state of risk mitigation in public purchasing recognised in 2010 by Tsipouri et al. They identified a lack in use of contractual tools in risk mitigation; organisations were relying mostly on pre-procurement data analysis and efforts to shift technological risk to the provider. The main reason for this difference is that in 2010 only 6 years had passed from introducing the EU–directive on procurement. Five years later, in 2015, EU procurement regulations had been enforced to public purchasing for over ten years. This time has allowed public organisations in countries such as Finland to steer their focus in purchasing away from just following the rules to achieving the potential benefits of outsourcing such as cost efficiency and improved service (see Bovis 2012; Marques and Berg 2011; Rouillard 2004).

Conclusions

This study is concluded by presenting the most essential risk mitigation tools during the competitive tendering process in outsourcing public health services. The most significant risks are the political risk, service quality risk and market risk as has been identified in previous literature (see Bovis 2012: Schoenherr et al. 2008; Roberts 2001). However, as a risk related to the outsourcing process, the political risk takes a different form than recognised in previous literature which has mainly focused on risk identification as a part of contract management (see for instance Manuj and Mentzer 2008). Political risk during the contract term can mean policy reformations will have an effect on service demand or content (see Bovis 2012). At a local government level, the risk is that the city council makes political rather than pragmatic decisions which complicate the ability to improve the service function's quality and/or cost efficiency through outsourcing. As the means to mitigate this risks are limited, the public organisation should form a plan to develop the service internally if outsourcing is not favoured due to politics.

The service quality risk, entailing different dimensions such as access to service, service content and system fragmentation, is the most significant risk in outsourcing a public health function (see Wong et al. 2015; Bovis 2012; Roberts 2001). However, there are several tools to manage and mitigate this risk once its service specific dimensions have been identified. Early market engagement and the negotiated procedure are the most critical tools as they allow building the service specification in cooperation with the tenderers. Another key factor is to include
health care professionals in the purchaser's project team and allocating them enough time to contribute and focus on creating the service specification for the request for tenders. Service specification and carefully considered contractual terms are key in achieving outsourcing success. By taking these steps in risk mitigation before and during the competitive tendering process, the public organisation is more likely to achieve the benefits of outsourcing.

The recognised risk mitigation can be implemented as a best practice across the Nordic Countries which share Finland's maturity level in public purchasing professionalism. The limitation of this as a single case study is that the applicability of these practices in less developed purchasing organisations remains an open question. Further research is needed to determine whether similar or a different risk management approach would be recommended in other EU-countries of which some are struggling with issues such as corruption.

Risk category	Description of risk	Number of respondents identified the risk	Significance of risk (1–5)	Likelihood (1–5)
Political	Politicians decide based on ideology rather than facts; operative management is not in right hands	3	5	4
Competitive tendering process	The service entity is too significant for one tenderer; lack of competition or lack of viable tenders	4	4	2
Competitive tendering process	Desirable/innovative providers are not selected to negotiated tendering process	2	4	2
Competitive tendering process	Service description in the RFP is inadequate; service quality suffers, patient leakage to other services	6	3.5	2.1
Contract management	The outsourced service remains a fragmented part of the health service delivery	3	3	3.75
Competitive tendering process	Changes in the project team resources	2	2.75	1.25

Appendix 1: Summary of All Identified Risks

(continued)

(continued)

Risk category	Description of risk	Number of respondents identified the risk	Number of respondents dentified the risk			
Competitive tendering process/communication	Inadequate communication to personnel and service users. Media criticizes outsourcing; affects attitudes and working atmosphere	3	2	3.5		
Transition phase/reputation	Issues with service availability and/or quality in the transition phase; negative impact on employer reputation and future projects	2	2.5	3		
Transition phase/personnel	Issues in relocating personnel; unemployment increases	2	2	3		
Contract term/quality	Service availability/quality suffers; provided care is not appropriate	4	3.25	2.5		
Contract term/quality	Care relationships suffer/brake	2	3	3		
National policy process of reforming the delivery of health services	Appropriates of outsourcing to the yet unknown details of the reformation process	2	3	3		

Appendix 2: Interview Outline

1. General

- Can you give me a brief overview of your background and your role in the organisation?
- Can you describe your role in the outsourcing consideration and the competitive tendering process related to primary care?

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2. Planning of service delivery and outsourcing considerations

- How is the service delivery planned in your organisation?
 - What is the time span?
- How is the service delivery monitored?
- Are the risks related to your service delivery identified?
 - If so, are they monitored regularly?
- Is risk identification part of outsourcing considerations?
 - If so, are the identified risks a factor in the decision on how to execute the outsourcing process?

3. The risks identified during the outsourcing consideration and competitive tendering process (in relation to the two outpatient clinics already outsourced)

- Were risks of outsourcing identified during the outsourcing consideration?
 - If so, what were these risks?
- Did the identified risks have an impact on the scope of outsourced services and/or the chosen tendering procedure?
- Were risks identified in relation to the different phases of outsourcing (competitive tendering process, implementation phase, contract management)?
- Were risks realised during the outsourcing process?
 - If so, what effect did they have on your processes?
- Did risks you had not identified realise during the outsourcing process?
- What were the key learnings for this new outsourcing process?
- How would you evaluate the manageability of the risks? related to your service delivery at the moment?

4. The risks identified during the outsourcing consideration (ongoing consideration of outsourcing two additional outpatient clinics)

- Would you describe the risks you have identified relating to this outsourcing process?
- How these risks should be mitigated during the outsourcing process?

Category	Description
Risk monitoring	Respondent discusses how risks are monitored
Risk identification	Respondent discusses how risks are identified
Risk management	Respondent discusses how identified risks are managed
Identified risks related to outsourcing	Respondent discusses the risks related to outsourcing a service
Risk manageability	Respondent discusses how they are able to manage the risks after identifying them
Impact of outsourcing	Respondent discusses the impact of outsourcing
Means to diminish the risks of outsourcing	Respondent discusses the means to mitigate the identified risks

Appendix 3: Coding Categories

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Chapter 16 Best Practice in South African Construction Procurement Law

Allison Anthony

Introduction

The construction industry plays an important role in the South African economy. According to Statistics South Africa (Stats SA), the industry contributed 4% to the country's Gross Domestic Product (GDP) in the first quarter of 2015 (Stats SA 2015). It was also the industry with the largest turnover for the last quarter in 2014 (Lehohla 2014).

In 1994, with the constitutional transformation of South Africa, a need to transform the public procurement system of the time was identified. The construction industry was used as a model for procurement reform in South Africa and much of the rules and procedures incorporated into the new public procurement regime were adopted from English and international law.

Consequently, the construction industry, public procurement is heavily regulated. The legislation applicable to this industry is the general public procurement legislation as well as the *Construction Industry Development Board Act* (CIDB Act) 32 of 2005 and its Regulations. The CIDB Act provides that the CIDB must promote best practice by publishing best practice guidelines for further regulation of the industry. This article will determine whether the qualification criteria for construction contractors in South Africa complies with the imperatives of Section 217 of the Constitution, where the rules may fall foul of the section. It will also highlight the current developments in South African public procurement law to the extent that they have a bearing upon the qualification stage of the procurement process.

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Method

In this chapter, a literature based review and analysis of legislation will be used. Various applicable literature sources will be referred to and the meaning of legislative provisions will be analysed.

Legal Regulation of Government Procurement in South Africa

Legislative Frameworks for Government Procurement

Section 217(1) of the Constitution provides that when contracting for goods or services, organs of state in the national, provincial or local sphere of government or institutions identified in national legislation must do so in accordance with a system which is fair, equitable, transparent, competitive and cost-effective. Section 217(2) provides for the use of procurement as a policy tool. This provision states that subsection (1) does not prevent organs of state or institutions in subsection (1) from implementing procurement policies providing for categories of preference in the allocation of contracts and the protection or advancement of persons, or categories of persons disadvantaged by unfair discrimination. Section 217(3) prescribes a national legislative framework to be enacted in terms of which preferential procurement policies as contemplated in subsection (2) are to be implemented.

The law applicable throughout the procurement process is the private law of contract (Bolton 2007). However, because the government is a party to the contract and is obligated to act in the public interest and deals with public funds, public law, or more specifically administrative law, is applicable as well (Ferreira 2011). Therefore, section 33 of the Constitution which protects the right to just administrative action applies to public sector procurement. Section 217(2) and (3) of the Constitution provide for the use of procurement as a policy tool. Public procurement is thus used to attain equity. Section 9 of the Constitution which entrenches the right to equality is therefore also applicable.

The legislation applicable to procurement in general includes the Preferential Procurement Policy Framework Act (PPPFA) 5 of 2000 and its Regulations which regulate preferential procurement by providing a framework in terms of which preferential procurement policies must be implemented. At national and provincial government level, the Public Finance Management Act (PFMA) 1 of 1999 and its Regulations govern public finance in general and public sector procurement. The Local Government: Municipal Finance Management Act (MFMA) 56 of 2003 with its Regulations and the Local Government: Municipal Systems Act 32 of 2000 manages public finance and thus public sector procurement at local government level.

The Supreme Court of Appeal (SCA) has further held in paragraph 552 of Umfolozi Transport (Edms) Bpk v Minister van Vervoer that the invitation, evaluation and award of government tenders is of an administrative law nature, therefore, the Promotion of Administrative Justice Act (PAJA) 3 of 2000 applies. The Promotion of Access to Information Act (PAIA) 2 of 2000 is also applicable as it regulates access to any information held by both the government and private parties. The Broad-Based Black Economic Empowerment Act (BBBEEA) 53 of 2003 applies to preferential procurement in that it regulates black economic empowerment. Various National Treasury Practice Notes are also published specifically for public procurement purposes. Since public procurement is of great economic importance, of potential application is the Competition Act 80 of 1998 since the purpose of this Act is inter alia the promotion of economic efficiency, the socio-economic welfare of South African citizens and the participation of small, medium and micro enterprises (SMMEs) in the economy. The Protected Disclosures Act 26 of 2000 also finds application and lastly, the Prevention and Combating of Corrupt Activities Act 12 of 2004 which is aimed at curbing corruption in general and also in procurement processes is relevant. Legislation which regulate procurement in general also prescribe that the specific prescripts of the CIDB apply to construction procurement alongside the general legislation.

Legislative Frameworks for Public Sector Construction Procurement

Legislation applicable to public sector construction procurement are those applicable to procurement in general, the CIDB Act, the Regulations to the Act and the prescripts issued by the CIDB. Section 2 of the Act establishes the CIDB as a juristic person and regulatory board for the construction industry and construction procurement in particular. The Act sets out the powers and functions of the board, it requires a register of contractors to be created for efficient procurement practices and to facilitate public sector construction procurement.

In terms of section 5(1)(vii) the CIDB must promote and implement policies aimed at procurement reform. Section 5(1)(viii) provides that the board may promote and implement policies and programmes aimed at standardisation of procurement documentation, practices and procedures. The board is empowered in terms of section 5(4)(b) to initiate, promote and implement national programmes aimed at the standardisation of procurement documentation, practices and procedures. Section 5(3)(c) of the Act further places an obligation on the CIDB to promote standardisation of the procurement process within the framework of the government procurement policy in order to advance the uniform application of policy in the construction industry. A register has been established in terms of section 16(1) of the Act of which the purpose is to provide for efficient public sector procurement in the construction industry. Contractors are registered in different categories which are determined based on their grading designations and their status as potentially emerging contractors. Nine grading designations exist in which contractors are registered and all contractors must apply to the CIDB to be registered in a specific category. Section 18(1) of the Act provides that a contractor may not undertake, carry out or complete any construction work or portions of the work if such contractor who disobeys this requirement is guilty of an offence in terms of section 18(2) of the Act. There are, however, certain contractors who are exempt from registration in Regulation 4.

The Meaning of Construction Procurement

Regulation 1 of the CIDB Act defines construction procurement as "procurement in the construction industry, including the invitation, award and management of contracts."¹ A construction contract is generally considered to be a form of letting and hiring of services or work (Du Toit 2008). In the South African procurement context, construction work is considered to be a part of services. There is therefore no additional or separate category for construction works. Within the construction industry, a distinction is made between construction works, services, supplies and disposals. These four categories thus constitute construction procurement.

Construction works are specifically defined in section 1(j) of the CIDB Act as "the provision of a combination of goods and services arranged for the development, extension, installation, repair, maintenance, renewal, removal, renovation, alteration, dismantling or demolition of a fixed asset including building and engineering infrastructure". However, in terms of the Regulations to the CIDB Act, construction works are divided into categories or classes which appear to exclude goods and services. These are defined in Schedule 3 to the CIDB Regulations. The first class is civil engineering works which involves inter alia the construction of bridges, the provision of water supply, drainage works and pipelines. The second class is electrical engineering works involving infrastructure which refers to the

¹According to Watermeyer in his paper "Public construction procurement in a global economy" presented at the Knowledge Construction Joint International Symposium of CIB Working Commissions in Singapore, October 2003 procurement constitutes the provision of supplies, services or engineering and construction works or any combination thereof, the disposal of moveable property, the hiring or letting of anything and the acquisition or granting of any rights. This definition is broader than that in the Regulations and the generally accepted definition of procurement which constitutes only acquisition, and not disposal.

generation, transmission and distribution of electrical equipment. The third class provides for electrical engineering involving electrical installation in buildings. General building works as a fourth class refers to the construction of buildings and the fifth class, mechanical engineering works, provides for inter alia boiler installations, air-conditioning and mechanical ventilation. The last class provides for specialist works which are identified and defined by the CIDB and may constitute the demolition of buildings and engineering infrastructure and blasting.

Services in the construction industry are not defined in the Act or its Regulations. However, the CIDB Standard for Uniformity in Construction Procurement defines a services contract as "the contract for the provision of labour or work, including knowledge-based expertise, carried out by hand, or with the assistance of equipment and plant". A distinction appears to be made between services in general and professional services. Professional services in the construction industry involve the design and supervision of construction work for limited periods of time without the obligation of permanent employment, possessing superior knowledge, transfer of skills and upgrading of a knowledge base while executing an assignment and the provision of independent advice.

Supply contracts are "contracts for the provision of materials or commodities made available for purchase". Lastly, disposals have been described as contracts for "the divestiture of assets, including intellectual property and other rights and goodwill by any means, including sale, rental, lease, license, tenancy, franchise, auction or any combination thereof" (Watermeyer 2004).

Qualification of Contractors in Public Sector Procurement

When contractors wish to conclude contracts for the provision of goods or services, the procuring entity often requires compliance with certain criteria. These criteria are the minimum requirements for participation in the procurement process and serve as an indication to the procuring entity of the capability of a contractor to perform the contract in question (Arrowsmith et al. 2000). The criteria are normally advertised in a call for tenders or expressions of interest. It entails the financial and technical requirements needed in order to ensure that the winning contractor will be able to perform in terms of the contract (Arrowsmith et al. 2000). It may also entail "secondary" or "horizontal" criteria which are criteria not directly aimed at determining whether a contractor is able to perform a contract. It may relate to a contractor's criminal record for example or compliance with other laws such as affirmative action laws or the integrity and business practices of contractors (Arrowsmith et al. 2000). Trepte (2004) notes that the general suitability of a contractor is looked at and refers to the general standing of the potential tenderer. The purpose is to ensure that the tenderer is of good professional standing, responsible and trustworthy.

A distinction has been made between pre-qualification, qualification and shortlisting. It has been noted that the pre-qualification of a contractor takes place in the case of open procedures where the procuring entity decides which tenderers will be invited to submit a tender offer.² In the case of restricted procedures, qualification is done prior to contractors being invited to submit tender offers and at which stage a shortlist of those to be invited is made (Arrowsmith et al. 2000).

The pre-qualification of tender offers, it is said, must be distinguished from the evaluation of tenders. Pre-qualification merely determines the capability of tenderers to complete a contract as opposed to evaluation which involves determining the lowest price or best offer received (Arrowsmith et al. 2000). Pre-qualification therefore relates to the tenderers and evaluation to the tenders.

Qualification of Construction Works Contractors in the South African Construction Industry

As noted, qualification of contractors in the construction industry is regulated by means of registers. A national Register of Contractors is established in terms of section 16(1) of the CIDB Act and indicates which contractors are qualified to tender for a construction works contract. Contractors are placed on the Register in terms of a grading designation which is determined by their financial and works capability. A contractor's status as a potentially emerging enterprise,³ its recognition status in terms of a best practice recognition scheme and its Broad-Based Black Economic Empowerment (B-BBEE) recognition level are also considered when determining which grading a contractor should have. Contractors are registered in one of nine grading designations with grade one being the grade with the lowest value of contracts for which contractors may tender and grade nine with an unlimited value, the highest. A contractor may be registered to perform more than one class of construction works but may hold one grading designation in relation to a specific class. It should be noted that certain contractors are exempt from registration on the Register of Contractors. Regulation 4(1) exempts contractors who are registered as home builders in terms of the Housing Consumer Protection Measures Act 95 of 1998 from registration with the CIDB for the purpose of construction works relating to the provision of a home. Regulation 4(2) and (3) further exempt

²It has been noted by Arrowsmith et al. (2000, pp. 610–611) that the benefits of pre-qualification according to the World Bank include affording contractors the choice not to tender, thereby avoiding expenses, when they are not qualified to do so or the opportunity to form joint ventures in order to increase their chances of winning a tender. Another benefit is that those contractors who do meet the qualification criteria, tender with the assurance that they are competing against equally qualified tenderers. Procuring entities can assess the interest shown by potential tenderers and amend the contract requirements accordingly. It is noted that pre-qualification is to be used to determine which contractors are qualified and not to reduce the number of tenderers. See Arrowsmith et al. (2000, p. 608).

³An emerging enterprise is defined in s 1 of the CIDB Act as "an enterprise which is owned, managed and controlled by previously disadvantaged persons and which is overcoming business impediments arising from the legacy of apartheid".

contractors who perform construction contracts which substantially consist of the provision of labour, in other words services and construction contracts which substantially consist of the provision of supplies.

Secondly, a Register of Projects is established in terms of section 22(1) of the CIDB Act for the recording of projects in which construction works contractors are involved. Failure to register a project must be reported to the Auditor-General in terms of Regulation 21(4).

Qualification Criteria for Placement on the Register of Contractors

The CIDB Regulations differentiate between requirements for contractors to be registered in grade one and those to be registered in grades two to nine. *Grading Designations Two to Nine*

A contractor, who wishes to be registered as a grade of 2-9 contractor, must apply to the CIDB for the registration. Application must be made for registration in at least one grading designation. As noted, a contractor may be registered for more than one class of construction works, but may hold one grading designation for a specific class of works. An application for registration must be accompanied by the required fees as indicated in Schedule 2 to the Regulations and the complete financial statements of the contractor for the two years preceding the application. Where the financial statements are not audited, supporting evidence relating to the contractor's turnover as set out by the South African Revenue Services (SARS) and proof of payment of value added tax must be provided if requested by the CIDB. An original tax clearance certificate issued by SARS must be provided as well as certified copies of the identity documents of the principal(s) of the contractor. Proof of any financial sponsorship must be provided, qualified persons employed by the contractor must be registered and if the contractor is registered with an emerging contractor development scheme, proof of such registration must be furnished. Documentary proof of contracts completed must be submitted to the CIDB as well as any other information required by the Board. The CIDB may obtain a contractor's tax clearance certificate if authorised to do so and may take reasonable steps to verify the information provided by a contractor. If a contractor does not provide further information within 60 days as requested by the CIDB, the application for registration may be cancelled. The information on the Register of Contractors on the CIDB website serves as a contractor's registration certificate.

In terms of Regulation 10(1), the CIDB must appoint an assessor or an independent person with the relevant expertise to evaluate applications for registration. The assessor is obligated in terms of Regulation 10(2) to decide on the specific category of registration for a contractor and may register a contractor in a lower grading than that applied for. The contractor must be notified within 21 days and may request reasons for registration in a lower grading.

Grading Designation One

As in the case of grading designations two to nine, a contractor who wishes to be registered as a grade one contractor must apply to the CIDB for the registration. An application for registration as a grade one contractor must be accompanied by certified copies of the identity documents of the contractor's principal(s), the registration number and certificate in the case of a close corporation, an original tax clearance certificate issued by SARS, proof of registration with the relevant professional bodies for example the Electrical Contracting Board of South Africa and any other information required by the CIDB.

Qualification for Grading Designations

Regulation 11(1) provides that a grading designation is determined by a contractor's financial and works capability. Different criteria are used for grades five to nine and grading designations two to four. It would appear that no specific qualification criteria is applicable to grade one contractors who may conclude contracts with a value below or equal to R200,000.

A contractor, who is registered in grading designations two to four, must have financial capability determined by the contractor's best annual turnover for the two years immediately preceding the application for registration which must be equal to or exceed the minimum amount indicated in Regulation 12(1). The contractor is required to have completed at least one construction works contract during the five years immediately preceding the application which exceeds a value indicated in Regulation 12(1). The contractor must further have available capital equal to or exceeding the minimum amounts indicated in Regulation 12(1).

The works capability of a contractor in grade two to four is determined by the number of qualified persons as indicated in Regulation 12(4). The contractor is further required to fulfil the requirements in Regulations 12(5) or (8) which provide for registration with the relevant professional bodies. Lastly, the contractor must have completed at least one construction works contract in the five years immediately preceding the application in the category for which the contractor wishes to register which is of a value exceeding the minimum amount stated in Regulation 12(7).

In order to determine the financial capability of a contractor in grade five to nine, it must be established whether the contractor has available capital equal to or exceeding an amount indicated in Regulation 12(1). A contractor is required to employ the minimum number of qualified persons as indicated in Regulation 12(4) in the specific class of construction works for which it wants to register. As in the case of grading designations two to four, the contractor applying to be registered as a grade five to nine contractor must be registered with the relevant professional body as provided for in Regulations 12(5) or (8).

Grading Designation for Joint Ventures

Regulation 25(6) provides that the grading designation of a joint venture⁴ is determined based on the number of partners registered in a specific grade. In other words, a joint venture will be a grade three contractor if three of its partners are registered in grading designation two. Similarly, a joint venture will be a grade four contractor if three of its partners are registered in grading designation two. Similarly, a joint venture will be based four contractor if three of its partners are registered in grading designation three. Its grading can also be determined in terms of Regulation 11 and will be based on the sum of the annual turnovers of all its members, the sum of the available capital of all the members and the total number of full-time qualified persons in the specific class of construction works advertised.

Qualification Criteria for the Invitation of Construction Works Contracts

Contrary to the above, the qualification of this section relates to the ability of an organ of state to invite offers to tender for construction work. The qualification criteria relating to the invitation of construction works contracts are applicable to organs of state who advertise contracts with a value equal to or exceeding R30,000. Regulation 25(1) provides that subject to subregulation (1A), a call for tenders or expressions of interest must stipulate that only those contractors who are registered in the category of registration for which a contract is advertised or higher, may tender. However, a contractor who is not registered in the required category but who is capable of being registered before tenders are evaluated, may submit a tender offer. In the case of an expression of interest, the contractor concerned must be capable of being registered within 21 days of the closing date for submission.

Regulation 25(2) provides that despite subregulation (1A) a procuring organ of state may under extreme conditions state in its call for tenders or expressions of interest that only contractors who are registered at the time of the advertisement will be evaluated. Extreme conditions are considered to be when human injury or death, human suffering or deprivation of human rights, serious damage to property or financial loss, injury, suffering or death of livestock or other animals, serious environmental damage or degradation and the interruption of essential services is present or imminent. A single class of construction works which best describes the work to be performed must be advertised. However, if more than one class adequately describes the work, no more than two classes may be stated in the tender call. In terms of Regulation 25(3)(b), a contractor's recognition status in terms of a best practice contractor recognition scheme must also be considered to determine its

⁴Regulation 1 defines a joint venture as "a grouping of two or more contractors who jointly and severally undertake to perform a construction works contract". Joint ventures are often also referred to as consortiums.

grading designation. In the case of a joint venture, Regulation 25(5) provides that it may submit a tender offer or expression of interest if every member is registered and the leading partner is registered in the specific grading designation for which the contract is advertised.

Of note is that in terms of Regulation 25(7), an organ of state must determine after the receipt of tender offers, the final lowest category of registration required for the contract concerned. An organ of state may further evaluate a tender offer from a tenderer which is registered but tendered outside of its grading designation. This is, however, conditional upon the requirements that the margin by which the value of the contract advertised and that for which the contractor may tender, is reasonable. The award of a contract to such tenderer must furthermore not pose any undue risk to the procuring organ of state. Lastly, the decision to award a contract to a tenderer in terms of this Regulation must be reported. An organ of state may furthermore evaluate the tender offer of a contractor who is a potentially emerging enterprise for a contract with a tender value one grade higher than the grading designation for which the contractor is registered. This may take place provided that the contractor has the potential to develop and qualify to be registered in the higher grade and that the contractor has the necessary financial, management and other support to enable it to perform the contract properly. Lastly, an organ of state must be satisfied prior to awarding a contract that the suggested winning tenderer is registered in terms of the Regulations, is not prohibited by legislation from participating in the procurement process and has the necessary resources to perform the contract. The tenderer's capacity to perform the contract must furthermore not be unduly compromised by the award of the contract.

Results and Discussion

Qualification of Construction Works Contractors and Section 217

Fairness

Fairness in the public procurement context refers to procedural fairness in the relationship between an organ of state and tenderers and the relationship between tenderers in relation to each other (Bolton 2007). In order for the process to be fair, it is required that the tender information or qualification criteria are publicly available. It is further required that tenderers should be familiar with all the applicable criteria and that the process should provide for sufficient participation. The qualification criteria which construction works contractors are required to meet, are found in the Construction Industry Development Regulations, CIDB prescripts and the CIDB website (www.cidb.org.za). Tendering opportunity is afforded to contractors who are capable of performing contracts of all values and classes of

construction works, thus providing for a system of grading designations which facilitates competition. Furthermore, Regulation 24 provides that invitations for tenders or expressions of interest should be advertised on the CIDB website and in accordance with the PFMA and the MFMA.

Qualification criteria are therefore widely published for sufficient participation. The requirement that a contractor's works and financial capability must be evaluated promotes fair treatment of tenderers in relation to each other. The tenders received are competitive and therefore evaluated fairly as opposed to tender offers which differ vastly with regard to works and financial capability. It ensures that only those tenderers who are capable of performing, compete in the process. Neither the Regulations, nor the CIDB prescripts provide for qualification criteria applicable to contractors registered in grading designation one. Consequently, no standard exists in terms of which the capability of a grade one contractor to perform a contract can be tested or established. It has been recorded in CIDB statistics that one of the reasons for poor quality in construction work in South Africa is procurement related, specifically the lack of pre-qualification of tenderers.⁵ It would appear that the qualification of grade one contracts for the purpose of registration and evaluation is, in the absence of qualification criteria, done at the discretion of the procuring entity.

As noted, in order for fairness to be complied with, tenderers should be treated fairly in relation to one another. It has been noted that grade two to nine contractors are required to comply with a registration system from which grade one contractors are exempt. On the face of it, it may appear as though these contractors have been given an unfair advantage above others.

However, this may have been done in the interest of cost-effectiveness. As required by National Treasury Practice Notes, all procurement transactions below R500,000 must be procured by way of written quotations. Grade one contracts would be awarded by means of quotations which is a less formal method of procurement. Additionally, the administrative process in procuring goods or services from grade one contractors would also be shorter. CIDB prescripts have indicated that grade one contractors, which constitute the micro enterprise sector has been over stimulated in the building and civil engineering classes of construction works to the extent that these enterprises are no longer sustainable.

Challenges facing this sector have been recorded as low annual average turnovers due to contractor dependence on cession agreements or donation of construction materials and sporadic track records due to fluctuating job opportunities. Initiatives have been suggested for the development of these contractors and once they have been sufficiently developed to be competitive contractors, qualification criteria for these contractors should be set. It has been noted that fairness and equity are interrelated principles and that procedural fairness cannot be completely

⁵At the same time, it is acknowledged that a factor which ensures good quality in construction works is a contractor's capability to perform a contract which is in turn ensured by the use of a procurement system which provides for the recognition of a contractor's capabilities, therefore the qualification criteria for contractors.

separated from substantive fairness (Bolton 2007). Therefore, although those needs of a grade one contractor cannot be compared to that of a grade nine contractor, in the light of fair and equal treatment as well as a cost-effective procurement system in ensuring that all contractors are capable of performing, section 217(1) would be better complied with if contractors in all grading designations are required to comply with prescribed criteria. The Regulations make provision for distinct requirements for two groups of grading designations, thereby acknowledging that different requirements are needed for the two groups. Therefore, specific criteria should be set for grade one contractors as well. Such criteria would furthermore provide an opportunity for grade one contractors to develop their capability to perform construction works contracts and in turn ensure fair treatment of all tenderers in the construction procurement process.

In terms of Regulation 25(7), on receipt of tender offers, the procuring entity must determine the final lowest category of registration required for the tender advertised. However, a departure from the category indicated in the tender advertisement must be reasonable. Regulation 25(10) in turn provides that a tender offer which does not satisfy the requirements envisaged in Regulation 25(7) must be rejected. It has been noted that tenderers have a right to expect and require an organ of state to apply the criteria advertised in a tender call, especially in the case of a construction contract due to its technical nature (Bolton 2007). The principles of fairness and transparency would be compromised if this was not adhered to. Therefore, it would seem unfair to adjust tender requirements after tender offers have been received. The different classes of construction works each provide for a different field of expertise and the grading designations provide for contract values which differ vastly. Tenderers who would have prepared responsive tenders may be unfairly excluded if the criteria, although required to be reasonable, is changed. Where organs of state or procuring entities are uncertain of the exact specifications of a project, a call for expressions of interest in terms of procurement procedures such as the qualified, two-envelope and two-stage procedures may be used in order to determine what options are available to them. Once expressions of interest have been received, an organ of state should be able to set the qualification criteria for the particular tender. Furthermore, the provision made in Regulation 25(3)(a)(i) further assists in allowing an alternative class of construction works to be advertised in a call for tenders. In order to ensure that fairness is complied with, the criteria advertised in the call for tenders should be the criteria applied when tenders are evaluated.

In light of the above, the court in Nelson Mandela Bay Municipality v Afrisec Strategic Solutions (Pty) Ltd (2008) JDR 1014 (SE) set a tender award aside which was found to have exceeded the scope of a tender call. The municipality which awarded the tender to Afrisec accepted that it advertised a call for tenders for the procurement of security-related work and that it awarded the contract to the deserving tenderer, Afrisec. However, the municipality alleged that the work which was performed in execution of the tender was beyond the scope of the tender call (para 2). The municipality concluded a main agreement with Afrisec (scope of work or SOW 1) based on the tender advertised and various subsequent agreements

(SOW 3–28) which were not concluded in terms of a separate tender process (para 5). During the execution of the work it became apparent that the amount paid for work already done far exceeded the amount which Afrisec tendered (para 9). Afrisec then initiated litigation when the municipality advertised a call for tenders which involved the implementation of work which Afrisec assumed it was contracted to perform (para 10). The court held that a tender process should have been conducted for SOW 3-28 to have been concluded (para 17) and that the vast difference between the price tendered and the price paid indicated that the work performed exceeded the tender call (para 20). The court further held that the argument that the work in terms of SOW 3-28 was negotiated based on SOW 1 could not stand since no tender process existed where the offer made by Afrisec could be matched by other tenderers. The original call for tenders which resulted in SOW 1 did not refer to the work performed in terms of SOW 3-28. Therefore, the tender was found to be beyond the scope of the tender call and set aside. Therefore, in order to comply with the principle of fairness, the tender awarded should be in line with the specifications called for in the call for tenders.

Equity

Equity in the public procurement context refers to substantive equality. This means that the socio-economic circumstances of construction contractors should be taken into account when contracts are awarded and is referred to as preferential or targeted procurement. Regulation 5 of the Construction Industry Development Regulations provides that in terms of a targeted development programme, potentially emerging contractors in particular grading designations allocated specifically for the purpose of development programmes on the Register of Contractors, may be identified. When contractors apply to be placed on the Register of Contractors, their status as potentially emerging enterprises and their status in terms of a best practice recognition scheme (aimed at achieving equity within the construction industry) is considered. Provision is therefore made for equity to be implemented in construction procurement qualification criteria. Regulation 6(d) further provides for a contractors.

Furthermore, in terms of Regulation 25(8), a procuring entity may accept the tender offers or expressions of interest of a contractor who is registered as a potentially emerging enterprise in terms of a targeted development programme and is registered in a grading designation one level lower than that advertised. This is, however, conditional upon the entity being satisfied that the contractor has the potential to develop and qualify to be registered in the higher grade and that the contractor has the necessary financial, management or other support in order to carry out the contract. The equity principle is therefore complied with.

Transparency

In order to regulate the behaviour of all stakeholders in the construction industry, a Code of Conduct has been published in terms of section 5(4)(a) of the CIDB Act and binds all participants in construction procurement processes. The preamble to the Code of Conduct makes reference to good corporate governance which is of great importance for all parties in the construction industry to comply with and requires inter alia transparent conduct. It is further stated that the development of the construction industry will be promoted by transparent performance and is further emphasised in the principles governing the conduct of parties in construction procurement. Participants must furthermore ensure that transparency is maintained in the tendering process. Section 29 of the CIDB Act provides for the enforcement of the Code of Conduct by way of an inquiry into a possible breach. All parties are therefore bound by the Code which will ensure that transparency is complied with. The CIDB Standard for Uniformity further provides that procuring entities and tenderers behave honestly and transparently. In promoting transparent practices, parties to a particular procurement are required to disclose any conflict of interest and shall not participate in any of the procurement decisions or recuse themselves from the process.⁶ Transparency is further promoted in the obligation placed upon the procuring organ of state to accept only tenders which comply with the published criteria. Tenderers must further inform organs of state of any material change relating to the qualification criteria of a tender.

A transparent system is one which is open and requires that all tender information be made publicly available (para 6 3). Qualification criteria for contractors in the construction industry are published in the Construction Industry Development Regulations, CIDB prescripts and the CIDB website. The criteria contractors must meet are therefore widely available which makes for a transparent system.

Procurement documents in the construction industry include those used to prequalify tenderers in order to solicit tender offers. These documents require tenderers to submit sufficient information to enable organs of state to evaluate tender submissions and make a well-informed decision. It is required that qualification criteria should be set in clear and unambiguous terms and that all rights and obligations must be defined. The rules for preparing construction procurement documents therefore promote transparency.

The requirements for the Register of Projects further promote transparency in that all information relating to a particular award is made publicly available. This is strengthened by the sanction imposed in Regulation 21(4) which is a report to the

 $^{^{6}}$ A conflict of interest is defined as a situation in which (i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially or (ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit or (iii) incompatibility or contradictory interests exist between an employee and the organisation which employs that employee. See CIDB Standard for Uniformity 34 (para F.1.3.3 a).

Auditor-General by the CIDB of the failure to register a project. Transparency is, however, compromised by the absence of works and financial capability criteria for grade one contractors. Therefore, the rules which determine the capability of these contractors to perform contracts are not publicly available. However, this may possibly be justified by the cost-effectiveness principle.

Competition

According to Bolton (2007), the principle of competition is intertwined with that of cost-effectiveness. The aim of competition in a procurement process is to have a choice between different options in order to choose the most viable deal. Competition with regard to the qualification of contractors is given effect to by means of the registration system. The designation of different grades determined by financial and works capability provides for competition amongst contractors. The higher the grading designation, the bigger the tender value for which contractors may compete. This therefore serves as an incentive for contractors to develop their financial and works capability in order to ultimately be registered in the highest grading designation. Regulation 25(8) further provides for contractors who are registered as potentially emerging enterprises to tender for contracts in one grading designation higher than they are registered for. Such a provision promotes competition and contractor development in that more contractors tender for a contract than would be the case in the absence of Regulation 25(8). Competition is further complied with in the qualification of contractors based on their works and financial capability which ensures that competitive tenders are submitted.

Competition is promoted in Regulation 25(5) which provides for joint ventures to submit tender offers or expressions of interest. The formation of joint ventures allows contractors to pool their resources, both their financial and works capabilities, in order to win a tender which is normally of a value much higher than they would be able to tender for individually. More contractors are therefore involved which provides for more competition in the tender process.

Cost-Effectiveness

Cost-effectiveness involves attaining value for money by taking into account various factors such as price, whole-life cost, the nature and quality of the goods or service to be provided, knowledge, capacity and the track record of tenderers. Since public sector procurement and thus construction procurement involves the expenditure of government funds, measures must be put in place to ensure that value for money is attained.

When construction contractors are placed on the Register of Contractors, their financial and works capabilities are looked at not only to determine their respective grading designations but also to determine whether they are capable of performing the work to ensure a cost-effective procurement. Cost-effectiveness is further

established by evaluating quality in tender submissions.⁷ Contractors are often required to submit expressions of interest before submitting tender offers to enable an organ of state to determine what its options for procurement are and to choose the most viable deal. It would appear, therefore, that the purpose behind the qualification of contractors is to achieve value for money for a cost-effective procurement system.

In the South African context, cost-effectiveness entails the capability of potential tenderers to perform a contract and the submission of tax clearance certificates by tenderers (Bolton 2007). It has been noted that the verification of tax clearances certificates enhances the attainment of value for money and that it can be assumed that a contractor who is unable to pay its taxes will be unable to perform a contract properly (Bolton 2007). Provision is made for determining the capability of construction works tenderers and tax clearance certificates issued by SARS must be submitted in order for contractors to be registered.⁸ The court in *Mpumalanga* Steam and Boiler Works CC v Minister of Public Works (22023/08) [2010] ZAGPPHC 128 (30 September 2010) set aside the award of a tender to a tenderer who submitted an invalid tax clearance certificate based on Regulation 16 of the 2001 PPPFA Regulations.⁹ The court held that in light of Regulation 15 of the 2001 PPPFA Regulations which places a duty on organs of state to act against any person who obtains a preference in a fraudulent manner, the organ of state was obliged to launch an investigation into the acquisition of a possible fraudulent tax clearance certificate and that its failure to do so has no place in a constitutional order that values transparency, accountability and effective service delivery (para 33). The court found that on the evidence presented, it could not establish that the tax clearance certificate was indeed obtained fraudulently, however, due to its invalidity at the time of tender submissions the award had to be set aside (para 34).

In *IMVUSA Trading 134CC v Dr Ruth Mompati District Municipality* (2628/08) [2008] ZANWHC 46 (20 November 2008), the court condoned the fact that the municipality allowed the winning tenderer to submit a fresh tax clearance certificate which was found to be invalid at the time of submission of tenders. The unsuccessful party argued that the winning tenderer submitted a fatally defective tender which rendered its acceptance invalid. The court held that the tender process was subject to section 217 of the Constitution but that the tender board was permitted to condone some defects. A distinction had to be drawn between a material factor and the evidence needed to prove that factor and that all the facts of the case had to be considered as well as public interest. The court held further that those who

⁷Quality is used as a synonym for functionality in the construction industry and is defined as "the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs". See CIDB Standard for Uniformity 5 para 3.11.

⁸Therefore, despite the absence of works and financial capability criteria for grade one contractors, the submission of a tax clearance certificate is required and is thus some indication of their financial standing.

⁹This Regulation provides that no contract may be awarded to a person who has failed to submit an original tax clearance certificate issued by SARS to certify that the taxes of that person are in order.

fraudulently contribute to the country's economy are not permitted to benefit from public tenders. This meant that a tenderer's tax matters had to be in order for a contract to be awarded to it (para 6). It was found that the winning tenderer's tax matters had at all times been in order and that only the proof of this was omitted. Therefore, the organ of state having allowed the tenderer to submit a fresh certificate constituted correcting a *bona fide* mistake which it was entitled to do (para 16). Section 217 was thus complied with in that the process was fair, transparent and competitive (para 17).

It would appear that the qualification of construction works contractors is done at various stages. They are qualified based on their works and financial capability, in order to be placed in a grading designation and in terms of an invitation for tenders or expressions of interest. This ensures that contractors are able to perform in terms of their contracts. Furthermore, the overall detailed qualification criteria for construction works contractors ensure that only capable contractors are awarded contracts and that cost-effectiveness is complied with.

In terms of Regulation 25(1), a call for tenders or expressions of interest must indicate that those contractors who are registered in the grading designation indicated in the advertisement or higher, may tender. Subregulation (1A), however, provides that notwithstanding Regulation 25(1), a contractor who is not registered in the grading designation advertised may submit a tender or expression of interest if such contractor is capable of being registered in the required grading. This must be done before tenders are evaluated in the case of a call for tenders and within 21 days after the submission date in the case of expressions of interest. It is further indicated in Regulation 25(2), that despite Regulation 25(1A), a procuring entity may indicate in extreme conditions only that contractors who are already registered may submit a tender offer or expression of interest.

Cost-effectiveness may be compromised where contractors are not registered within the time frame given. In order words, where they are not registered within 21 days or before evaluation. The process may be less cost-effective and more time-consuming when unqualified contractors are allowed to participate in the procurement process. A measure of flexibility should be provided for in exceptional circumstances where tenderers are not capable of being registered at the time it is required or may still be in the process of doing so when they tender for a contract. However, Regulation 25(2) appears to contravene the requirement in section 18(1) of the CIDB Act that contractors must be registered to undertake construction works contracts and contradicts the idea of maintaining a Register of Contractors which promotes a cost-effective system.

New Developments

Despite the seemingly adequate regulation of construction procurement in South Africa, issues such as non-compliance with rules and corruption are still rife in the construction industry. This leads to the conclusion that if the rules are not the problem per se, the problem must lay at the door of those parties involved in construction procurement. In an attempt to curb some of the issues faced by the industry, National Treasury has begun a transition to a new system of public procurement which will entail less legislation, clearer rules and more efficient remedies in order to settle disputes such as those in qualification criteria.

As a result of the various laws applicable, the regulation of public procurement is rather fragmented which may lead to confusion as to which legislation is applicable in certain situations. In order to address the fragmentation as well as the lack of effective remedies, an initiative has been started by the National Department of Finance which entails centralising the public procurement system in South Africa. This means that a central Office of the Chief Procurement Officer (OCPO) has been established and is managed by the Chief Procurement Officer. The intention is that the OCPO will function as a central regulator of public procurement and will be exclusively responsible for regulation of public procurement. In other words, the Regulator will not procure goods and services on behalf of the government.

Currently, the OCPO is assisted by various public officials who manage specific areas of public procurement such as preferential procurement, legal matters, information technology etc. The suggestion is that the Regulator will consist of 3 bodies. An administrative body managed by an executive official and supported by public servants which will oversee the administrative functions of the OCPO, meaning the day-to-day regulatory functions of this body. Secondly, a non-executive board to oversee the work of the administrative body and provide guidance to the executive body. The non-executive board will also make high-level regulatory decisions and will be accountable to Parliament. The recommended third body will be responsible for enforcement of procurement rules which will include an ombudsman. This body will strictly handle only the enforcement of procurement rules. Since both the executive and non-executive bodies will make regulatory decisions, it is currently unclear what will constitute high-level decisions and how these are distinguished from those decisions made by the executive body. Currently, there exists no legal basis for the creation of the above bodies therefore legislation will be required for its establishment. It is recommended that the ombudsman would be the first port of call in relation to all public procurement disputes and his/her powers will be limited to recommendations to contracting authorities. He/she will also be able to fulfil the role of mediator or arbitrator in such disputes. It therefore appears that dissatisfied parties will be able to take the decisions of the ombudsman on judicial review.

In an attempt to curb the scourge of corruption in public procurement, National Treasury has further established an e-tender publication portal and central supplier database on which all tenders in all spheres of government will be published. All tender documents and information pertaining to the advertised tenders will be made available on the central portal. The entire initiative and the administration behind the portal will be managed by the OCPO. The intention is to reduce fragmentation, improve transparency and accountability with regard to the award of government tenders and in the process curb corruption and reduce costs.

In addition to the above, as of 1 July 2016, a new Standard for Infrastructure Procurement and Delivery Management will come into operation. The standard has been issued as National Treasury Instruction Note 4 of 2015/2016 in terms of section 76(4)(c) of the PFMA and Regulation 3(2) of the MFMA SCM Regulations. It will apply to all departments, constitutional institutions and public entities listed in Schedules 2 and 3 to the PFMA and organs of state in terms of section 239 of the Constitution, including the CIDB. The instruction note introduces a new term into South African public procurement, that of "infrastructure procurement" which is defined as "the procurement of goods or services including any combination thereof with the acquisition, refurbishment, rehabilitation, alteration, maintenance, operation or disposal of infrastructure" (National Treasury Instruction Note 4 of 2015/2015). The Instruction note makes no reference to construction procurement or construction work or even the construction industry. It appears therefore that the intention is to re-name procurement in the construction industry, infrastructure procurement. Although the instruction note does not strictly affect the qualification criteria of construction contractors, it will majorly impact upon the description of the work they tender for and their ability to be registered with the CIDB which consequently affects their ability to contract with the government. Since the new rules refer to "infrastructure" and "infrastructure procurement", the CIDB Act, the Regulations and the CIDB best practice guidelines will have to be amended in order to be aligned with the new standard.

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Chapter 17 The What, Who, and How of Public Procurement: Job Functions Performed and Managed by Professionals

Joshua Steinfeld

Introduction

Roman's article, The Politics of Bounded Procurement: Purists, Brokers, and the Politics-Procurement Dichotomy (2013), aptly applies the age-old paradox of public administration to the public procurement context, where politicization and neutrality are empirically studied (see also Roman 2015). Indeed, the roles and responsibilities assumed by public procurement practitioners are still being developed in the body of knowledge, scholars are just beginning to look at the specific job tasks completed as part of the work (Prier et al. 2013). Whereas Roman (2013, 2015) notably examines elements of politicization in public procurement by defining "how" public procurement practitioners execute their roles and responsibilities, either *politically* or *neutral*, this manuscript addresses the matters of "who" and "what." Utilizing Prier et al. (2013) framework for conducting a job analysis in public procurement, this study attempts to identify job tasks performed and managed by public procurement practitioners. It is vitally important to identify what job tasks practitioners complete, and who completes these job tasks, to learn more about how job tasks are executed politically or neutral and to better understand which job tasks serve as bases for broader job functions in public procurement.

There are numerous functions served through public procurement that is largely dependent on the organization, job position, or context of the task at hand. Public procurement is a core administrative function that specifically deals with the purchasing and supplier functions within an organization. Functional areas include, but are not limited to, procurement policy, strategic planning and scheduling, contract administration, negotiations, process and outcome evaluation, and various analytical procurement methods and techniques (Snider and Rendon 2012, p. 329). Practitioners strive to reduce cost and maximize value to the organization or broader

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community through the products and services that are procured. Generally, purchasing agents and buyers consider price, quality, availability, reliability, and technical support when choosing suppliers and undertaking specific procurements.

Public procurement professionals engage dual responsibilities: (1) They ensure that operational agencies, departments, or units, comply with procurement regulations, and (2) There is direct involvement in procuring goods, services, and capital assets as authorized and funded (Thai 2001, 29). Public procurement comprises strategic action-orientations that involve acquisition, contracting, buying, renting, leasing, purchasing, and commissioning (Thai 2001, 42–43). The purpose of the procurement practitioner is to ensure that organizations' needs are met in terms of production and supply chain management so that operations can run smoothly and continuously without failure or interruption. Consequentially, procurement managers identify strategic areas of purchasing that may assist the organization's overall mission, vision, values, or objectives through the wise allocation of resources that link product and service offerings to end consumer specifications and demands.

As the profession of public procurement continues to develop, there is a desire to identify the job tasks that are managed by practitioners. There has been great debate among scholars regarding what constitutes professionalism in public procurement (Callender and Mathews 2000; Thai 2001; McCue and Gianakis 2001; Prier and McCue 2009; Prier et al. 2013; Steinfeld et al. 2015), and whether practitioners should be neutral civil servants or adopt various kinds of political orientation (see '*purists*' and '*brokers*,' Roman 2013). The question of professionalism includes not only the political question but also the extent to which public procurement is specialized enough to be considered an autonomous profession. Practitioner task specialization is fundamental to studying the attributes of professionalism by technical specialty and empirical rigor, specifying that the unique characteristics of professionalism involve task-specific knowledge and abilities related to a single specialization as well as professionals' consistent approach to task completion regardless of external factors being present.

A major challenge of identifying task specialization in public procurement is determining a theoretical framework that captures the scientific elements underlying task specialization. In public administration, the discipline for which the subfield of public procurement belongs, there has been longstanding discourse regarding the context and validity in examining task specialization. Public administration has been proclaimed to resemble business, science, and art, and each view of public administration has different implications for the meaning of task specialization and the nature of the knowledge, skills, and abilities (KSA's) that are being managed. Wilson (1887) likens professionalism in public administration to business, where managerial efficiency is the guiding criterion for government operations. On the other hand, professionalism in public administration can be viewed as pragmatic, highly interpretive, and epistemological, as if functioning more like a craft of inquiry than a means to an end (see Price 1878; Keynes 1904).

The rational approach to public administration applies measurement criteria and insinuates professionalism to resemble a politically neutral bureaucracy.

Early public administration scholars had faith in the power of reason to order human affairs and its role in achieving progress (Spicer 1995, 26). These scholars were greatly influenced by doctrines such as utilitarianism, legal realism, positivism, and pragmatism (Spicer 1995, 27). According to this technical rationality, the division of work affects both the efficiency that a given set of tasks is carried out with, and upon the nature of the goals that are achieved (Simon et al. 1950/1991, 135–136). Simon, Thompson, and Smithburg also delineates skills from tasks in describing skills as the ability to demonstrate a stable characteristic of good performance that is acquired through considerable time and effort, in completion of tasks (pp. 138–139). This mechanistic view of the skills in the profession of public administration has been confronted with a postmodern view of the relationship between knowledge and skills, largely emanating from the challenges offered by public choice theory (see Buchanan and Tullock 1962; Downs 1967; Olson 1965; Reisman 1990).

Before offering the sociological or political perspective, the actual tasks of practitioners need to be identified; what it is that public procurement professionals actually do, and who it is that completes these job tasks. Subsequently, how the public procurement practitioner displays professionalism through political or neutral orientation can be further examined. This job analysis computes data from the 2012 Universal Public Procurement Certification Council (UPPCC) survey to identify the job tasks that practitioners perform and manage, and their respective job description. A discussion of how practitioners complete their jobs follows the sensitivity analysis as a means for spurring future research based on these empirical findings.

Literature Review

Developing Occupations

The term profession describes an occupation that has a high level of professionalism (Andersen and Pederson 2012). Professionalism is thus ultimately "a continuous occupational variable" since some occupations have achieved higher levels of professionalism than others (Andersen and Pederson 2012). Each occupation has its own unique history and possesses a pattern of structural and ideological features (Levi-Strauss 1966). "Two major considerations impel an individual to choose his/her occupation: the income it may bring and the social status with which it is traditionally associated. With the first, the individuals may sustain their lives. Because of the second, society evolves a scale of values which are identified with the folkways and mores and which find expression in the social hierarchy of occupations" (Chen 1947). An individual's desired values and expression, and those associated with the occupation of choice, are reflective of self-image. A person's self-image is defined as a set of attitudes, beliefs, and opinions held by a person of himself or herself (Faunce 1968). In turn, a person's self-image is dependent upon the support, encouragement, recognition, and acceptance of those whom that actor shares a relationship (Salaman 1974). Typically, we build relationships with the people we work with; the people who share our daily experiences and can relate to our interests, endeavors, and sacrifices.

Accordingly, Freidson (1970) states an occupation exists when workers perform the same activities and devise common methods that are used by new recruits (p. 71). In this manner, established practices become affiliated with specific job tasks inherent to a particular occupation. Hughes (1958) observes that new occupations recruit from existing occupations leading to issues regarding formalized training for the new occupation that eventuates into a more formal credentialing system placing clearer boundaries and ways to create barriers to entry into the occupation (pp. 134–135) (see also, for barriers to entry: Kline 1981; Christensen 1994).

New occupations develop when workers are needed by employers to do tasks that have not been done before or when needed tasks are sufficiently different from what exists and it becomes the primary job of enough workers (Crosby 2002). Economic expansion, population growth, technological innovation, intellectual advancement, and changes in trends could all have the effect of creating new tasks. Yet, it is particularly important for the development of an occupation that individuals from different backgrounds perform similar services (Blum et al. 1988).

The process dictating the way role bundles are made up and organized, the power exercised by those occupying roles, and how power is utilized are thus critical for better understanding the division of occupations (Freidson 1985). The grouping together of role bundles, vis-à-vis declaration of the occupied roles as "occupations," largely determines how workers are viewed in the labor force and by social networks. To begin with, the conceptions and identities that persons form of themselves are based upon their vocations, the role they seek to play in communities and social groups, and the recognition and status which society accords to actors in these roles (Park 1931). And, people's identities are not the result of any one single role because society understands people as multiple-role-performers rather than as a person with a particular role (Goffman 1969). Especially in public procurement and administration, an interdisciplinary field consisting of several subfields ranging from budgeting/finance to political science to organizational management, the concept of professionalism applies to practitioners who assume a multitude of roles and responsibilities.

Examining Public Sector Professionalism

For the past century, public administration has undergone a search for a core body of theory and knowledge to determine whether elements of professionalism exist in the field that would constitute evidence of a profession (Pugh 1985). The Pendleton Act of 1883 is one early case in point, which provided a legal arrangement for

professionalism in the public sector by the implementation of competitive exams, elimination of mandatory campaign contributions, and political neutrality (Theriault 2003). Despite the Pendleton Act's accomplishment in achieving civil service reform by striving to rid the public administration of patronage, many challenged the Act's intent to establish meritocracy rather than providing party professionals with another weapon for party power (Skowronek 1982).

It has been argued that accepted administrative principles commonly utilized to achieve efficiency such as specialization, unity of command, span of control, and organization by purpose, process, clientele, or place, cannot be validated (Simon 1946, p. 53). However, from a conceptual standpoint, especially one that would apply to the policy context of the public sector, there are arguments suggesting that task specialization corresponds to purpose and expertise. Krimsky (1984, p. 249) outlines the following intellectual skills that scientific or technical experts bring to a problem: (1) a theoretical framework, lattice of concepts, laws, and explanations, (2) acquaintance with a body of literature, (3) proficiency with specialized instruments, (4) causal knowledge and the ability to frame hypotheses, and (5) a process of inquiry that enables collection, organization, and interpretation of data. Technical rationality led to specialized, expert knowledge, the very life blood of the professional, leading to the proliferation of professional associations in the latter half of the 19th century and early part of the 20th century (Larson 1977). Only by specialization within applicatory limits can scientific thoroughness and exactness be achieved in any knowledge department (Keynes 1904, 114). The division of work affects both the efficiency that a given set of tasks is carried out with, and upon the nature of the goals that are achieved (Simon et al. 1950/1991, 135-136).

Wilson's essay *The Study of Administration* (1887) and its mantra "administration is a field of business" (p. 209), the idea that public administrators should act like professionals or that certain values or methods are characteristic of professionals, has been at the forefront of administrative scholarship and debate. It represents perhaps the first attempt toward articulating the ideology and theoretical constructs of professionalism in public administration. The science of public administration is concerned with the effective and efficient performance of the machinery of government apart from the "hurry and strife of politics" or the "debatable ground of constitutional study" (Wilson 1887, 209–210). Public administration was known to deal with the execution of policies enacted by political bodies (Goodnow 1900). Taylor (1919/2006) attempted to instill standards into administrative practices stating that: "Instead of having only one way which is generally accepted as a standard, there are in daily use, say, fifty or a hundred different ways of doing each element of the work" (p. 31).

One of the earliest attempts to identify the criteria of a profession was offered by Abraham Flexner (1915) who stated "Professions involve essentially intellectual operations with large individual responsibility; they derive their raw material from science and learning; this material they work up to a practical and definite end; they possess an educationally communicable technique; they tend to self-organize; they are becoming increasingly altruistic in motivation." Similarly, Parsons (1939) differentiates professionalism by technical specialty and empirical rigor, specifying that the unique characteristics of professionalism involve task-specific knowledge and abilities related to a single specialization as well as professionals' consistent approach to task completion regardless of any external factors being present. In conjunction with Parsons' definition of professionalism, Eulau (1973) attributes professionalism to the translation of "knowledge into action" and use of that knowledge to help people address problems they cannot resolve themselves (pp. 172–173); a condition referred to by Kline (1981) and Christensen (1994) as specialized, or esoteric subject matter. Accordingly, Sanders (1993) denotes the essence of professionalism as: "A professional is one who is competent at some difficult task; the term 'profession' describes either the pursuit of the work in question, or the aggregate of persons doing that work; 'professionalism' and other cognates must similarly involve reference to this central idea" (p. 86).

Task Specialization in Public Procurement

"Public procurement is the designated legal authority to advise, plan, obtain, deliver, and evaluate a government's expenditures on *goods and services* that are used to fulfill stated objectives, obligations, and activities in pursuant of desired *policy* outcomes" (Prier and McCue 2009). In this sense, public procurement practitioners play a central role in the provision of public goods in an economy. As a result, public procurement practitioners must manage a variety of job activities or job tasks.

According to the US Bureau of Labor Statistics (BLS), 'purchasing managers,' 'buyers,' and 'purchasing agents' are recognized as an occupation within the business and financial occupation group (US Bureau of Labor Statistics 2013). Collectively, the three purchasing positions belong to the field of procurement, indicative of the strategic and managerial aspects of purchasing (Mol 2003; de Boer et al. 2003). Despite the creation of several scholarly journals in the field of procurement, including the *Journal of Public Procurement* in 2001, researchers in public administration, public finance, and public budgeting have largely ignored the purchasing function (MacManus 1992). Subsequently, labor force participants are largely unaware of public procurement practitioners' roles and responsibilities and if procurement and logistics is noticed, it tends to be dominated by purchasing activities in the private sector.

Beginning in the 1980s and 1990s, the formation of public-private partnerships (PPP) established the necessity of public practitioners to consider stakeholder interests such as business private investors (Kettle 2002; Cooper 2003). However, best practices have not been vested to address the various dynamics at each level of government (Steinfeld and Thai 2013, p. 71). At one extreme, there are prescriptive and regulated structures, where executives or directors are heavily involved in the majority of the procurement process. At the other end, there are loosely guided approaches where responsibilities are devolved and procurement is viewed as a managerial function (Peters 1996).

The objectives of public procurement and its operations are expansive, even more so than the singular objective of minimizing costs, maximizing value, revenues, or profit (Murray 1999; Larson 2009). Such objectives involve the delivery of a wide range of public services, such as law and order, health, education, defense, transportation, the environment, and social services. Thus, the scope of procurement in public sector organizations is broad with regards to diversity and serving consumers' needs (Erridge 2007). An increasing recognition of the strategic role of public procurement has emerged that applies cost saving functions to cover more general governmental objectives (Zheng et al. 2007).

As public procurement continues to mature, there is a desire to identify the contours that shape the occupation. Currently, public procurement has some of the contours of a profession including a recognized professional society, codes of ethics, a certifying body, and even a burgeoning interest in developing curriculum in Master of Public Administration programs. However, a major constraint of public procurement's push towards professional recognition is the fact that there is limited research determining what these practitioners actually do on their jobs, and who are the practitioners that assume these roles and responsibilities. To date, there is no specific research that attempts to argue that the job of public procurement practitioners is specialized to require unique knowledge and training (see Gargan 1998).

Job Tasks of US Public Procurement

In 2012, the UPPCC conducted a job study to devise sound and defensible content for testing those wishing to pursue certification. The UPPCC gave permission to use the data from that study for analysis and publication. For the UPPCC survey, there were 2593 respondents, all from public procurement organizations in the US such as the California Association of Public Procurement Officials, Florida Association of Public Procurement Officers, National Association of Educational Procurement, National Association of State Procurement Institute, and the National Institute of Governmental Purchasing: The Institute for Public Procurement. As part of the survey, respondents were asked whether they "perform," "manage," "perform and manage," or "neither perform nor manage" each of a list of 75 job tasks. Respondents also identified themselves according to one of thirteen job descriptions, as well as responded to questions regarding attainment of UPPCC certifications, years of experience, and salary.

For the quantitative analysis conducted here, first, the question of what public procurement practitioners actually do is addressed by identifying the most commonly performed and/or managed public procurement job tasks. The goal is to identify the most common, or frequently, performed and/or managed job tasks to establish basis for task specialization among a majority of practitioners. Also, a reason for identifying the *most commonly* performed and/or managed job tasks,

rather than all job tasks on the survey, is to establish a firmer basis for the job tasks expected to be present in public procurement. These robust results may demonstrate a set of job tasks that can be considered to reflect the core responsibilities most frequently performed and managed by public procurement practitioners to establish a basis for task specialization.

Once the job tasks are identified, the issue of "who" completes these job tasks is examined according to practitioner job descriptions. However, identifying the job descriptions that perform and/or manage the most common job tasks only covers one approach to differentiating between job descriptions. For example, it is expected that more competent procurement professionals not only perform and manage certain job tasks more frequently, but that they also assume a greater breadth of roles and responsibilities as well. Therefore, the *uncommonly* managed job tasks are also identified to discern the esoteric job tasks within procurement of each practitioner job description.

There are two reasons for focusing on the commonly *performed and/or managed* job tasks and those that are uncommonly *managed*. The distinction between performance and management is not always straightforward, so when trying to identify the common job tasks, it makes sense to capture the variations that exist among practitioners in job task completion. Additionally, when looking at uncommon job tasks, management connotes a more intensive measure, as management of a job task indicates greater mastery and therefore serves as a more pivotal data point when differentiating job descriptions.

To determine the threshold to use in establishing which job tasks are commonly performed and/or managed and which job tasks are uncommonly managed requires sensitivity analysis. The sample mean and standard deviation are calculated for the means of each job task so that only job tasks performed and/or managed by a proportion of respondents falling beyond one standard deviation are included. The one standard deviation benchmark is used to separate those job tasks that are statistically more common because based on the normal bell-shaped curve, more than 68.2% of respondents are found to perform and/or manage job tasks beyond one standard deviation, which represents greater than a two-thirds majority, and can thus be considered a common, or central task for the typical procurement practitioner. The mean of means is calculated for performance and/or management responses of each job task and the standard deviation is added to the sample mean, the resultant value is the threshold used to determine which job tasks are commonly performed and/or managed by procurement practitioners (Appendix). Job tasks where the rate of performance and/or management by surveyed practitioners exceeds the threshold value are included as commonly performed and/or managed job tasks for the analysis.

For the threshold used to categorize uncommonly managed job tasks, the two resulting sample means are summed and the standard deviations are averaged to determine the threshold percentage for uncommonly managed job tasks (Appendix). The standard deviation of the management of all job tasks is then subtracted from the sample mean calculated from the means of each job task managed in order to determine which job tasks are deemed to be uncommonly managed. Whereas the standard deviation was added to the sample mean of job task means for the purposes of determining commonly performed and/or managed job tasks, in this case, the standard deviation is subtracted from the sample mean of job task means to determine which job tasks are uncommonly managed by procurement practitioners.

Sensitivity analysis indicates that thresholds of 85 and 38% are appropriate in determining what constitutes commonly performed and/or managed job tasks and uncommonly managed job tasks, respectively. The sample mean of the proportion of all survey respondents who indicated performance and/or management of each job task is 67.5% and the standard deviation is 17.4% (Appendix). Since the aim is to identify the most commonly performed and/or managed job tasks, only job tasks that are performed and/or managed by a proportion of survey respondents extending beyond one standard deviation from the sample mean (67.5% + 17.4% = $84.9\% \rightarrow 85\%$) are included in the subsequent analysis.

Regarding the uncommonly managed job tasks the sample mean of the proportion of all survey respondents who indicated management of each job task is 46.5% and the standard deviation is 8.2% (Appendix). Again employing the one standard deviation benchmark, job tasks that are considered uncommonly managed are those job tasks that less than 38% of all survey respondents reported managing (46.5–8.2% = $38.3\% \rightarrow 38\%$). Rounding down to 38%, from 38.3%, for the threshold of uncommonly managed job tasks and rounding up to 85%, from 84.9%, for the commonly performed and/or managed job tasks helps ensure that approximating errors do not include job tasks that should not be included, and also serves to simplify the benchmark thresholds.

It is found there are 13 job tasks that 85% or more of all survey respondents reported performing and/or managing as shown by the overall totals that each exceed the 85% threshold (Table 17.1). Also, it is demonstrated that survey respondents of all job descriptions perform and/or manage common job tasks since each job description has a proportion of respondents greater than zero for each of the 13 job tasks, indicating the breadth of job tasks that procurement practitioners perform and/or manage across all job descriptions. More specifically, directors/managers of procurement, executive director/chief procurement officers, intermediate buyers, and risk management supervisors all performed and/or manage across practitioners surveyed at these job descriptions. Also, assistant directors, contract administrators, and entry-level buyers performed and/or managed common job tasks at a proportion of greater than 80% on average across practitioners for these job descriptions.

Furthermore, the findings suggest there are 18 job tasks that fewer than 38% of all survey respondents reported managing (Table 17.2). By looking at the "overall" column (Table 17.2), it can be seen that less than 38% of all survey respondents manage the 18 listed job tasks. More specifically, directors/managers of procurement and executive director/chief procurement officers manage the uncommonly managed job tasks at proportions of 59 and 58% on average for surveyed practitioners at each job description, respectively. Assistant directors, finance/accounting

	AS	AD	CA	DM	EB	CP	FA	IB	CO	PM	PS	WM	RS	All
Interpret policies and procedures	70	91	88	98	84	96	86	86	92	90	88	83	91	90
Review compliance with law, policy, procedures	65	92	89	98	89	96	78	83	86	78	87	56	94	91
Identify sources of services and/or supplies	75	87	89	96	94	87	89	96	73	78	78	90	96	91
Select method of procurement	60	90	87	98	88	93	82	95	73	77	75	74	95	90
Develop solicitation document	56	90	89	98	88	89	74	93	69	70	74	61	96	89
Review solicitation document	51	93	93	99	90	92	75	93	86	73	80	62	97	92
Select contract type	48	89	88	96	81	85	71	91	66	65	75	55	93	87
Solicit competitive quotes	62	81	79	95	90	83	78	92	65	66	78	83	92	86
Ensure transparency for open/fair competition	57	90	91	99	90	93	71	95	77	67	81	63	98	91
Analyze and evaluate solicitation responses	49	88	91	96	83	87	63	91	71	73	71	60	97	88
Prepare and make recommendation award	37	86	86	95	80	87	66	87	67	73	72	56	93	85
Prepare and execute contractual documents	52	85	93	96	84	88	81	90	68	70	69	44	93	87
Uphold/promote mission, vision, values	62	92	84	98	87	93	62	87	84	83	84	59	89	88
Avg % for job description by common job task	57	89	88	97	87	90	75	91	75	74	78	65	94	89

Table 17.1 Percentage of job tasks commonly performed and/or managed by public procurement practitioners (>85%)

Note See Table 17.3 for job description abbreviations. "All" column is average % completion across the 13 job descriptions for each job task, n = 2518

Source Universal Public Procurement Certification Council (UPPCC) 2012 Job Analysis
managers, program managers, and warehouse managers each manage the uncommonly managed job tasks at proportions of greater than one-third (33%) on average for surveyed practitioners at each job description. Thus, even though these uncommon job tasks are less frequently managed across all practitioners, a substantial portion of practitioners at these six aforementioned job descriptions do manage these uncommon job tasks, indicating these job tasks are indeed a part of public procurement but esoteric among practitioners to the point that only certain job descriptions manage them, and there may be distinctions within some of these job descriptions that dictates management of these uncommon job tasks as well. The proportion of administrative support, entry-level buyers, and intermediate buyers who manage the uncommonly managed job tasks is especially low, with numerous uncommonly managed job tasks being managed at a proportion of survey respondents at each respective job description that is below 10% (Table 17.2).

For each of the 31 job tasks of focus, the proportion of practitioners at each job description that perform and/or manage the common job tasks and manage the uncommon job tasks is shown in Tables 17.1 and 17.2. These proportions of practitioners at each job description, with respect to each job task, is then averaged to determine the cumulative proportions of practitioners for each job description that performs and/or manages common job tasks and manages uncommon job tasks. The cumulative proportions are shown by the last row of Table 17.1 denoted as *Average % for Job Description by Common Job Task* and the last row of Table 17.2 labeled *Average % for Job Description By Uncommon Job Task*. Finally, the proportions of practitioners at each job description for each job task are then averaged, across the 31 job tasks of focus, and the resultant cumulative, averaged percentages are illustrated in Table 17.3.

The quantitative results are as expected from an intuitive perspective, with job descriptions of executive director/chief procurement officer, director/manager of procurement, and assistant director demonstrating the most frequent completion of job tasks, contract administrator, program supervisor, and intermediate buyer in the middle, and compliance officer, entry-level buyer, and administrative support near the bottom of job descriptions for job task completion. The findings are paramount as they demonstrate that job descriptions considered to be more senior in public procurement are indicative of a greater frequency and larger breadth of job tasks and hence a greater scope and complexity of work, which directly relates to professionalism through technical expertise and task specialization.

Another consideration is to examine who make-up these 13 job descriptions in terms of practitioners' experience, attainment of certifications, and salaries. The data shows the job descriptions that most frequently complete these job tasks also have more years of experience and earn higher salaries (Table 17.4). In particular, the proportion of practitioners with 0-5 years and 5-10 years of experience diminishes while ascending job descriptions that more frequently complete public procurement job tasks, and the proportion with over 20 years of experience increases as well. For compensation, the proportions increase while ascending job descriptions in the 80-100 k and 100-125 k salary ranges, with a decrease in those practitioners making only 30-60 k. Looking at certification, the proportion of

	AS	AD	CA	DM	EB	СР	FA	IB	СО	PM	PS	WM	RS	All
Administer a	11	34	16	58	18	59	36	17	33	39	39	23	18	31
procurement card														
program														
Implement a	11	38	23	55	8	57	19	14	15	34	23	26	18	29
sustainable														
procurement program	16	07	10	50	1	50			10	21	10	21	4	24
operating budget	16	27	10	58	1	59	66	3	10	31	19	31	4	24
Ensure compliance	21	13	24	60	16	61	30	17	22	36	3/	12	10	33
with sustainable	21	45	24		10	01	50	17	22	50	54	42	19	55
procurement														
Maintain inventory	29	18	8	40	15	43	53	13	10	37	17	80	11	23
Design internal	24	19	8	39	9	39	35	8	7	30	13	69	11	21
distribution channels														
Account for assets	24	23	11	43	9	47	58	9	10	31	19	74	11	23
Establish warehouse	15	18	5	36	8	37	47	8	5	24	7	75	9	19
shipping and receiving														
processes														
Select method of	28	32	11	64	16	55	57	15	25	32	39	75	18	33
disposal for surplus														
equip/material														
Facilitate movement of	23	25	11	48	18	43	37	13	12	33	16	77	16	36
goods														
Establish mission	13	52	20	78	5	77	38	6	24	43	26	20	14	35
statement, vision,														
operating values		20	22	(1	-	50	20		12	20	12	24	1.7	20
conduct business	8	39	22	64	3	58	32	9	13	30	13	24	15	30
outsourcing.														
privatization,														
partnering)														
Analyze economic	9	53	27	70	7	68	30	13	24	40	23	20	20	35
trends/conditions														
affecting procure														
Conduct cost/benefit	11	47	26	69	8	62	41	11	20	33	32	20	19	34
analyses on future														
acquisitions														
Implement a process	8	53	29	68	5	74	31	9	22	51	30	24	19	35
	0	50	26	(0)	0	70	20	11	10	20	20	20	17	24
Plan/implement	8	50	26	69	8	/0	32	11	19	39	29	20	1/	34
by forecasting														
Formulate a	11	50	20	69	6	70	38	8	18	41	26	30	16	33
procurement	11									'	20			
contingency/continuity														
plan														

 Table 17.2
 Percentage of job tasks uncommonly managed by procurement practitioners (<38%)</th>

(continued)

	AS	AD	CA	DM	EB	CP	FA	IB	СО	PM	PS	WM	RS	All
Develop staff	9	50	14	68	4	64	35	4	11	43	30	30	9	29
succession plan														
Avg % for job	16	37	17	59	9	58	40	11	17	36	24	42	15	30
description by														
uncommon job task														

Table 17.2 (continued)

Note See Table 17.3 for job description abbreviations. "All" column is average % completion across the 13 job descriptions for each job task, n = 2514

Source Universal Public Procurement Certification Council (UPPCC) 2012 Job Analysis

 Table 17.3
 Average percentage of each job description that completes common and uncommon job tasks in public procurement

Director/manager of procurement (DM)	75
Executive director/chief procurement officer (CPO)	71
Assistant director (AD)	59
Finance/accounting manager (FA)	55
Program manager (PM)	52
Warehouse manager (WM)	52
Risk management supervisor (RS)	48
Program supervisor (PS)	47
Contract administrator (CA)	47
Intermediate buyer (IB)	44
Entry-level buyer (EB)	42
Compliance officer (CO)	41
Administrative support (AS)	33

Source Universal Public Procurement Certification Council (2012)

practitioners holding a UPPCC certification is consistent for the mid and upper-tier job descriptions, with certification noticeably absent from the lower-tier job descriptions. Since more years of experience and compensation are indicative of a practitioners' history of job completion, these results demonstrate that the job tasks and the respective job descriptions identified are implicative of a relationship that may connote indicators for the presence of professionalism in public procurement as related to task specialization and KSA's necessary for task completion.

Discussion and Conclusion

The job tasks performed and managed most frequently by public procurement practitioners have been identified along with the management of job tasks deemed to be uncommon among practitioners. To better understand the actors who perform and manage these job tasks, a cross tab analysis was conducted according to

Table	17.4 Years o	f experience, co	ertification, and	salary by job d	lescription (i.	n %)					
	0–5 years	5-10 years	10-20 years	20+ years	UPPCC	30-60 k	60–80 k	80–100 k	100–125 k	125 k	n = 2508
	(%)	(%)	(%)	(%)	(%)	$(0_{0}^{\prime 0})$	(%)	(%)	(%)	$(0_{0}^{\prime \prime})$	
DM	11	16	37	37	59	20	35	27	13	4	594
CPO	8	14	31	47	64	19	15	24	22	18	118
AD	6	17	44	31	66	22	47	20	6	2	137
FA	26	37	31	6	31	60	23	11	3	0	35
M	14	19	39	28	65	24	46	17	10	1	72
WM	6	23	49	19	42	56	28	7	5	0	43
RS	10	24	40	26	66	50	38	10	1	0	554
PS	16	23	42	19	74	26	58	10	6	0	31
CA	14	25	38	23	62	44	38	14	3	1	281
B	26	27	36	11	49	77	18	3	0	0	352
EB	44	26	20	6	26	80	6	3	0	0	137
CO	24	21	43	13	38	49	24	16	3	2	63
AS	29	16	42	13	22	66	11	3	1	0	91
Source	Universal Pu	blic Procuremen	nt Certification (Council (2012)							

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practitioner job description. The results of the study serve to identify specific job tasks and the practitioners who perform and manage these tasks. These findings may be of relevance to scholars interested in how the public procurement function can be executed, either politically or neutrally, to achieve public service outcomes. The matter of how public procurement practitioners go-about, or approach and execute, their job is centrally important to understanding the impacts of decision-making and establishing standards of practice accordingly.

Similar to public administration (see Gargan 1998), public procurement has undergone scholarly challenges in the literature with regard to defining the functions of public procurement practitioners in terms of the scope of knowledge and skills fit for the job (Callender and Mathews 2000; Thai 2001; McCue and Gianakis 2001; Prier et al. 2013; Steinfeld et al. 2015). The job tasks identified herein shed light on the knowledge and skills of practitioners. However, Nanda (2003) cites concerns with professionalism such as conflict of interests that coincide with the characteristic of esoteric, task-related competencies professionals have been labeled to imbue. For Nanda (2003): "The distinguishing characteristic of professionals is [the] pledge to actively manage the conflict between the client and personal interests to favor the client" (p. 3). In the professions, a fiduciary relationship exists whereby the principal, or appraiser, has knowledge and abilities that are not possessed by the client, or layperson, yet these professional attributes are necessary for accomplishing the objectives of the work for which the professional has been retained (Nanda 2003, 6). Therefore, professionalism connotes an ethical standard and code of conduct by which the professional will put the interests of the client in front of the professional's extrinsic values such as compensation, notoriety, client-dependency, or other personal interests. It is these social and political factors that have been of interest to public administration and public procurement scholars alike.

Roman (2013) conducts an empirical study that surveys public procurement specialists and finds that a politics-procurement dichotomy exists in which public procurement practitioners assume roles and responsibilities as either purists or brokers. Purists are "defenders and enforcers of the supposedly neutral and hierarchical nature of the procurement process" and define decision-making criteria and performance measures exogenously from their organizational context (Roman 2013, 40). Brokers focus on human relationships and learning dynamics, characterizing themselves as helpers and facilitators in the public procurement process, heavy emphasis is placed on developing personal, professional, and interorganizational relationships; believing that external environments can be shaped in ways that assist public procurement habits or practices (Roman 2013, 40).

The purist model in public procurement assumes a politically neutral orientation, whereby purchasing practices are pursued according to scientific styles of management and decision-metrics involving cost-benefit analysis. Differently, the broker model in public procurement assumes a political orientation involving a circular interaction between exogenous factors such as the environment and other organizations, and the purchasing practices within the organizational context. In this manner, political factors such as the needs and wants of inter-organizational participants can impact the decision-making that takes place with respect to the nature and type of specific procurements.

Numerous public procurement scholars have posited professional practices in public procurement, like public administration, according to either the politically neutral or politically oriented bureaucrat. Durant et al. (2009) juxtapose the issues surrounding politically neutral procurement agents as the trend to outsource, or contract-out, has become prevalent in which private sector and nonprofit entities are doing the work that the procurement practitioners once loved. In this way, the political orientation of procurement practitioners is being transferred to supposedly neutral agents of the administration. Agranoff and McGuire (2003), Lynn et al. (2001), and Meier and O'Toole (2006) elaborate on the recent trend for public procurement to adopt market-based best-business practices including privatization, contracting, competitive sourcing, public-private partnerships, and cross-sectoral networks. Agranoff and McGuire (2003) discuss the new roles of procurement and contract specialists as being immersed within networks involving dyadic and bilateral contract relations and thus these roles for procurement specialists are outside of the agency. Lynn et al. (2001) argue that the tools now exist for "a new logic of governance" in which social, economic, and political factors are incorporated into inanimate clients who are deemed to be separate from political thrift. Meier and O'Toole (2006) further examine the political sway between bureaucracy and clients (the public) but determine that it is the complex intergovernmental and inter-organizational networks themselves that limit bureaucracy's ability to implement public policy in tune with public preferences, and that instead, bureaucracy responds to the public's demands. Bureaucracy is thus limited with its response according to executing these initiatives with solely efficiency and effectiveness in mind.

The idea of procurement-as-administration, or that public procurement mimics private sector notions of business management, efficiency, effectiveness, and mechanistic approaches is widely discussed in the theoretical literature. The mission of the supply function in public procurement, like the private sector counterpart, is to manage deliveries of goods and services in a cost-effective manner (Johnson et al. 2009, p. 176). Financial management, negotiations, purchasing, contract administration, and evaluation are all tasks central to the achievement of cost-effectiveness in the public and private sector alike. Muller (1991) surveyed National Association of Purchasing Management (NAPM) members in US state and local governments in addition to private procurement employees where the responsibilities of respondents between the two sectors was found to be minimal. Only areas of inventory management, material flow, and special considerations for performance enhancement were found to be differentiating, with the public sector being less active in all three (Johnson et al. 2009, 177). Meanwhile, utilization of automated purchasing systems for transaction processing and tracking as well as execution of multi-year contracts are common trends in both sectors.

Consequently, Bozeman (2007), Rosenbloom (2007), and Rosenbloom and Piotrowski (2005) discuss the issues with privatization and market-based purchases to be centered on threats to democratic ideologies. Adams and Balfour (2004) and

Frederickson (1997) believe that the politically neutral bureaucrats, i.e. public procurement specialists who serve as purists in purchasing roles, and their tendency to assume neutrality through shifting managerial responsibilities have led to corruption, immoral practices, and commodification. Milward and Provan (2000) and Suleiman (2003) point to an encompassing shift to a "hollow-state" and an undermining of its democratic principles.

One specific challenge posed to public purchasing managers is achieving accountability for effectiveness despite the presence of multiple, competing, and alternating performance expectations of diverse, legitimate, and conflicting sources (Hayes 1996; Khademian 2000; Klingner et al. 2002). In some cases, contractors face trade-offs between being accountable to the client (purchasing department) and their own organization (Frumkin 2001). Additionally, overall effectiveness is determinant on shared impressions involving the key players, issues of program turmoil, political controversies, client satisfaction, points of ongoing conflict, and issues that remain unresolved (Romzek and Johnston 2005, 441).

Meyers et al. (2001), Riccucci (2005), and Sandfort (2000) believe that de-politicization in public procurement can actually lead to goal divergence between public policy directives and implementation, presenting further accountability and effectiveness issues. Hardin (2002) and Yamagishi and Yamagishi (1994) elaborate on the importance of strategic relations between political actors, a trust that is based on the knowledge of and experience with other parties, which involves a mutual expectation of reciprocity in the present and future. Resultantly, trust is a major political function involving psychological and social processes that underlie developing, maintaining, changing, and continuity of operations (Rousseau 1995).

Phillips et al. (2007) recognize political factors for public procurement outcomes but "the missing link" between good governance and other tenets of democracy is what is absent in procurement activities. For example, the outcomes vis-à-vis public policies of elected officials are reflected through specific procurements, however, when the public procurement function fails in delivering the appropriate quality or quantity of public goods/services demanded by the public, the engagement between elected officials and public procurement fails to be interpreted or reported (Caldwell et al. 2007, 156). As an example, Erridge et al. (1998) conduct a case study regarding the balanced-scorecard approach that includes leadership, policy, and strategy, however this scorecard failed to address engagement with politicians. Reed et al. (2005) advocates that the design of performance metrics must consider both the audience and the input of politicians. More often than not, procurement's customers are actually internal departments (Schiele and McCue 2006), thereby insinuating devolution from implicating the political needs and wants of politicians and residents.

Chen (2009) presents the notion that the policy school of thought grounded in theoretical and economic techniques has provided public managers with an applicable understanding of the deficiencies separating politics from procurement, thus leaving motivational, sociological, and political aspects unexplored. Van Slyke (2007) emphasizes the need for public procurement to serve as both technically

rational administrative functions and functional conduits for the proliferation of political will. Public policy directives, policy goals, and program requirements may be ambiguously defined and monitored infrequently, making it difficult for public managers to evaluate frequency, consistency, and quality of service in light of privatized or contracted-out social services (Van Slyke 2007, 159). Therefore, the attributes of public services require that public managers exercise discretion in the provision of public goods and services (Van Slyke 2007, p. 159).

Tacit knowledge involving political issues, cultural issues, and valueorientations are crucial elements in the public sector (McAdam and Reid 2000). Public procurement personnel therefore are expected to contribute to the strategic policy process by interpreting what "good service" means through reconciling the diverse values of varying constituent groups and deeper community cultures (Chen 2009). Public procurement practitioners ensure accountability and effectiveness by balancing numerous sources of authority including board policies, purchasing guidelines, public hearing requirements, and civil service regulations (Morgan et al. 1996). If responsibility is degraded with respect to failure in catering to, or considering stakeholder factions, there is a chance of eroding democracy and impeding citizen participation, leading to public value failures (Bozeman 2007).

The findings provide a basis for further study into how public procurement job tasks may be performed and managed either politically and neutrally, which can then lead to understanding outcomes via the purist or broker models (see Roman 2015). Steinfeld et al. (2015) compare the job duties of public sector practitioners to those denoted for procurement by the US Bureau of Labor Statistics (BLS), in which the BLS does not differentiate its description of procurement as relating specifically to the "public" or "private" sector. Steinfeld et al. (2015) find that public sector procurement practitioners perform and manage the job duty of "establish/uphold mission, vision, and values," while a duty with similar or general relative scope was completely absent from the BLS description of procurement. There is substantial research to indicate that the essence of professionalism in public administration can be found in its differentiating characteristics from the corresponding practices in the private sector. The study's findings relate the performance and management of establishing/upholding mission, vision, and values to the social responsibility aspect of public administration; seemingly the defining characteristic that makes the field esoteric, at least in its contemporary form, from related practice in the private sector such as business administration (Dahl and Lindblom 1953; Wamsley and Zald 1973; Perry and Rainey 1988; Nutt 2005; Bowman and Thompson 2013), and public procurement from private sector purchasing and supply management (Murray 1999; Telgen et al. 2007; Larson 2009; Jaafar and Radzi 2012), respectively. The implication is that the nature by which these job tasks are completed, politically or neutrally, may substantially impact the levels of professionalism displayed by the practitioner.

Given the political narratives identified in public procurement such as practical idealist, adapted idealist, steward of public interest, resigned custodian, or businesslike utilitarian (Roman 2015), in addition to the purist and broker models, the next step in developing professionalism of public procurement is to examine how

practitioner job tasks are performed and managed according to these narratives. The positive and negative outcomes that could hypothetically result from performing and managing job tasks either politically or neutrally, can be assessed for sub-stantiating standardization of public procurement practices.

Appendix: Sample Means and Standard Deviations

Recoded variables	P and/or M	М	P and M
	Mean	Mean	Mean
Recodedesmain	0.160	0.150	0.495
Recodeimpauto	0.392	0.139	0.139
Recodeadminprocard	0.583	0.126	0.185
Recodeadmineproc	0.416	0.141	0.251
Recodeimpstand	0.201	0.174	0.395
Recodeimpopwork	0.246	0.111	0.406
Recodeinterpolic	0.096	0.098	0.514
Recodeestcoop	0.376	0.125	0.283
Recodeimpsustproc	0.482	0.135	0.157
Recodeauditproc	0.268	0.141	0.356
Recodeprepdeptbud	0.652	0.058	0.184
Recodemandeptpers	0.495	0.072	0.328
Recodetrainpurch	0.237	0.108	0.404
Recodeutilauto	0.196	0.129	0.356
Recodeutileproc	0.358	0.121	0.256
Recodeenscop	0.358	0.152	0.241
Recodeenscomplis	0.414	0.156	0.177
Recoderevprocomp	0.091	0.112	0.522
Recodeconmktres	0.238	0.156	0.305
Recoderecombuydec	0.247	0.137	0.321
Recodeusehistinfo	0.161	0.148	0.361
Recodeanalecon	0.287	0.139	0.275
Recodeensourcofsupp	0.088	0.161	0.448
Recodeselecmeth	0.100	0.145	0.498
Recodedevsolic	0.106	0.128	0.537
Recoderevsolic	0.085	0.100	0.561
Recodeselecont	0.132	0.140	0.480
Recodesoliccopquote	0.136	0.181	0.482
Recodesoliccompbid	0.156	0.144	0.493
Recodesoliccompprop	0.169	0.128	0.506
Recodeenstranp	0.089	0.114	0.582

(continued)

Recoded variables	P and/or M	М	P and M
	Mean	Mean	Mean
Recodeidenteval	0.185	0.168	0.443
Recodecondprebid	0.184	0.140	0.483
Recodeprepissueadd	0.159	0.137	0.499
Recodeanalevalsolic	0.117	0.140	0.529
Recodepreprecomm	0.148	0.143	0.499
Recoderespprotest	0.232	0.085	0.436
Recodeselecpayme	0.354	0.157	0.279
Recoderevsuppsam	0.269	0.172	0.323
Recodeprepcontr	0.126	0.119	0.537
Recodecondpostawd	0.300	0.128	0.363
Recodemitirskterm	0.256	0.099	0.422
Recodeselecnegmem	0.428	0.157	0.268
Recodeprepnegostra	0.357	0.141	0.310
Recodecondnego	0.284	0.117	0.391
Recodedocnegoproc	0.279	0.135	0.376
Recodecondpostawdconf	0.451	0.152	0.232
Recodeevalsupp	0.337	0.198	0.250
Recodemonsuppcomp	0.282	0.194	0.302
Recodedevstaffsuccess	0.207	0.261	0.216
Recodemodcontract	0.272	0.143	0.404
Recoderemednoncomp	0.255	0.135	0.368
Recoderesolvdispute	0.269	0.109	0.414
Recodetermcontract	0.389	0.106	0.398
Recodecondcloseact	0.312	0.154	0.268
Recodefollupexporder	0.303	0.195	0.286
Recodesolvdelrecprob	0.702	0.214	0.272
Recodemaintaininven	0.720	0.125	0.104
Recodeintdistchan	0.674	0.114	0.093
Recodecountassets	0.752	0.114	0.119
Recodeestwareship	0.585	0.106	0.082
Recodeselecmethdisp	0.593	0.148	0.177
Recodedispobssurp	0.622	0.158	0.164
Recodeacilmovgood	0.484	0.141	0.123
Recodeestmisstatvis	0.119	0.069	0.281
Recodeupholdpromomis	0.280	0.079	0.439
Recodecondvaluanal	0.340	0.129	0.309
Recodeimpgoalsobjmeas	0.320	0.085	0.338
Recodemonlegtrendlaw	0.527	0.085	0.305
Recodecondbusanal	0.391	0.094	0.201

(continued)

(continued)

Recoded variables	P and/or M	М	P and M
	Mean	Mean	Mean
Recodeanalecontrendcond	0.420	0.109	0.240
Recodecondcostbenac	0.462	0.114	0.224
Recodeimpprocimprov	0.472	0.104	0.243
Recodeplanimpprocstra	0.500	0.097	0.240
Recodeformprocconting	0.612	0.091	0.237
Mean for neither P nor M of job tasks	0.325		
Mean for P and/or M of job tasks*	0.675		
Std dev for P and/or M of job tasks*	0.174		
Mean for only M of job tasks		0.132	
Std dev for only M of job tasks		0.034	
Mean for P and M of job tasks			0.333
Std dev for P and M of job tasks			0.129
Mean for M of job tasks**: 0.465			
Std dev for M of job tasks**: 0.082			

(continued)

Source Universal Public Procurement Certification Council (UPPCC) 2012

*Values utilized for determining thresholds of *commonly* performed and/or managed job tasks **Values utilized for determining thresholds of *uncommonly* managed job tasks. The Mean for M of job tasks is added to the Mean for P and M of job tasks because "Manage" is being reported by "only M" and "P and M" responses. The standard deviation for M of job tasks is averaged with the standard deviation for P and M of job tasks based on aforementioned reasoning

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