TOWARD FINANCIALLY EFFECTIVE CONTRACT MANAGEMENT: COMPARING PERCEPTIONS OF CONTRACT MANAGERS IN THE PUBLIC AND PRIVATE SECTORS

by

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ABSTRACT OF THE DISSERTATION

Toward Financially Effective Contract Management:

Comparing Perceptions of Contract Managers in the Public and Private Sectors

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Despite the large volume of literature on contracting out and the growth of publicly-funded yet externally-delivered goods and services at all levels of government, far less attention has been paid to financially effective contract management. In particular, the question as to under which conditions public funds can be spent in cost-effective and accountable ways given the current contracting out system is still open. Based on a mixed methods approach with data derived from two Web-based surveys and 23 semi-structured interviews with local public contract managers and private contractors in New Jersey, this dissertation attempts to fill this gap in the scholarship by empirically exploring factors that are related to perceived contracting financial performance in the context of cost-effectiveness and financial accountability.

The findings of quantitative data analyses revealed that higher competition in bids, public-private competition, intensive and fair monitoring, use of rewards and sanctions, and government management capacity are significantly associated with higher levels of perceived contracting financial performance. Public and private contract managers commonly viewed that longer contracting relationships led to

improved financial accountability but not to cost-effectiveness. Public contract managers, however, were more critical of their nonprofit counterparts with regard to satisfactory contracting financial performance, whereas private contract managers held more positive views of nonprofit contractors.

Furthermore, based on the findings from qualitative data analyses, conditions that improve the financial outcomes of contracting out and reduce the incidence of corruption include fair and competitive bids without favoritism, contract specificity, a statewide contractor performance database, sufficient staffing with well-trained personnel, strong leadership, team-based organizational structures, two-way communication, and evaluations based on qualitative and quantitative values. While public contract managers tended to place greater value on visible organizational and managerial factors, private contract managers were more likely to value invisible and relational factors that may cost more in the long run.

Overall, this dissertation contributes to the scholarship on local government contracting by casting new light on financially effective contract management, enriching the literature through a multi-organizational perspective, and providing more feasible guidance to current contract managers of financially and ethically low performing local government agencies to foster their success.

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CHAPTER 1 INTRODUCTION

This chapter presents an overview of this dissertation research. The chapter first begins with the research background and motivation and then turns to the statement of the research problem. It also discusses the purpose of the research and then briefly explains the focus of the research and data collection methods. Finally, it provides an outline of the dissertation.

Background and Motivation

The last three decades have witnessed a growing number of publicly-funded yet externally-delivered goods and services through contracting out, regardless of the level of government. Spurred by businesslike administrative movements (e.g., Reinventing Government and National Performance Review) to reform inefficient government operations as well as increasing financial pressure in the 1980s and 1990s, governments have continued to pursue private production and delivery alternatives to decrease their costs without compromising heightened citizen demand for public goods and services. As a consequence, awarding contracts to the private sector has become not only an effective alternative to the traditional bureaucratic public service delivery method but also one of the most utilized management strategies in the public sector (Alexander, 2009; Amirkhanyan, Kim, & Lambright, 2007; Prager, 1994; Savas, 2000; Van Slyke, 2009).

In response to the expansion of contracting out, there has been a spike in research activity on government contracting in the area of public administration and

policy with diverse terms as the “third-party governance” (Salamon, 1981), “government by proxy” (Kettl, 1988), “hollow state” (Frederickson & Frederickson, 2006; Milward, 1994; Milward & Provan, 2000; Milward, Provan, & Elsa, 1993), or simply “contracting regime” (Smith & Lipsky, 1993) – all of which describe the broadening of new public management strategies in the context of contractual relationships with nongovernmental organizations outside the public sector. The main rationales for this do not deviate from the fact that governments have increasingly relied on goods and services provided by for-profit and nonprofit organizations under contract. Interestingly, however, it seems that despite shifting production and delivery functions of the public goods and services to external providers, the government still retains its authority to exercise control over private organizations (contractors) and holds itself responsible for planning, financing, and operating the contracts (Amagoh, 2009; Auger & Raffel, 2004; Johnston & Seidenstat, 2007).

In light of the government’s continued management and oversight of the contracting out process, to date, a large amount of prior research has actively explored the determinants and consequences of government contracting. Specifically, studies have tended to provide empirical evidence, the scopes and contexts of which vary. These include, for example, which factors influence a government agency’s decision to contract out (Brudney, Fernandez, Ryu, & Wright, 2005; Ferris, 1986; Savas, 1987), why governments decide to contract back-in (Hefetz & Warner, 2004), how governments manage the contracted services effectively (Amirkhanyan, Kim, & Lambright, 2012; Brown & Potoski, 2005; DeHoog, 1990; Van Slyke, 2009; Warner & Hefetz, 2004), what factors correlate contractor performance and further lead to

different outcomes (Amirkhanyan, 2010; Fernandez, 2007, 2009; Milward & Provan, 2000), and how much government contracting leads to cost saving and improved service quality (Hodge 1998; Prager 1992; Savas, 2000).

Despite the growth in scholarship on government contracting, as of yet, relatively far less attention has been paid to issues on financial management and performance beyond generally accepted efficiency grounds. The question of how to achieve financially effective contract management, accompanied with satisfactory financial performance – cost-effectiveness (cost savings) and financial accountability – during the entire contracting process, is still open. More important, what is lacking in past and recent scholarship is a more developed structural approach of under which conditions public funds can be spent in cost-effective, accountable, and transparent ways given the current institutional arrangements, including the political and fiscal environments of government contracting. In this sense, this research is motivated by the need to look at how the conceptual and analytical approach of satisfactory financial contracting performance contributes to cumulative knowledge of the study of local government contracting.

Recognizing the need for new academic and practical perspectives, this research focuses on the following research question: “How can local governments achieve satisfactory financial performance in their contracting out process?” Consequently, to advance the study and practice of successful government contracting, understanding the bigger picture as to how public money can be spent in cost-effective and transparent ways requires more research. Specifically, methods of inquiry must be broadened and sharpened in order to understand how satisfactory contracting financial

performance is itself operationalized based on existing theoretical streams, to identify under which circumstances it can be incorporated into the current government contracting system, and to explore whether or not there is variance in contract managers' perceptions of the topic by sector.

Statement of the Research Problem

Managing the contracting out process and gauging contracting out performance have continued to be controversial issues and the subject of ongoing debate among many scholars and practitioners in the public administration and policy field. Despite extensive research on these issues, a relatively small literature appears to have explored "best practice" approaches, beyond general "how-to" approaches, to enhance financial accountability beyond generally-accepted efficiency grounds. In addition, very few have studied financial consequences and performance in government contracting through a multi-perspective, multi-organizational view, and the field still lacks a rigorous model that explains what drives financially effective contract management.

Furthermore, recent scandals at the local level have led to renewed interest in minimizing contractors' opportunistic behaviors and ensuring efficiency and accountability throughout the contracting-out process. For example, reports by New York Times (Halbfinger, 2012, 2013) revealed that billing fraud accompanied by overcharging and improper accounting has been common in contracted services. Public officials have tended to heavily rely on independent audits conducted by accountants hired by the contractors to report fiscal problems. In some cases, like that

of New York City, local officials conducted their own audits and sent them to state agencies, but they were often ignored and investigation by site-visit did not follow (see Halbfinger, 2013). Even though contractors used public money for questionable services related to personal purposes, or in an inappropriate way, local government agencies that approved the contract with public funds have often not known about the services for which the contractors are billing. Furthermore, until recently, when contractors have been accused of overcharging, they have usually only been required to make restitution.

Noting this challenge, the existing scholarship has pointed out that effective monitoring of public services is very limited because of, for example, unfulfilled expectations for cost savings and physical and financial burdens (e.g., monitoring costs) drawn from difficulties in substantial performance monitoring (Brown & Potoski, 2003a, 2003b; Hefetz & Warner, 2004; Pack, 1989; Prager, 1992; Savas, 2000; Whitaker, Altman-Sauer, & Henderson, 2004). Without proper safeguards in complex contracting-out settings, it is possible that public managers are "captured" by contractors, meaning that their interests become aligned with those of contractors rather than remaining consistent with the public interest (for more information, e.g., see Carr & Brower, 2000; Eggleston & Zeckhauser, 2002; Stigler, 1971), and this is at odds with the principal-agent perspective dominantly adopted in the research on contracting out (Yang, Hsieh, & Li, 2010). In turn, self-interested contractors are more likely to engage in financial corruption and mismanagement, including fraud, waste, and abuse (or theft). Given this situation, over time government agencies will struggle with poor contractor performance. In the end, it is unlikely that governments or

contractors will be able to accurately foresee all potential problems that may arise during the contracting out process (Dixit, 2002; Girth, 2012; Laffont & Martimort, 2002; Van Slyke, 2007).

Arguably, potentially serious managerial and ethical challenges in government contracting are not easily observed and managed. There is no guarantee that current local contracting out systems can sufficiently ensure that the government will achieve cost savings and hold their private contractors responsible for their financial performance against corruption. Nonetheless, so far, little practical guidance has been available on which specific factors work better to minimize unexpected opportunistic behaviors of private contractors and instead produce certain financial benefits and related performance gains. As a result, it is important to better understand how local governments achieve satisfactory financial performance in their contracting out process.

Purpose of the Research

Considering the deficiency of relevant empirical research and the lack of guidance to counter potentially serious managerial and ethical risks embedded in government contracting, the purpose of this dissertation is to shed light on the determinants of satisfactory contracting financial performance and to explore the differences with regard to contract managers' perceptions toward financially effective contract management by sector. This goal is particularly relevant in the context of cost-effectiveness and financial accountability-via-transparency that are subject to

informational asymmetry and opportunistic behaviors of private contractors, and directly and indirectly link to financial mismanagement and corruption.

Although many scholars have sought to identify the conditions that lead to successful contracting out and examine the institutional and organizational factors related to the performance of contracted services (e.g., Brown & Potoski, 2003a, 2003b; Brudney et al., 2005; Cohen & Eimicke, 2000; Fernandez, 2007, 2009; Hefetz & Warner, 2004), they tend to provide either a prescriptive approach or inconclusive evidence and focus heavily on only public managers' subjective perspectives. In practice, however, successful contracting out requires the two main parties – government(s) and contractors – to be held accountable to their contractual relationships. While public managers in government agencies are obligated to supervise and monitor whether contractors are held accountable, contractors should be responsible for their performance with intense commitment under the control and direction of government(s).

Given that contractual relationships implicitly force two main stakeholders to make a commitment and faithfully maintain credibility in their relations with each other, it is more likely that structural and managerial problems embedded in the contracting out process may be drawn from both parties. For example, in the atmosphere of unexpected contractors' opportunistic behaviors and the high monitoring costs of government agencies, public managers may be afraid to contract out and be willing to find more systematic strategies than before (Auger & Raffel, 2004; Ferris, 1986). Likewise, contractors, seen as private counterparts as well as external service providers who are engaged in the same government contracting

process with public managers, also sometimes encounter uncertainties and respond to contingencies when government agencies conduct unfair bidding processes or minimal oversight functions. As a result, contractors may bear some of the burden of identifying strategies to reduce service costs and increase efficiency in complex and unfair contracting settings (Romzek & Johnston, 2005; Yang et al., 2010).

Given the problems that can develop in the relationship between government and contractors, more research has examined the likelihood that public managers and private contractors (contract managers in the private sector) alike seek to find effective contract management – and to understand the causes of variation in financial performance – with a view toward enhancing the benefits derived from public resources. Their attitudes and concerns about government contracting can complement each other. If this is true, the two main actors in government contracting may gain the same (or at least similar) insights into the barriers to and challenges of current contracting out process and further suggest more feasible systematic strategies and related requirements.

Accordingly, it is reasonable to assume that contractors have enough reason not only to evaluate the government contracting out process in general, but also to diagnose structural problems and provide suggestions that could improve the process in particular. It is possible for contractors, if asked, to report current practices and managing strategies used by governments (public agencies) when they are unsatisfied and inefficient. Specifically, contractors can report to what extent they agree on, for example, transparency and fairness in the bidding and awarding process, effectiveness of government agency's monitoring and oversight functions along with incentives and

penalties, the likelihood that public money is effectively used in providing services, and so forth.

Notwithstanding these considerations, little research has rigorously analyzed the factors that actually influence financial performance of government contracting at the local level and the relative perceptions of public managers and the contractors with whom they work. In other words, the approach that has been employed to study the financial consequences of the contractor assigned to produce and deliver public goods and services has been empirically weak (Jang, 2006). It also appears that the existing literature provides very limited information about a multi-perspective, multi-organizational view of government contracting. It is therefore necessary to empirically test the financially effective contract management perceptions of multiple actors in different interacting organizations responding to an arguably similar set of administrative rules, procedures, and behaviors within a shared contractual relationship of the contract. Thus, this dissertation attempts to fill this gap by empirically exploring how public managers and contractors view conditions in which effective contract management, accompanied with satisfactory financial performance (cost-effectiveness and financial accountability), can be operationalized during the entire contracting out process.

Overall, through two main actors' viewpoints, this research seeks to find more feasible and critical strategies for financially effective contract management and guide current local contract management systems of government agencies when public goods and services are contracted out. In doing so, this research provides an opportunity to compare the perspectives of contract managers in the two different

sectors, merge the perception differentials, and further offer additional detailed insights about financially effective contract management to draw a comprehensive picture of contract success in the long run.

Focus of the Research and Data Collection Methods

This dissertation specifically focuses on local level contracts (widely known as public procurement) in the state of New Jersey. Particular attention is paid to current government contract management and its relationship to financial performance at the local level. On a daily basis, providing and delivering public goods and services to citizens is essential in that it is directly associated with public interest in our society. Compared to federal and state governments, local governments have a relatively long history of contracting goods and services from the closest standpoint with the citizens they serve (Girth, 2010; Osborne & Gaebler, 1992; Savas, 1987). As Greene (2002) and Jang (2006) argued, contracted services at the local level appear to have more practical expediency and mundane routine characteristics in, for example, service areas such as garbage collection, building repair, park and recreation services, road construction and maintenance, snow removal, and legal counsel services.

When considered together, it is evident that local government contracting is a compelling and worthwhile setting for the research. Seen in this light, New Jersey is an attractive study site due to the great political, socio-economic, and demographic variation among the cities and other localities. In practice, as of 2015, New Jersey, seen as a strong mayoral form of government, has undertaken a variety of ranges of services in contracting out across 21 counties and 565 municipalities.

The unit of analysis of this study is not local governments (jurisdiction) but public and private contract managers participating in a typical local government contract, regardless of specific service areas. In other words, the target population of this study consists of two different participants : (1) local contract administrators (government contract managers) who provide technical assistance in the areas of contract preparation, control, monitoring, amendment and closeout, audit compliance, and service evaluation under the purview in public agencies in the state of New Jersey, and (2) workers in contracting organizations that are involved in procurement, professional and service vendors responsible for the delivery of purchased services by local government agencies. Both participants, in their roles, are expected to be charged with administrative and cost efficiency, accountability, and integrity in the contracting process.

For the analysis, this study uses a combination of quantitative and qualitative methods approach based on Web-based surveys and semi-structured interview data collected from local public officials (purchasing agents and chief financial officers) and private counterparts (for-profit and nonprofit contractors) participating in the New Jersey local government contracting. As Creswell and Plano Clark (2011) argued, it is expected that mixed methods for collecting both quantitative and qualitative data can help researchers to converge the two forms of data to bring greater insight into the problem and phenomenon than would be obtained by either type of data separately. In doing so, this research may be more meaningful to offer significant implications in the contracting out field.

Outline of the Dissertation

The present study is organized as follows. First, following this introduction, Chapter 2 begins with the literature review of effective contract management and performance and then operationalizes contracting financial performance in the context of cost-effectiveness and financial accountability. Next, existing theoretical approaches to contracting financial performance will be reviewed and empirical evidence observed in the literature will be discussed. This chapter concludes with a discussion of research gaps in the reviewed previous research.

Chapter 3 provides the conceptual framework of this research to examine the relationships between various contextual and organizational factors and contracting financial performance. Based on this framework, testable research hypotheses will be discussed including direct and indirect effects of factors.

Chapter 4 presents the research design and methodology. In pursuit of a mixed methods approach, this chapter offers explanations of focus of the research, data collection and analysis procedures, preliminary results of quantitative and qualitative methods, and pros and cons of each methodology.

Chapter 5 discusses the quantitative data analyses based on two Web-based surveys with local public contract managers and private contract managers. The operationalization of variables, statistical procedures, and empirical results of each survey will be explained. In the specific context of cost-effectiveness and financial accountability, it is followed by the comparisons of perceptions between public contract managers and private contract managers.

Chapter 6 reviews the qualitative data analyses for semi-structured interviews with public and private contract managers. Focusing on emerging themes, the evidence and findings observed in each contract manager's perception will be reported and compared across two sectors.

Chapter 7 summarizes the key findings and observations drawn from this study and then highlights this study's contributions based on theoretical and practical implications for public management. The chapter concludes with a discussion of its limitations and directions for future research.

CHAPTER 2 LITERATURE REVIEW

The purpose of this dissertation is to shed light on the determinants of satisfactory contracting financial performance and to explore the differences with regard to contract managers' perceptions toward financially effective contract management by sector. Thus, this chapter first illustrates how contracting performance can be conceptualized in general and how satisfactory financial performance in the contracting out process can be operationalized in particular by revisiting existing studies on government contracting and combining them with other scholarly research in the public administration and management field. Rationales and dimensions of contracting financial performance are also discussed in terms of cost effectiveness and financial accountability.

In addition, this chapter draws on several distinct theoretical streams from a body of previous literature and discusses why certain contextual factors or conditions are recommended to achieve satisfactory financial performance in the government contracting setting. Focusing on previous studies that deal with the determinants of successful contractual relationship in the specific context of effective contract management, contract effectiveness, or performance at large, this chapter summarizes the empirical evidence in the existing research. Finally, the chapter concludes with a discussion of gaps in the reviewed research and how the present study attempts to address these issues.

Conceptualization of Contracting Performance

Contracting performance is a key concept in the contracting out literature and one that is complex and multidimensional. As such, there is a broad consensus that contracting performance is neither easily measured nor defined in one perspective. Interestingly, the empirical results regarding contracting performance still appear to be mixed and inconclusive since it depends on different service areas and certain circumstances (Boyne, 1998; Hodge, 2000; Lavery, 1999; Romzek & Johnston, 2002; Stein, 1990; Yang, Hsieh, & Li, 2009). It seems that satisfactory contracting performance and contract success are attributable to a variety of environmental, organizational, and contextual factors surrounding the contractual relationship between the government (agencies) and contractors.

Recognizing the complex nature of the contracting performance, in order to examine the impact of factors on contracting performance in various contexts, to date, scholars have used several terms interchangeably, such as accountability effectiveness (Amirkhanyan, 2011; Amirkhanyan, Kim, & Lambright, 2014; Romzek & Johnston, 2005), contract(ing) performance (Brown & Potoski, 2003a; Fernandez, 2007, 2009; Girth, 2012; Stein, 1990; Yang et al., 2009), contractor performance (Amirkhanyan et al., 2007, 2010; Shetterly, 2000), effective contract accountability (Romzek & Johnston, 2005), contracting effectiveness (Fernandez, 2004), service effectiveness (Romzek & Johnston, 2002), and smart contracting (Lavery, 1999).

In particular, a recent and growing body of literature has examined whether and how governments ensure satisfactory contract outcomes and enhance performance with multiple dimensions and measures of contracting performance at the local level.

For example, focusing on service provision costs of local governments, Jang (2006) used the per capita expenditure of three services (parks, libraries, and public health services) in the ICMA service delivery surveys from 1997 and 2002. In a similar vein, using the sample of 982 local government contracts drawn by the 2002–2003 International City/County Management Association (ICMA) alternative service delivery survey, Fernandez (2007, 2009) analyzed eight different outcomes including actual cost in comparison to projected cost, actual cost in comparison to in-house service delivery, quality of service/work, responsiveness to the government's requirements, timeliness, service continuity, compliance with the law, and customer satisfaction. Based on interview data of more than 60 government contract managers in the District of Columbia and three adjacent counties, Amirkhanyan, Kim, and Lambright (2014) examined diverse performance items including compliance with performance measurement requirements, timeliness of service delivery, quality of services, cost-effectiveness of contracted services, customer satisfaction, and service continuity.

Surprisingly, despite such progress in the research on contracting effectiveness, it seems that there has been no common consensus on its dimensions. In light of this observation, this research carefully coins Fernandez's (2004) viewpoint on contracting effectiveness (performance), who envisioned it as "a provider's performance on a contract and the various outputs and outcomes public managers use to measure it" (p. 6). Thus, in a broader manner, contracting performance can include and be measured by, for example, cost savings, efficiency, service quality, satisfaction, regulatory compliance, equal access and distribution (service delivery equity), service timeliness,

responsiveness to consumers, responsibility, community economic development, and so forth.

Operationalization of Contracting Financial Performance

An essential question raised by this research is how satisfactory financial performance can be achieved in local government contracting. This line of inquiry can be refined to differentiate between two dimensions of contracting financial performance: (1) cost-effectiveness and (2) financial accountability. While the former is one of the most dominant features of contracting performance identified in previous literature (e.g., Amirkhanyan et al., 2007; Savas, 1987; Seidenstat, 1996), the latter, as an ideal outcome of contracting out, is relatively new but increasingly gaining more scrutiny. Cost-effectiveness and financial accountability implicitly represent "how much public money is spent" and "how public money is spent" throughout the entire contracting out process, respectively.

First, cost-effectiveness (cost savings) has long been considered not only a driving force toward contracting out but also a noticeable common outcome of government contracting. The most frequently cited reason by governments, regardless of the level, for using service contracting is to reduce costs and save public money (Brown & Potoski, 2003a; Chandler & Feuille, 1991; Chi & Jasper, 1998; Ewoh, 1999; Hirsch, 1995; Savas, 2000; Siegel, 1999; Uttley, 1998). Some scholars suggested that it is more likely that the decision to contract out will occur when the extent of savings is expected to be greater and the cost-reducing incentive is stronger (e.g., see Ferris, 1986; Hirsch, 1995). But interestingly, even though much of the

existing literature on government contracting has illustrated the cost-effectiveness rationale, the empirical evidence on actual cost-savings tends to be mixed and inconclusive. For example, Hilke (1993) examined more than 100 independent quantitative studies of privatization (contracting out) efforts and found private firms could save states nearly 20 to 50 percent by increasing competition. Likewise, Hodge (1998) found that contracting out could save governments between 8 and 14 percent by conducting meta-analysis of 129 contracting out studies ranging from 1976 to 1994. Although the cost savings varied across different service areas, his result was statistically highly significant with a sample size of more than 20,000 measurements. GAO (1995, p. 2) reported the result of the 1994 ICMA survey, noting that city governments have reported savings that ranges from 16 to 83 percent. Later, Savas's (2000) study confirmed that contracting out is effective in saving government costs by about 25 percent for the same level and quality of services by analyzing contracting out practices from different countries. Such amount of saving was derived after taking into account the costs of administering and monitoring (Savas, 2000; Yang et al., 2010).

By contrast, Donahue (1989) noted that there is no tendency for private companies to be more efficient than public ones (p.75) and further making the efficiency distinction between public and private organizations statistically insignificant (p. 91). Brudney, Fernandez, Ryu, and Wright (2005, p. 398) found that although contracting out of service delivery by state governments has been very common, nearly 30 percent of the state agency directors in their survey reported that contracting barely decreased service costs. Taken together, we must acknowledge the

lack of consensus on cost-effectiveness in previous scholarly works. In general, however, still much of the analysis on the contracting out of public services is very favorable, indicating that financial savings for governments are very likely high compared to in-house provision (or contracting in). This research in turn posits that cost-effectiveness is one critical component of contracting financial performance, viewing it as total cost savings.

In addition to cost-effectiveness, there is another equally important dimension of contracting financial performance – financial accountability. In contrast to the general convergence shown among public administration scholars regarding the rationale of cost-effectiveness, the conceptualization of financial accountability and its operationalization remain underdeveloped. Moreover, there is a noticeable absence of empirical research into the central underlying logic of financial accountability and its specific measures in the context of government contracting. This review of the literature found very few studies that offer some clues on how financial accountability can be incorporated into contracting financial performance.

In order to draw upon the concept of financial accountability in the contractual relationship, this research embraces several sources of accountability argued in the literature. First, in the research on privatization and contracting out of public services, scholars have continued to emphasize that a propensity for corruption and unethical behavior of service providers seems to be hardly avoidable (Alexander, 2009; Cohen & Eimicke, 2008; Frederickson, 1997, 1999; Gray & Kaufmann, 1998; Nightingale & Pindus, 1997). The widely discussed challenges in the literature are, for example, risk of contractors' fraudulent, criminal, or improper use of public funds, including abuse

(mismanagement); conflicts of interest; and waste (cost overruns) at large (Auger, 1999; Donahue, 1989; Fernandez, 2007; GAO, 1997, 2006; Kettl, 1993; Milward & Provan, 2000; Prager, 1994; Savas, 2000; Stein, 1990; Van Slyke, 2003, 2009).

In particular, as many government agencies have increasingly relied on goods and services provided by the private sector under contract, critics have argued that contracting out has been associated with wasting taxpayers' funds, thereby hampering the institutional integrity, core competence, and accountability of governments (Parker & Gould, 1999; Terry, 2006; Yang et al., 2009). In short, it is likely that contracting financial performance declines as time goes by because public funds are not properly used according to the contract.

Given that government contracting (public procurement) is easily vulnerable to financial corruption and ethical mismanagement issues based on contractor's opportunistic behavior, there is no doubt that the production of public goods and the delivery of public services are barely handled in an effective and accountable manner. In the contracting out process, governments thus must ensure that assets are adequately protected against fraud, waste, and abuse by contractors because governments are responsible for protecting public interests. As Mulgan (1997) argued, government officials need to see if contracts are properly drawn up and carried out as promised under a contract, and public money is spent for only public purposes (p. 108). Indeed, ensuring financial accountability is essential in contracted goods and services. For this reason, it is important to understand the nature of financial accountability and what this implies for satisfactory contracting financial performance and further contract success in the long run.

In the public sector, accountability has been long recognized as answerability for one's actions or behavior, often to a higher legal or organizational authority in a formal, bureaucratic, or inter-organizational chain of command (Dicke, 2002; Dicke & Ott, 1999; Kearns, 1994, 1995, 1996; Shafritz, 1992). Importantly, such definition entails the questions about "to whom" and "for what." Paul (1991) attempted to respond to this issue, noting that it involves "[h]olding individuals and organizations responsible for performance measured as objectively as possible" (p. 2). Applying it to the contracting schemes, Dicke (2002) demonstrated, "[t]he 'who' [that is] usually identified as answerable is an agent (a contracted provider) to a principle (a government agency) and the 'for what' responsibilities are identified in the provisions of the contract" (p.456).

Accountability ranges from "an obligation for keeping accurate records of property, documents, or funds," to "a wide spectrum of public expectations and performance standards that are used to judge the performance, responsiveness, and even morality of government organizations" in a broad manner (Kearns, 1995, p.7). If this is true, then we can expect that financial accountability is not spared from the basic rationale of accountability. Conceptually, Romzek and Johnston (1999) noted that "[f]inancial accountability is a virtual synonym for the whole concept of accountability" (p.388). More specifically, Brinkerhoff (2003) stated that "[f]inancial accountability concerns tracking and reporting on allocation, disbursement, and utilization of financial resources, using tools of auditing, budgeting, and accounting" (p. 7). As such, financial accountability represents how financial resources are utilized and should be used and it is also directly linked to organizational performance.

Furthermore, in the way of managing public funds to counter corruption, financial accountability appears to be intertwined with transparency, integrity, honesty, fairness, and legal compliance along with ethical, managerial mandates in nature. For instance, a report by the Asian Development Bank and Organization for Economic Cooperation and Development (2006) suggested diverse strategies to strengthen fiscal integrity and prevent mismanagement, fraud, waste, and corruption in government contracting and public procurement. It is recommended that specific managerial efforts should ensure that public funds are used according to the purpose intended; consider the prevention of misconduct, compliance, and monitoring; encourage close cooperation between government and the private sector; and detect misconduct and apply sanctions accordingly. As stated by Dicke (2002), "When accountability methods fail, public funds may be used inappropriately and service clients can be placed at risk for harm, neglect, or exploitation – especially when they ill, frail, or vulnerable" (p. 456).

Existing Theoretical Approaches to Contracting Financial Performance

In an environment of increased contracting out for public goods and services, achieving cost-effectiveness and ensuring the financial accountability of contractors appear to be key dilemmas facing scholars and practitioners in the field of public administration and management (Dicke, 2002; Johnston & Romzek, 1999; Lambright, 2009; Romzek & Johnston, 2005). Recognizing this challenge, in various service contexts, a recent but growing body of literature on government contracting has actively highlighted issues regarding how to manage contracts effectively, in general,

and how to hold contractors accountable for the goods they provided and the services they delivered, in particular (e.g., Amirkhanyan, 2009; Amirkhanyan et al., 2007, 2010, 2014; Brown & Potoski, 2003a, 2005; Fernandez, 2004, 2007, 2009; Girth, 2012; ; Lamothe & Lamothe, 2012; Liu, Hotchkiss, & Bose, 2007; Romzek & Johnston, 2002; Yang et al., 2009).

Nevertheless, there is a dearth of scholarly research that empirically tests the link between contextual factors and financial performance beyond generally accepted cost-saving rationales in the local contracting out process. Therefore, to make the connection, this section will review key tenets from the existing body of scholarship on cost-saving rationales, provide examples of contracting out scenarios, find some empirical evidence on a set of determinants affecting contracting financial performance, and present limitations and research gaps by exploring previous studies on contracting effectiveness and performance.

Given that contracting out is on-going, shared contractual relationship between government and contractors (Liu et al., 2007) and its effectiveness and performance rely on the environment in which it is carried out (Brown & Potoski, 2003a; Fernandez, 2004, 2009; Stein, 1990), this research draws on two main theoretical threads on how to minimize contractor opportunism and how to achieve satisfactory contracting performance, distinguishing the potential difference in regards to control and management strategies (external versus internal control methods): (1) the conventional wisdom perspective widely cited in the contracting literature (for more information, e.g., see Fernandez, 2004, 2007) and (2) relation-oriented approach

embedded in the contractual relationship between government and contractors in nature.

Such a two-way classification of existing research streams in government contracting helps recount the existing, major theoretical approaches on contract management and performance, particularly in terms of countering corruption and mismanagement and enhancing contractor accountability, and assists in further developing a more detailed understanding of contracting financial performance to the context of cost-effectiveness and financial accountability. Each theoretical approach is discussed in further detail below.

Conventional Wisdom Perspective

The conventional wisdom perspective appears to be a classical economic approach as well as control-oriented management philosophy that is dominant in the research on contracting out (Davis, Schoorman, & Donaldson, 1997; Marvel & Marvel, 2009). It embraces principal-agent theory, transaction cost theory, market theory, and incentive theory at large. From this theoretical standpoint, it is assumed that people are rational decision makers who are self-interested in nature; in turn, in the context of contracting out, government agencies (public managers) basically aim to achieve efficiency gains with the goal of maximizing cost savings with adequate service performance (DeHoog, 1984).

Scholars who support this conventional approach have generally concurred that governments are viewed as principals and private contractors are viewed as agents in a typical government contracting setting. In particular, principal-agent theory and

transaction cost theory commonly envision both principals and agents as utility maximizers with bounded rationality (Barney & Ouchi, 1986; Williamson, 1975, 1981; Lambright, 2009). Ideally, it is expected that the principals represent the public interest and the agents should serve the principals' interests (Lawther, 2000; Martin, 2004; Pratt & Zeckhauser, 1991). In practice, however, contractors have better information on their day-to-day service delivery operations and more professional expertise than governments do, and information about them and their behavior are not easily observed by the principal. Such asymmetric information (sometimes, known as limited information or hidden information) and conflict of interest are embedded in the contractual relationship (Kettl, 1993; Prager, 1994; Shetterly, 2000) and, therefore, may cause contractors' opportunistic behaviors and deepen subsequent corruption in terms of incomplete contracts and contract failure (Brown, Potoski, & Van Slyke, 2006; Fernandez, 2004; Frederickson, 1997; Laffont & Martimort, 2002; Martin, 2004; Moe, 1987; Paddon, 1998; Prager, 1994; Savas, 2000; Yang et al., 2009). In other words, self-interested agents (contractors) are more likely to pursue their own interests and goals and shirk their contract responsibilities, thereby giving rise to inefficiency in government contracting, especially difficulties in overseeing the agents' behaviors. In particular, this situation easily arises in the absence of external control methods based on threats, sanctions, or inducements, for ensuring accountability (Dicke, 2002).

Ultimately, the goal incongruence between governments (public agencies) and contractors may reduce the likelihood that governments use contracting out, thus increasing the likelihood of in-house production (Amirkhanyan et al., 2012). In

accordance with the basic proposition embedded in transaction-cost theory, due to contractor's opportunistic behaviors and uncertainty, unavoidable high transaction costs can exist in monitoring the contractor's activities and performance, evaluating the results, and determining whether to renew or terminate the contract upon completion (Brown & Potoski, 2003a, 2005; Hefetz & Warner, 2004; Hirsch, 1995; Kettl, 1993; Martin, 2004; Prager, 1992; Savas, 2000, Williamson, 1975, 1981). Even though it is widely believed that contracting out helps reduce government costs, added costs of proper monitoring sometimes can outweigh the production savings (Prager, 1992). In sum, this is not to say that it is impossible to overcome the agency problem. Rather, it means that governments, as principals, are responsible for supervising contracted out service production and delivery of goods and services and thus designing a contract that motivates the contractors, as agents, to meet the performance requirements of the contract (Greene, 2002; Shetterly, 2000).

As Brown and Potoski (2003b) argued, "[t]he success or failure of any alternative service delivery arrangement likely depends on how well governments can manage the entire contracting process" (p. 153). Similarly, Fernandez (2007) further stated that, "[s]uccess in contracting, therefore, depends on a set of factors and practices that help to program the contractual relationship and limit the contractor's ability to behave opportunistically and conceal private information" (p. 1122).

Fearing the scenarios outlined above, governments have enough reason to devote time to building up effective contracting systems to control the agency problem (adverse selection and moral hazard) and related conflicts before and after awarding a contract. In this regard, Marvel and Marvel (2009) explained that,

> [C]ontracting governments must determine how much effort to invest in ex ante contract design, including the specification of goals, performance metrics, and incentives based on those metrics. A government may choose instead to intervene ex post to deal with problems as they arise, discussing objectives and performance issues with service deliverers, providing assistance, and, on occasion, publicizing either superior or inadequate performance. (p. 185)

Moreover, it is also important for governments (public agencies) to award contracts for public service delivery to contractors that are less likely to engage in discredited or costly management of public funds. Market theory holds that competition in the contracting out process can lower the comparative costs of the public service delivery and eliminate the possibility of financial corruption and monopoly (Girth, 2012; Savas, 1987, 2000; Sclar, 2000). As noted by Savas (2005),

> [T]he goal of contracting is competition, not necessarily contracting with a private firm … 'managed competition' and 'competitive sourcing,' and it has proven to be a powerful incentive for public agencies – under the threat of privatization – to improve their performance. (p.21)

Likewise, Hefetz and Warner (2012) argued that "…lack of competition continues to plague markets for public goods … lack of competition undermines the potential for cost savings" (p.292). As such, it seems, in a bidding process, whether the contract is awarded to the lowest of bidders under competition matters (Ferris & Graddy, 1986; Moore, 1987).

According to incentive theory, one can argue that incentives work with reward contingent contracts to agents who control corruption and monetary or nonmonetary praise, whereas penalties function with contract terminal or rebidding. Girth (2012) agreed with this point, stating that "appropriately designed incentives help to overcome the information inefficiencies in the principal-agent exchange" (p. 3). Indeed, contracting governments should curb contractors who opportunistically exploit

the government's information advantages and rather achieve contract financial accountability by implementing institutional and legal strategies.

Generally, contract refers to a law of the workplace, a legal instrument, or an agreement between two or more parties who accept a set of rules to govern their relationship (Brown et al., 2006; Cohen & Eimicke, 2008; Cooper, 1996, 2003). Yet, when governments provide minimal oversight, it is easier for contractors to engage in corruption and mismanagement (e.g., financial fraud, waste and abuse). In other words, if contractors are not properly monitored by government agencies, poor performance is barely penalized and then lower service quality is provided (Savas, 2000). Therefore, a government contracting system, at least in part, should be designed by reflecting intensive *ex ante* incentives[1] (reward before the fact) for satisfactory performance, or appropriate *ex post* penalties (sanctions after the fact) for poor or unsatisfactory performance (Brown & Potoski, 2005; DeHoog, 1990; Girth, 2012; Martin, 2004).

It is widely believed that institutions provide incentives or constraints to influence people's behavior through reward or punishment (Clingermayer & Feiock, 2001; North, 1990). In this sense, they help provide a direction to contractors to pursue the same goal-sharing interests with governments (public agencies) by limiting their discretion. As Girth (2012, p. 3) argued, the so-called "carrot and stick" approach bears the threat of financial sanction or loss of the contract, thereby motivating contractors to maximize contract performance. When contracting out, in turn,

[1] *Ex ante* incentives include (1) the granting of contract extensions and renewals, (2) the award of additional work without competition, and (3) exclusively arrangements whereby contractors are awarded additional work of either a particular type or in a specific geographical area (Martin, 2004, p.62).

governments can reduce transaction costs and work more efficiently (Warner & Hefetz, 2008). Kettl (1993) goes on to argue that,

> … principals must structure incentives and sanctions to induce the agents to perform as desired. Ideally, the incentives are high enough to reward good performance and the sanctions are tough enough to discourage poor performance. Put together, the right balance of inducements and sanctions can produce the most desirable behavior from agents at the lowest cost to principals. (pp. 27-28)

Taken as a whole, it is reasonable to assume that a variety of managerial and contextual factors contribute to local government contracting performance, including financial outcomes. Particularly, it seems that satisfactory contracting financial performance may depend upon the specific conditions under which governments contract out their services, what management strategies they use, and whether they are capable of managing contracts effectively. From this conventional theoretical perspective, governments (public managers) are encouraged to have, for example, fairness in the solicitation process, market competitiveness in the bidding process, strong and effective external control methods in monitoring and evaluating contracting performance, and trained agency personnel with expertise in contract administration in the contracting out system (Brown & Potoski, 2003b; Fernandez, 2007).

Relation-Oriented Approach

Until recently, most of the contracting out literature has placed a strong emphasis on contractual relationships between two key actors – government and contractors beyond the principal-agent theory. Assuming that contractors act as more pro-organizational partners than self-interested agents in a government contracting

setting, this theoretical approach provides useful insights to supplement generally accepted theories, including principal-agent theory and transaction cost theory, and suggests a well-rounded, ideal contracting relationship.

For example, in stewardship theory, scholars tend to refer to "a principal-steward relationship" or "relational contracting," arguing that the main parties tend to rely on mutual planning, bargaining, negotiation, and collaboration in the original contracting agreement (Fernandez, 2007; Girth, 2012; Sclar, 2000; Van Slyke, 2007). Distinct from external control methods adopted in the conventional wisdom perspective, relational contracting research recommends internal accountability methods to heighten a contractor's responsibility, including professional licensing, codes of ethics, and peer reviews, but these are seldom employed in practice (Dicke, 2002; Girth, 2012). In a similar vein, Davis, Schoorman, and Donaldson (1997) and Marvel and Marvel (2009) highlighted the agent–steward dichotomy, stating that stewardship theory points to self-actualizing man whose intrinsic motivation and involvement-oriented management philosophy is based on trust and a long-term time frame. Building upon this notion, Lambright (2009) emphasized the goal congruence between stewards and principals, noting that "[u]nlike agents who focus on extrinsic tangible rewards, stewards focus on intrinsic intangible rewards. Examples of intrinsic intangible rewards include opportunities for growth, achievement, affiliation, and self-actualization" (p. 210). Consistent with this perspective, contractual relationships appear to evolve from transactional to relational. Amirkhanyan et al. (2012) argued that,

> [T]ransaction contracts are short-term, economic exchanges based on carefully detailed contractual agreements and close oversight of the provider's

> compliance. In contrast, relational contracts are based on open-ended long-term exchanges in which personal ties and informal communication foster trust and flexible approaches to solving implementation problems. (p. 344)

Notably, such a relation-focused approach is mostly reflected in non-profit sector research dealing with social services contracting (e.g., child care, health, or human resource services) or comparisons between the public, private, and nonprofit sector (e.g., see Amirkhanyan et al., 2010; Dicke, 2002; Girth, 2012; Lambright, 2009; Marvel & Marvel, 2009; Van Slyke, 2007, 2009; Van Slyke & Roch, 2004). For instance, according to Sclar (2000), Brown et al. (2006), and Amirkhanyan et al. (2010), relational contracts are used in situations in which government contracting faces a high-level asset specificity and uncertainty. These are generally defined as contracts based on open-ended exchanges and long-term relationships that involve trust and cooperation and are less vulnerable to opportunism. Thus, it is reasonable to assume that awarding contracts of longer duration and maintaining the long-term relationship provide greater opportunities for the parties to develop trust and goal congruence (Fernandez, 2009; Witesman & Fernandez, 2013).

In this scholarship, from a principal-steward perspective, it is widely believed that agency problems can be minimized by selecting contractors whose goals are closely aligned with those of the principal. If a principal and an agent share the same internal values, including responsibility and trust, it is possible to solve managerial and ethical problems, reduce transaction costs, and ensure accountability in the entire contracting out process (DeHoog, 1990; Denhardt, 1993; Dicke, 2002; Fry, 1995; Marvel & Marvel, 2009; Mulgan, 1997; Smith & Smyth, 1996; Van Slyke, 2009). As Dicke (2002) noted, compared to for-profit organizations, nonprofit ones are attractive

and trustworthy contracting partners because they are assumed to hold altruistic core values (p. 457). Thus, the public sector and nonprofit sector tend to be described as equal partners as well as stewards who share common interests within the realm of government contracting (e.g., Brown et al., 2006; Bryce, 2005; Salamon, 1995; Van Slyke, 2007).

Moreover, given the potential for long-term contracting agreements and the sufficient ability to select the right type of contractors, strong collaborative relationships between two stakeholders (or collaborative management by government) may help lower transaction costs (particularly, *ex ante* screening and *ex post* monitoring costs) (Bertelli & Smith, 2010; DeHoog, 1990; Sclar, 2000). In the context of relational contracting, Van Slyke (2009) stated, "[c]ollaboration and contracting are not antithetical to one another … successful contract relationships often involve some degree of collaboration between the buyer and seller" (p. 140).

In sum, considering the relation-oriented approach , it is expected that contract length, contractor ownership (type of service providers), and the so-called, internal accountability methods such as frequent communication, collaboration, networks among different sectors, and trust-building between the parties in government contracting matter for contracting effectiveness and financial performance.

Empirical Evidence Regarding Contracting Performance

Despite the abundance of research on government contracting, to date, few studies have rigorously investigated the factors influencing contracting performance. Existing studies tended to examine such issue with one single service area (Shetterly,

2000); prescriptive, descriptive analyses with no empirical tests (Amirkhanyan et al., 2007); or a small number of case study approaches (Romzek & Johnston, 2002). In recent years, however, a few studies appear to offer some clues on how and what factors shape successful contracting processes and contribute to high levels of contracting performance, including financial outcomes. The main empirical evidence regarding the determinant of contracting performance is discussed in the following.

Shetterly (2000) studied one contracted service area in the delivery of residential refuse collection services based on the 1992 International City/County Management Association (ICMA) alternative service delivery survey data. He examined the impact of several contract design factors on the cost of per residence serviced (here, annual refuse collection cost per residence). Despite finding a weak relationship between these variables, he assumed that several contract design factors appeared to be positively associated with cost reduction of the government contracting setting. These included competition in the bidding process, solicitation method (a sealed bidding method or noncompetitive procedure), incentive provisions (financial rewards and sanctions) in the monitoring process, contract length, population density, public managers' (contracting staffs) experience, and the government form (a mayor/council form of government). Among other environmental factors, he found that active market competition among many firms for contract award might be the most important factor for contracting performance.

Focusing on five Kansas social service contract cases (e.g., Medicaid managed care, home and community based services, and employment prep services), Romzek and Johnston (2002) viewed contract service effectiveness as the state's capacity to

design, implement, and manage contracts for social services based on timely and accurate reporting from the contractor (p. 430). For each case, the effectiveness assessment was conducted through interviews with contracting and state agency officials and reviews of relevant documents. Such qualitative measures were rated by a three-point ordinal scale – low, moderate, or high. Among several factors that are likely to influence service effectiveness, their study demonstrated a positive impact on contract implementation and management effectiveness with the following factors: competition among providers, resource adequacy, planning for performance measurement, training for state contract managers, evaluation of contractor staffing capacity, evaluation of contractor financial management capacity, and theoretical rationale for reform. On the other hand, three other factors – political strength of client advocates, complexity of subcontractor relationships, and risk shifting to the contractor – were negatively associated with contracting effectiveness.

Unlike empirically examined-studies, Amirkhanyan, Kim, and Lambright (2007) attempted to describe the main framework of various organizational and environmental factors influencing contractor performance, which can be measured through cost-effectiveness (actual cost savings) and service quality. Focusing on principal-agent and transaction cost theories, they pointed out several factors that are likely to affect contract performance, including effective monitoring by government, contractors' resources adequacy for service delivery and administrative capacity, government-contractor relationship (e.g., past relationship, goal consensus, contract clarity, the existence of shared professional norms and values, rewards and penalties in the contract), and market condition (general market condition, provider competition,

client/population characteristics). Although their study was not empirically examined with data, it is notable that they stressed the methodological limitations in prior studies on cost-effectiveness and highlighted the need to analyze a variety of possible outcomes beyond the traditional economic indicators for understanding the comprehensive framework for contractor performance (Amirkhanyan et al., 2007, p. 700).

Analyzing a manager survey data conducted in 2006 in Taiwan, Yang, Hsieh, and Li (2009) focused on the relationship between contracting capacity and perceived contracting performance. In their efforts to link contracting capacities with performance, contracting capacities were represented with four different types of contracting capacities (agenda setting, contract formulation, contract implementation, and contract evaluation), while contracting performance was measured using three different dimensions including cost, efficiency, and quality. Utilizing both Probit model and Ordinary Least Squares (OLS) regression, they found that government capacities in agenda setting, contracting formulation, and contracting implementation and evaluation had a significant impact on contracting performance, but the effects differ across three performance indicators, thus showing that they are neither always positive nor linear. Rather, the relationships appeared to be nonlinear as time passed.

Among recent studies on the determinants of contracting performance, it seems that the fundamental theoretical arguments for contracting effectiveness as well as the conceptual modelling work of contracting performance were laid out by Fernandez (2004, 2007, 2009). In his seminal and chronological work, he employed a survey of American local governments conducted in 2003-2004, which included 982 local

governments randomly selected from the 2002-2003 ICMA alternative service delivery dataset, and nearly 18 determining factors of contracting performance: competition, evaluating the contractor's capacity to perform prior to contract award (*ex ante* evaluation), discretion given to the contractor, contract specificity, rigorous contract monitoring (scope and intensity of monitoring), expertise in contract administration, technical knowledge of the service, use of legal means for resolving disputes, use of alternative means for resolving disputes, joint problem solving after contract award, communication between the parties after contract award, trust between the parties, political support for contracting out, financial resources, use of contract incentives, contract length, task uncertainty, and asset specificity. Moreover, to capture the multi-dimensional aspects of the contracting performance as dependent variable, he continued to use factor analysis consisting of eight ordinal indicators including actual cost in comparison to projected cost, actual cost in comparison to in-house service delivery, quality of work, responsiveness to the government's requirements, timeliness, service continuity, compliance with the law, and customer satisfaction.

In Fernandez's (2007, 2009) more recent analyses, the number of subcontracts, number of bids, and public-private competition were added to the initial list of indicators and he included several interaction terms between independent variables. For the analysis, while he utilized Substantively Weighted Analytic Techniques (SWAT) analysis in his 2007 study, he employed Ordinary Least Squares (OLS) regression and two-stage least squares (2SLS) regression model in 2009. In his 2007 study, he found that the most successful contractual relationships experience higher

levels of contracting performance when two main parties engaged in a flexible, cooperative manner like, for example, in the cases of working together to solve problems that arose during the contract period and supporting contracting initiatives. In addition, performance was higher when the parties trusted each other, the contracting process was well funded, and the contracting tasks lacked complexity.

In particular, Fernandez (2009) confirmed that trust and working together had a positive impact on overall contracting performance in his recent analysis. On the other hand, his results showed that *ex ante* evaluation of service providers and greater reliance on legal sanctions are positively related to the performance, whereas efforts by public managers to limit the contractor's discretion, to write tight contract specifications, and to rigorously monitor performance did not result in higher levels of contracting performance (Fernandez, 2007, p. 1136). His most recent study (2009) revealed again that *ex ante* evaluation of bidders before awarding a contract, monitoring, and competition were not associated with higher performance.

Using data on the Partnership Impact Research Project (2001-2004) in the state of Ohio, Amirkhanyan, Kim, and Lambright (2014) explored the impacts of a variety of organizational and environmental factors (e.g., internal management practices, human resource capacity, demographic variables, and current contract relationship strength) on performance assessments of the service by nonprofit and for-profit child care centers operating under Head Start contracts. They viewed the contracting performance with a mix of objective and subjective measures, including regulatory violations documented during state licensing inspections and satisfaction with the center's quality reported by center directors, teachers, and parents. For the empirical

analyses, they collected contracting performance data reported by various internal and external stakeholders' viewpoints. One interesting finding showed that parent and teacher satisfaction increased as contract length increased and collaborative contract development decreased teacher satisfaction. More importantly, their findings revealed empirical evidence that contracting relationships based on trust, shared goals, and communication played a critical role in improving managements' satisfaction with organizational performance (Amirkhanyan et al., 2014, p. 24). Such conclusions reaffirmed findings of prior studies on relational contracting (e.g., see Brown et al., 2006; Van Slyke, 2007), but unlike other prior studies (e.g., Amirkhanyan, 2010; Amirkhanyan, Kim, & Lambright, 2008), Amirkhanyan et al.'s (2014) study revealed that nonprofit ownership was not positively associated with the contracting performance assessed by teachers and parents.

Research Gap

As discussed above, empirical evidence from previous studies suggests factors that influence likelihood of developing effective contract management and achieving satisfactory contract performance. Still there has been somewhat fragmented and inconclusive empirical evidence and several gaps in knowledge remain. It is important, then, to recognize the need for new research in specific contexts of contracting performance that remain unexplored. This section identifies several research gaps that this dissertation tries to address to contribute to current theoretical and methodological bases.

First, the existing literature fails to provide a clear definition of contracting performance in general as well as financial performance in particular. Although it has been widely acknowledged that contracting performance has complex and multidimensional nature itself, many studies have neglected other important dimensions of financial performance such as financial accountability-via-transparency. As discussed earlier, there is a dearth of scholarly research that empirically tests the link between contextual factors and financial performance, particularly beyond the context of cost-effectiveness (cost savings) in government contracting. No studies have been conducted to systematically examine how public funds should be spent in the contracting out process neither empirically explore how contextual factors and conditions matter for managing public funds in an accountable and transparent manner. Therefore, there is a need to develop a conceptual model that explains causal relationships between various contextual factors and financial accountability. By operationalizing the rationales of financial accountability into the contracting scenarios and adding conceptual leverage to the existing financial performance measure, this study fills this research gap by exploring the impact of organizational and environmental factors on financial accountability.

Second, as detailed in the section above, some progress has been made in the research on contracting performance. For example, recent large-n studies by Fernandez (2007, 2009) attempted to focus on a large number of explanatory variables, embrace diverse theoretical perspectives beyond the traditional public choice theory including principal-agent theory and transaction cost theory, and fill methodological deficiencies identified in prior studies by including interaction terms

between the main independent variables and using new methodological analysis (e.g., SWAT analysis). Amirkhanyan, Kim, and Lambright (2007, 2014) attempted to build a comprehensive model of contracting performance by incorporating diverse organizational and contextual factors, and collected qualitative data from external stakeholders as service clients who actually received the contracted services beyond the managers who administrate the contract.

Despite such scholarly attempts, it seems to be challenging to collect data on all internal and external stakeholders' involvement in the contracting process and non-monetary contract outcomes may prove to be daunting as Amirkhanyan and her colleagues (2007, p. 720) pointed out. In particular, most contracting out studies have largely relied on one-dimensional perspective or public managers' self-reported data in the form of surveys (Yang et al., 2010). We still have little knowledge about the perception of private service providers (contractors) on contextual factors embedded in the contracting out process and performance. It might be useful to collect a self-rated measure of contracting financial performance reported by the contracted service providers (contractors) and then explore whether or not there is variance in contract managers' perceptions of the topic by sector. Hence, this study attempts to fill this gap by empirically explore how public managers and contractors differently or similarly view conditions in which effective contract management, accompanied with satisfactory financial performance can be operationalized during the entire contracting out process.

Finally, despite progress in research on contracting performance, relatively little research has been conducted to use a mixed methods approach by collecting both

quantitative and qualitative data. Even if employed, the analysis was supplemented by only relevant document reviews and its impact was not clear. In other words, the existing literature mostly tends to rely on perceptual data based on one survey, case study, or interview data. Such approaches do not necessarily provide accurate sources of the topic being examined and may be overstated from one perspective. To better understand the details of the situation and problems involved, it is important for researchers to support their research hypotheses and answer to their research questions with more reliable evidence. Thus, this study fills this gap by employing a convergent parallel mixed-methods design based on surveys and semi-structured interviews of local governments and their private counterparts (contractors).

CHAPTER 3
CONCEPTUAL FRAMEWORK AND RESEARCH HYPOTHESES

The previous chapter reviewed the literature that contributed to developing a conceptual framework on financially effective contract management that leads to satisfactory financial performance in government contracting. Based on the theoretical perspectives and practical situations outlined in Chapter 2, this research operationalizes contracting financial performance using (1) cost-effectiveness and (2) financial accountability. While cost-effectiveness focuses on outcomes of financial resources measured by perceived total cost savings, financial accountability places greater value on procedural aspects regarding good management based on compliance with contract requirements and standards, integrity, and transparent use of public funds. In short, the former represents results-oriented financial performance, whereas the latter represents process-oriented financial performance in government contracting. These two different dimensions of contracting financial performance do not necessarily reflect certain managerial trade-offs since they both present concrete and specifiable organizational financial outcomes. They can thus empirically complement each other.

As per the aforementioned theoretical approaches, this chapter presents a conceptual framework for examining the relationships between various contextual and organizational factors and contracting financial performance in the particular context of cost-effectiveness and financial accountability. Following this framework, this chapter introduces hypotheses based on the contracting out literature discussed in Chapter 2. This chapter then provides an empirical model of factors affecting

contracting financial performance, indicating main and control variables and expected hypothesized outcomes. Finally, the chapter concludes with a summary of the hypotheses.

Figure 3.1 Conceptual Framework of Perceived Contracting Financial Performance

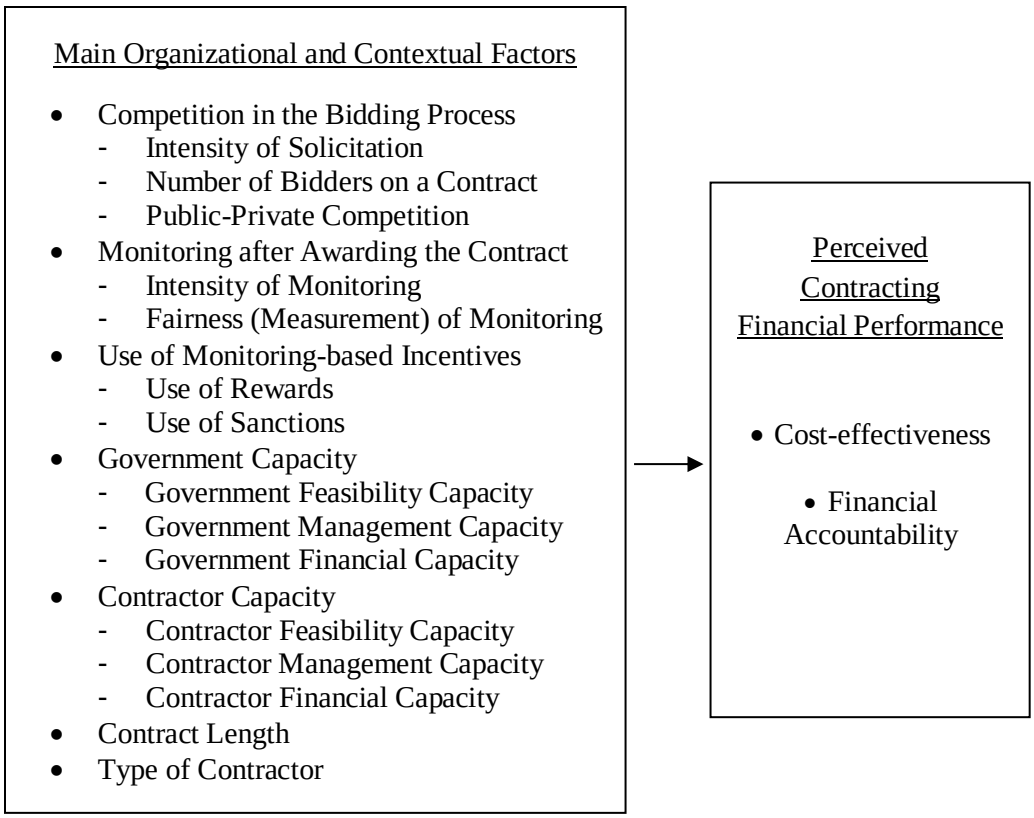


Figure 3.1 provides the conceptual framework adopted in this study, which includes key factors that influence contracting financial performance. Based on this specified model, this chapter provides an extended discussion of the multiple factors embedded in the contractual relationships, focusing on considering why all these factors – as well as other factors – are related to effective contract management and why they matter for understanding potential influences on the likelihood of achieving

satisfactory financial performance in government contracting settings. As such, each of the sections that follow takes the literature in a more specific direction centered on the basic rationale and determinants of effective contractual relationships and successful contract management to frame the hypotheses.

Main Factors Affecting Contracting Financial Performance

Drawing on the government contracting literature, as discussed in the previous chapter, this research explores situations in which the circumstances surrounding contractual relationships are potentially susceptible to opportunism and financial corruption by contractors (Alexander, 2009; Nightingale & Pindus, 1997; Prager, 1994; Savas, 2000; Stein, 1990). As a result, this study posits that satisfactory contracting financial performance may depend upon the specific contextual conditions embedded in the government contracting out process (Brown & Potoski, 2003a; Stein, 1990). Among a myriad of internal and external factors influencing effective contract management and contract performance identified in prior research, this section narrowly focuses on basic organizational and environmental factors describing the contractual relationship between two main parties – government (government agency) and contractors. In particular, it focuses on visible organizational and contextual factors that are expected to minimize opportunistic behaviors by contractors and affect contracting financial performance throughout the entire contracting out process. Each section presents testable hypotheses.

Competition in the Bidding Process

The extensive literature on government contracting has suggested that injecting competition (competitiveness) in the bidding stage reduces a risk of bureaucratic monopoly and corruption threats, and further may help reach successful contracting out, albeit to a limited extent (e.g., Boyne, 1998; Brown & Potoski, 2005; Donahue, 1989; Fernandez, 2007, 2009; Girth, 2012; Girth, Hefetz, Johnston, & Warner, 2012; Savas, 2000). Some contributions to this wide literature indicated that what matters most in the contracting process appears to be a sufficiently competitive market for any type of service rather than simply deciding whether the public or private sector is the service provider (Donahue, 1989; Kettl, 1993; Nightingale & Pindus, 1997; Osborne & Gaebler, 1992; Shetterly, 2000). As Moore (1987) and Fernandez (2004, 2007) argued, this perspective is noteworthy because each private vendor might have an incentive to offer its services at the lowest possible price and further be required to reveal honest and true information about its experience, expertise, or performance capabilities to win the contract. It seems to be in accordance with principal–agent theory, which highlights that market competitiveness enables governments to lessen the effects of adverse selection.

Besides, as indicated in the previous research based on transaction cost theory, the belief that contracting out can reduce government costs depends largely on whether the bidding process is fairly opened and frequently available for potential contractors (e.g., Brown & Potoski, 2003b, 2005). According to Shetterly (2000), managing a fair and equitable competition in the bidding process is a critical task for public officials in a purchasing, contracting organization. In turn, truly competitive

bids in government contracting may depend on both how contracting governments invest their time and how much time is invested in pre-contract preparation, including a design of solicitation (advertisement) methods and contract specifications.

It is thus important to make visible any efforts to foster a situation in which many potential contractors, particularly suitable ones that are expected to perform at high levels, actively participate in the contracting process (Johnston & Girth, 2012; Shetterly, 2000). Johnston and Girth (2012, p. 8) emphasized this point, stating that,

> Because competition is considered so fundamental to successful competition, public managers in the contacting arena pay close attention to the provider markets from where they acquire goods and services.

Government agencies tend to use a wide range of solicitation channels to release information. Their solicitation efforts for bids, as an antecedent of market competition in the bidding process, are to stimulate competitive environments in the provider markets as well as to select the most competent contractor(s) among unknown or relatively less known candidates for private delivery alternatives (Amogoh, 2009; Brown et al., 2006; Hodge, 1999). In reality, there are several different types of bidding, such as a sealed bid, a Request for Proposal (RFP),[1] a competitive sealed negotiation, and sometimes combined bidding process that has multiple steps (Shetterly, 2000). For the publication and distribution of solicitation, public managers employ diverse means such as, for example, advertising in media

[1] Cohen and Eimicke (2008) stated in their book *The Responsible Contract Managers: Protecting the Public Interest in an Outsourced World*, "[R]equests for proposals (RFPs) are used for purchases of higher amounts ($100,000 or more) and/or when the product or service is technical, approaches vary widely, or the government is not exactly sure about the best approach. … as government contracts our more services and requires complex technological solutions, the RFP is being used ever more frequently" (p.106).

(i.e., major newspapers, relevant trade journals, and agency websites), public hearings, electronic bid databases (e-commerce), and so forth.

Even though there is little detailed research on these practices, it is reasonable to assume that the frequent use of solicitation to solicit the bids of vendors for a typical contract during the formal bidding process (which can be lengthy) is one of the important dimensions of competitiveness that links to satisfactory financial performance. Accordingly, it is hypothesized that:

> $H_{1\text{-}1}$. The intensity of solicitation in the bidding process will be positively associated with perceived contracting financial performance.

In practice, public service markets often have struggled with a lack of sufficient competition and a dearth of bids, known as "*thin*" markets (Amirkhanyan, 2007, 2011; Fernandez, 2009; Girth, 2012; Girth et al., 2012; Johnston & Girth, 2012; Weimer & Vining, 2005). Given this situation, even though less capable contractors or relatively competent contractors may be selected, they can be more likely to behave opportunistically. Hefetz and Warner (2012) noted that "… [the] lack of competition continues to plague markets for public goods … [and] undermines the potential for cost savings" (p. 292).

In terms of the extent of competition in the bidding process, even though three or more bidders have been widely accepted as indicative of some minimal level of competition (Girth et al., 2012; Johnston & Girth, 2012; Savas, 2000), it is arguable as to whether there is a clear consensus as to what defines an optimal number of bidders (Johnston & Girth, 2012, p.7). But, it is widely believed that the greater the number of bidders on a contract, the greater the likelihood that governments will achieve satisfactory financial performance.

Furthermore, given a lack of competitive markets, governments may rather be more prone to find and retain competent and trustworthy contractors by themselves and exercise greater oversight albeit with higher management costs (Girth et al., 2012). It is likely that governments engaged in the bidding process create active competition in the same service area and, as a result, sometimes the participation of public agencies in the form of public–private competition may help foster competition (Fernandez, 2007; Greene, 2002; Hefetz & Warner, 2004; Miranda & Lerner, 1995). In this context, by using the unique expression "chasing competition" in their study, Johnston and Girth (2012) suggested that "[i]t is not unusual for public managers to create competition by encouraging new vendors to enter the market or to adopt mixed delivery approaches" (p. 10), and "[i]ndeed, some contract specialists devote more time to chasing competition than to other components of contract management" (p.11).

Overall, as the literature presented above suggests, this study posits that the competitive bidding process in government contracting has a significant influence on whether public agencies hold contractors accountable for their financial management and achieve satisfactory performance. But ironically, so far, the relationships between the number of bidders and allowing public employees to bid on the contract, and the overall contracting performance, have been inconclusive and the benefits of competition have tended to depend on the nature of contracted services, whether it be stable, disruptive, or reflect a natural monopoly (e.g., social welfare services and infrastructure areas) (for more information, see, for example, Fernandez, 2004, 2009; Girth et al., 2012).

Nonetheless, it seems that competitiveness may present an early opportunity to control contractor opportunism before awarding contracts, as Brown and Potoski (2005) argued. Thus, it is reasonable to assume that contractors chosen by governments through notably fair, equitable, and competitive bidding are less likely to behave opportunistically. More specifically, it is likely that these contractors are good at maintaining cost savings and using public funds in a transparent and accountable way. From this perspective, this research formulates the following hypotheses:

> $H_{1\text{-}2}$. The greater number of bidders on a contract, the greater the likelihood that governments achieve higher levels of perceived contracting financial performance.
>
> $H_{1\text{-}3}$. Allowing public organizations (government) to participate in the bidding process for the same service delivery will be positively associated with perceived contracting financial performance.

Monitoring after Awarding the Contract

Due to hidden action stemming from discretionary behavior on the part of the contractor, known as *moral hazard*, a number of scholars have argued that contracting out requires monitoring as a critical managerial tool in ensuring contract success. As a result, in the contracting out literature, it has been long acknowledged that monitoring (*ex post* opportunism) helps replace the utility maximizing contractor opportunistic behavior with goal-sharing behavior with governments (public agencies), thereby leading to an improvement in contracting outcomes (see Amagoh, 2009; Fernandez, 2007, 2009; Kettl, 1993; Laffont & Martimort, 2002; Lawther, 2000; Savas, 2000; Witesman & Fernandez, 2013). In this vein, Martin (2004) argued that, "[m]onitoring work is essentially an early-warning system designed to alert governments when contractors stay too far from the contract specifications and the best interests of

governments" (p.62). Given this, how the government agency collects, monitors, and evaluates contracting information appears to be related to the likelihood of holding contractors accountable for their performance and achieving satisfactory contract performance. Amirkhanyan et al. (2007, p. 709) shed further light on this matter through their argument that,

> A government agency using well-designed monitoring tools would be more likely to collect data that accurately captures the quality and quantity of services being delivered than an agency using poorly-designed tools.

Given that the government's monitoring efforts are infrequent and lack integrity along with a mere minimal oversight, a contracting government (public agency) is more vulnerable to contractor opportunistic behaviors, and the contractors may turn out to be conventional monopolists (Amirkhanyan et al., 2012; Brown et al., 2006; Prager, 1992). Hence, it seems that beyond a dichotomous characterization of the presence or absence of monitoring methods (Marvel & Marvel, 2007), monitoring itself should be conducted more frequently by the contracting government on a regular basis.

Additionally, more rigorous monitoring efforts are necessary since they can help mitigate contractor's opportunism by increasing the chances such behavior will be detected (Witesman & Fernandez, 2013, p.696). Among a variety of monitoring methods, as Rehfuss (1989) noted, perhaps the best-known type of monitoring tools, known as *arms-length*, in the field of contract management include, for example, self-reports by contractors (e.g., monthly or quarterly reports, financial documentation of cost), periodic inspections (e.g., field observation and audits), and performance standards (p.91). In addition to typical internal administrative monitoring methods

(contractor self-reporting and direct government inspections), contracting governments may employ external monitoring methods based on the viewpoints of diverse stakeholder (third-party monitoring), such as citizen or client feedback based on complaints, media, Ombudsman policy, and additional independent audits, for effectively assessing contracted service delivery (Amirkhanyan, 2011).

As the risk of moral hazard increases, contracting governments need to use diverse performance monitoring techniques intensively along with fair measurements. Thus, public managers who are engaged in government contracting, especially monitoring officials, are expected to behave responsibly to monitor contractor activities, ranging from contract compliance to contract implications and performance. More specifically, the obligation to monitor appears to include identifying instances of inappropriate or opportunistic behaviors of contractors as well as detecting their true goal achievement, performance fluctuations, and shortfalls (Brown et al., 2006; Fernandez, 2007; Perrin, 1998).

In addition to using performance monitoring methods intensively and frequently to gather adequate contract information, the extent to which governments fairly and appropriately monitor and evaluate the performance of contractors matters for overall contracting performance. According to Amirkhanyan et al. (2007, p. 709), well-designed monitoring tools should meet the requisites for validity and reliability and be free from bias. In this respect, procedural fairness and appropriateness that shape the monitoring efforts employed by governments seems to be linked to effective contract management and further performance. Overall, it is anticipated that intensity (frequency) of monitoring and procedural fairness (appropriateness of measurement)

in the monitoring works are related to contracting financial performance. These considerations lead to the following hypotheses:

> $H_{2\text{-}1}$. The intensity of monitoring will be positively associated with perceived contracting financial performance.
>
> $H_{2\text{-}2}$. The fairness of monitoring will be positively associated with perceived contracting financial performance.

In the government contracting literature, research on the effects of contract duration (length of contracting relationship) and the contractor's nonprofit and for-profit status has considered moderate influences in addition to direct impacts on contract management and performance (see, for example, Fernandez, 2009). First, scholars have suggested that the contract duration appears to be related to government monitoring in one common direction and their interaction influences contracting performance (e.g., Fernandez, 2009), even though the relationship between contract duration and contracting performance has been contradictory (e.g., see Amirkhanyan et al., 2012; Brown et al., 2007; Smith & Lipsky, 1993). In long, on-going contractual relationships, the main parties (government and contractors) are allowed more time to learn about each other, thereby overcoming contractor opportunistic behaviors and further reducing the need to oversee and monitor contract performance (Agranoff, 2006; Agranoff & McGuire, 2003; Amagoh, 2009; Fernandez, 2007, 2009; Marvel & Marvel, 2007; Van Slyke, 2003).

In addition, it has been discussed that even though a nonprofit contractor's performance is not easily observed and measured compared to for-profit counterparts, nonprofit contractors are monitored less than for-profit ones (Brown & Potoski, 2003a, 2003b; Fernandez, 2009; Witesman & Fernandez, 2013; Van Slyke, 2007). For

example, in Brown and Potoski's (2003a, p. 291) study, even though it is not clear as to whether for-profit vendors are in fact more likely to behave opportunistically than nonprofit vendors or other governments (perhaps due to perceived or actual goal incongruence between the vendor and the contracting government), it is revealed that governments contracting with for-profit vendors are more likely to use more diverse monitoring procedures (e.g., monitoring citizen complaints, analyzing vendor performance data with audit, and field observation). In a similar vein, Marvel and Marvel (2007) asserted that "[w]hen the contracting partner is another government or a non-profit entity, monitoring efforts by the government contracting for services actually decline." (p.529). If these arguments are true and common in the contracting out process, then this study can expect that it is likely that contracting governments are less vigilant in their relationships with nonprofit contractors rather than for-profit ones and, furthermore, nonprofit contractors are less screened in government monitoring activities.

Taken as a whole, it is arguable that the suggestions indicated above lead naturally to the proposition that sector difference in contract duration and the type of contractor will moderate the impact of monitoring intensity on contracting financial performance. Seen in this light, this study derives the following hypotheses:

> $H_{2\text{-}3}$. The relationship between intensity of monitoring and perceived contracting financial performance will be weaker as the contracting relationship length is longer.
>
> $H_{2\text{-}4}$. The relationship between intensity of monitoring and perceived contracting financial performance will be weaker as governments contract their goods and services with nonprofit organizations.

Use of the Monitoring-based Incentives (Rewards and Sanctions)

In the contracting literature, scholars have drawn on principal–agent theory, stewardship theory, or incentive theory to explain that appropriately designed sets of monitoring-based incentives and penalties, the so-called "carrot and stick" approaches, are useful to overcome information asymmetry, and particularly to curb contractor's opportunistic behaviors (Girth, 2012). Such monitoring-based incentive provisions may work as different levels of risk that contractors are frequently confronted with in the *ex post* monitoring process (Sappington, 1991). In this sense, Prager (1992, p. 41) explained that, "if contract violations are unlikely to lead to adverse consequences such as contract cancellation, monitoring becomes a toothless exercise and all outlays on monitoring will be wasted." Stated more succinctly by Girth (2012, p. 2),

> When contract sanctions are not explicitly included in the contract or enforced, vendor opportunism can result, posing a considerable risk to public value and contract accountability … Sanctions are designed as a threat to the contractor to induce performance, signaling the purchasing organization's commitment to consequences for poor performance.

In addition, the use of rewards and sanctions can lead to satisfactory and higher levels of contracting performance (e.g., Brown & Potoski, 2005; Cooper, 2003; Fernandez, 2007, 2009; Girth, 2012; Martin, 2004; Savas, 2000; Shetterly, 2000; Yang et al., 2010). So far, most studies on government contracting have not directly and empirically tested the effect of the use of rewards and sanctions on contracting performance with the exception of a few studies such as Shetterly (2000) and Fernandez (2007, 2009). Consistent with principal–agent theory, Shetterly (2000) found that a penalty provision had a significant influence on the cost of residential refuse collection and in Fernandez's (2007, 2009) two empirical studies, despite

limited results, it appeared that the greater reliance of local governments on legal sanctions (for resolving disputes) contributed to higher levels of contracting performance. In this vein, Amirkhanyan et al. (2007, p. 717) noted that

> The presence of *rewards and penalties in the contract* can impact contractor performance … Incorporating performance appraisal into the contract through appropriate rewards and penalties serves as an incentive mechanism positively affecting contractor performance by aligning the goals of the contractor and the government agency.

The literature has indicated that extrinsic rewards for satisfactory performance typically include contract renewal (extension), praise of the contractor by the contracting government, gain sharing, and financial rewards, including fees and bonus payments, whereas intrinsic rewards include trust, enhanced reputation and involvement in goal setting and program evaluation, discretion and autonomy, level of responsibility, job satisfaction, stability and tenure, and mission alignment (Cooper, 2003; Fernandez, 2007; Girth, 2012; Van Slyke, 2007).

In terms of the sanctions for inadequate performance, they seem to range from less severe sanctions, including written document and monetary penalties, temporary suspension, threat of contract termination, being prohibited for future bidding, and rebidding, to more severe sanctions like legal litigation (Brown & Potoski, 2003b; Girth, 2012; Lambright, 2009; Marvel & Marvel, 2009; Romzek & Johnston, 2005). Based on these distinctions, it is naturally expected that rewarding satisfactory, strong performance and sanctioning poorly performing contractors (e.g., threat of financial sanctions or loss of the contract/termination) can be feasible strategies since such incentives help motivate contractors to avert risks and maximize contract performance.

In light of the literature reviewed above, the use of rewards and sanctions as a monitoring-based incentive as well as a powerful institutional tool appears to be

necessary for maintaining effective government–contractor relationships accompanied with satisfactory contracting performance (Fernandez, 2007, 2009; Girth, 2012; Kettl, 1993; Lambright, 2009; Shetterly, 2000; Yang et al., 2010). Using monitoring-based incentive provisions (rewards and sanctions) is likely to play a critical role in government contracting particularly in situations in which governments are challenged to achieve expected performance goals and hold contractors accountable for their performance. Consequently, the following hypotheses are formulated:

> $H_{3\text{-}1}$. The use of rewards for satisfactory performance will be positively associated with perceived contracting financial performance.
>
> $H_{3\text{-}2}$. The use of sanctions for unsatisfactory performance will be positively associated with perceived contracting financial performance.

Although poorly performing contractors are detected through monitoring efforts, there is a tendency for government to impose less sanction on contracted service areas with long-standing contracting relationships and/or nonprofit contractors. In the context of contract length (duration), Bennett and Ferlie (1996), Smith and Smyth (1996), and Van Slyke (2007) all found that as contracting relationships become longer, both government and the contractor are more likely to share goals and build trust, and, as such, informal and relational sanctions can be used more than severe and rigorous ones. In a similar vein, Amirkhanyan et al. (2007, p. 710) found that,

> In a situation where a government agency and contractor have a long-standing relationship built on mutual trust, the contractor may be compelled to satisfy contract requirements more out of a sense of duty rather than as adherence to the formal contract or legal sanctions.

Recent research by Girth (2012) gives us further confidence about the effect of contracts of longer duration, even though the empirical results seem to be inconclusive.

This research implicitly revealed that the longer the contractor and government have worked together, the more likely it is that an opportunity for corrective action or counsel on performance will arise and be provided and the less likely it is that sanctions will result.

Furthermore, the existing contracting research indicates that nonprofit contractors may face less vigorous performance monitoring and as such there may be less need for sanctions (see, for example, Brown & Potoski, 2003b; Girth, 2012; Marvel & Marvel, 2009; Van Slyke, 2007). Thus, the hypotheses indicated earlier can be moderated by other factors, including contract length (duration) and type of contractor (nonprofits versus for-profits). This does not mean, however, that monitoring-based incentives do not play an important role in evaluating contracting performance. Rather, it means that the instances in which a government contracts out with nonprofit organizations and has long-standing contracting relationships may make the use of sanctions less likely and can even lessen the likelihood of achieving satisfactory contracting financial performance.

For instance, Van Slyke (2007, p. 173) found that even though nonprofit contractors performed poorly and provided unfavorable outcomes, public managers tended to confront the situation instead of directly and formally enforcing sanctions. He further argued that unlike the state-level contracting setting, at the local level (particularly suburban and rural counties), public managers tended to deal with such challenges informally not by directly applying sanctions to the contractor but by limiting contractor discretion, remaining silent about the contractor's reputation to others, and over time seeking alternative service providers from other regions to

replace the contractor. Marvel and Marvel (2009) categorized sanctions into three groups – monetary penalty, temporary suspension, and prohibit future bidding – and presented similar evidence that despite these specific distinctions, nonprofit organizations are less sanctioned than for-profit organizations and other governments (p. 195).

In light of the findings of previous research discussed above, this study can expect similar effects. Accordingly, the following moderating hypotheses are outlined.

> $H_{3\text{-}3}$. The relationship between use of sanctions and perceived contracting financial performance will be weakened under long contracting relationships.
>
> $H_{3\text{-}4}$. The relationship between use of sanctions and perceived contracting financial performance will be weaker when governments contract their goods and services with nonprofit organizations.

Government Capacity

The importance of government's (or public agencies') in-house capacity to be "smart buyers" and "smart managers" in effectively managing the entire contacting out process – beyond simply monitoring contractor performance – has been called to attention on account of unexpected opportunistic behavior on the part of contractors that is associated with financial misappropriation of public funds and corruption (Brown & Potoski, 2003a, 2003b, 2005; Cohen & Eimicke, 2008; Hefetz & Warner, 2004; Martin, 2004). From make-or-buy decisions and the designing and implementing of contracts to the monitoring and evaluating contracting performance in order to assign rewards or sanctions (penalties), such capacities are broad and critical to contract success.

Unlike the research discussed above, however, in reality many government agencies have continued to rely heavily on the private sector in the production and delivery of public goods and services and they appear to lack in-house professional capacity to effectively evaluate contractor performance due to staffing cuts and resource-constraints (e.g., lack of budget) (Brown & Potoski, 2006; Girth, 2012; Kettl, 1993; Milward & Provan, 2000; Smith & Smyth, 1996; Van Slyke, 2003, 2007).

In a situation in which governments lack or fail to maintain their capacity, one would expect that the governments would easily become dependent on contractors to, for example, review financial data collected by contractors (Kettl, 1993; Lambright, 2009), and, as previously noted, it thus might be challenging for them to hold contractors accountable for expected contracting outcomes. In this context, Yang et al. (2009) asserted that in spite of a temptation to wish that contracting capacities always had positive impacts on performance, the reality is not as rational as our theories and capacities entail costs (p. 685). A government's capacity factor, in the context of agenda setting, contracting formulation, implementation, and evaluation, might help lead to better performance but after passing a certain point, the positive effect on performance will decrease. They further emphasized that public officials who are engaged in the contracting out process should understand what they can do to make it work, for example, in terms of a strong evaluation system and an authentic collaborative relationship with the contractor (p. 693).

This is reminiscent of some critical arguments that prior studies pointed out. For example, Brown and Potoski (2003b) argued that "[t]he success or failure of any alternative service delivery arrangement likely depends on how well governments can

manage the entire contracting process" (p. 153). Few years later, they (2005) reaffirmed the importance of government capacity, addressing that "[c]ontract management may mean extensive communication with vendor contract staff, frequent monitoring of vendor behavior and performance, and periodic enforcement of contractual penalties" (p.330).

Similarly, Brudney, Fernandez, Ryu, and Wright (2005) also asserted that "[c]ontracting for services must be managed well, and doing so requires a special set of managerial knowledge, skills, and practices" (p. 406). More specifically, Fernandez (2007) noted, "having agency personnel with expertise in contract administration and with in-depth knowledge of the workings of service delivery are factors that are expected to contribute to successful contracting" (p. 1125). Furthermore, this point echoes Cohen and Eimicke's (2008) research on responsible contract managers in government contracting. One could argue that Cohen and Eimicke, in effect, suggested best practices for contracting government and their contract managers to complicate the accountability-management-performance link specifically by pointing out the necessity of sufficient communication between government and the contractors. Indeed, they stated that,

> Public managers must become effective contract managers and need to learn how to: (1) find out what their contractors are doing, (2) develop and implement systems of contractor incentives, (3) get a fair price for services, and (4) develop the skills needed to negotiate performance-based contracts. (Cohen & Eimicke, 2008, p. 123)

Interestingly, recognizing the significance of government contract-oriented capacity, scholars also have constructed several different measures of the capacity through empirical research using a variety of criteria. For example, Brown and Potoski

(2003b) classified government capacity into three phases. First, feasibility assessment capacity refers to the capacity to determine whether a particular good or service is appropriate for contracting and whether there is sufficient market competition for that good or service. It may include hiring trained staff and legislative study groups (Brown & Potoski, 2003b, p. 155). Second, implementation capacity involves the issues of contract bidding, vendor selection, contract negotiation, and contract writing – the capacity to bid on the contract, select a provider, and negotiate the contract. Finally, evaluation capacity concerns monitoring and evaluating the contractor performance to determine whether the contractor has fulfilled their responsibilities as outlined in the contract by using citizen surveys, monitoring customer complaints, making field observations, and analyzing operational records (Yang et al., 2009, p. 682).

More simply put, according to Liu, Hotchkiss, and Bose (2007), to a large extent, government purchasers need two basic capacities – financial capacity and managerial capacity. Financial capacity includes sufficiency and sustainability of financing, financial management capacity, and timely payment to providers. On the other hand, managerial capacity contains procurement, oversight, performance assessment, and problem solving capacity at large. Such differentiation seems to be in line with the argument by Amirkhanyan et al. (2007). They insisted that the contracting government agency needs to have enough financial resources to be able to hire staff qualified to perform the required monitoring tasks and to ensure that staffing levels are adequate (Amirkhanyan et al., 2007, p. 709). Besides, in addition to having

stable and sufficient resources, adequate administrative capacity is required to ensure that resources are efficiently distributed (Amirkhanyan et al., 2007, p. 716).

Furthermore, Fernandez (2004, 2007) posited that the government capacity that can lead to successful contracting basically requires in-depth knowledge of the working of service delivery. It may depend on the extent and period of training in contract administration regarding, for example, preparing bid documents, monitoring performance, and dealing with complaints and performance problems; and past experiences of public managers involved in contract relationships. Similarly yet more specifically, Lee and Kingsley (2009) noted that capacity may rely on diverse features of public managers who are in charge of government contracting, such as agency tenure, age, gender, education level, working experience with contracting firms, and the frequency of interaction with contracting firms on attitudes toward hiring contractors and the hiring of agency personnel by contractors (p. 275). Similarly, Girth (2012) argued that in addition to sufficient staffing, sufficient expertise, experience, time to administer and monitor contracts are fundamental aspects of successful government contracting process and outcomes.

When considered together, it seems reasonable to expect that effective government capacity is likely to help combat opportunistic behavior by contractors and further facilitate effective contract management accompanied with satisfactory financial performance. Following the literature, this study posits that government capacity can be divided into three aspects depending on stages (before versus after awarding a contract) and types of resources (personnel (or staffing) versus financial resources) in need for successful contracting. Formulated as hypotheses:

$H_{4\text{-}1}$. Government feasibility capacity will be positively associated with perceived contracting financial performance

$H_{4\text{-}2}$. Government management capacity will be positively associated with perceived contracting financial performance.

$H_{4\text{-}3}$. Government financial capacity will be positively associated with perceived contracting financial performance.

Contractor Capacity

Successful contracting out with higher levels of performance requires that contractor (private service provider) capacity is equivalent to the capacity of government (service purchaser) to exercise effective management. It is likely that contracting out allows public agencies to take advantage of the specialized skills and the capacity of private organizations (Holzer, Price, & Kang, 2004) by contracting with external personnel who have sufficient time, staff, and unique expertise (Amirkhanyan et al., 2012; DeHoog, 1990). Thus, as one of the main parties in government contracting, contractors, regardless of their sector status (nonprofit or for-profit organizations), are expected to meet and exceed performance expectation both before and after the awarding of the contract (Witesman & Fernandez, 2013).

Once the contracting relationship between government and the service providers is established and specified by a classic and legal contract, contractors are obligated to comply with contract requirements and hold themselves accountable for their performance. In this context, considering contractor capacity (known as *ex ante* evaluation in his studies) as one main factor affecting contracting performance, Fernandez (2004, 2009) noted that it is essential for public managers to evaluate the bidder's capacity to perform the work prior to awarding the contract. But ironically, as

discussed earlier, it has been documented that such hidden information and related issues, such as adverse selection and moral hazard, embedded in the relationships cannot be completely observed and easily managed due to information asymmetry.

Although the issue of contractor capacity has not received much attention in the literature compared to government in-house capacity, there are a few studies that offer some basic rationales on how contractors can play a critical role in government contracting and how their capacity can matter for effective contract management and satisfactory contract performance. Kettl (1993) argued that "[c]ontractors can help government agencies determine whether control strategies should be required … it can help reduce transaction costs. One of the costs is the cost of investing in the capacity to act as smart buyer" (p. 194). As such, contractors are capable of sharing more information requested by government agencies and providing feedback to the agencies.

Based on this information, government can further modify contract requirements to fit contractor capability by negotiating performance standards and providing identified best practices from their fields (Amirkhanyan, 2008). As Amirkhanyan et al. (2012) and Girth (2012) commonly argued, greater administrative capacity by the contracting firm is a necessary condition for better contracting performance.

More specifically, with respect to the aspects and dimensions of contractor capacity, a variety of criteria has been suggested in the literature. For instance, drawing upon a conceptual framework of contracting out at the health system level, Liu, Hotchkiss, and Bose (2007) argued that the capacity of contracted service

providers could contain the capacity in delivering specified services, the level of autonomy of individual providers (particularly financial autonomy), contract management capacity, motivation, and capacity of the providers to implement performance self-monitoring (p. 203). Amirkhanyan et al. (2007) made a normative argument that contractors are ultimately responsible for effective service delivery and performance according to government agency expectations. For example, Amirkhanyan et al. (2007, p. 704) mentioned that "[w]hen deciding whether to contract out a particular service, government agencies are likely to consider not only their capacity to provide the service but also their capacity to manage the entire contracting out process."

Likewise, in more recent studies (e.g., Amirkhanyan, 2010; Amirkhanyan et al., 2012; Fernandez, 2009; Girth, 2012; Witesman & Fernandez, 2013), it has been argued that contractor capacity may include staffing capacity and financial capacity (financial health or dependency on government funding) needed to complete government contracts effectively. For instance, analyzing over one hundred child care centers and Head Start agencies in Ohio, Amirkhanyan and her colleagues (2012) divided contractor's capacity into two aspects – internal management capacity and environmental conditions (financial autonomy from the contracting public agency) and found that even though a contractor's financial autonomy is somewhat negatively associated with collaborative contracting relationship between government and the contractor, its internal management capacity is positively associated with that. In other words, the effective contracting out may depend on how much contractors have skilled managers or invest their time and energy in improving the process (Amirkhanyan et al.,

2012, p. 345). Interestingly, Fernandez (2009) and Witesman and Fernandez (2013) built upon this perspective by extending up to contractor's financial viability, technical capacity, the cost for service delivery, reputation, total previous experience performing the work, and the previous performance of other contractors with governments in a line with previous literature (e.g., Rehfuss, 1989; Romzek & Johnston, 1999, 2002).

Taken together, it is very important to note contractor internal capacity as a main factor affecting contracting performance. This study thus explicitly acknowledges that contractor capacity can help shape effective contract management and achieve higher levels of contracting financial performance. Similar to government contract management capacity above, depending on the stages embedded in local government contracting, this study divided the contractor's capacity into three aspects: (1) contractor feasibility capacity before awarding the contract, (2) contractor management capacity after awarding the contract, and (3) contractor financial capacity based on the extent to which contractors have sufficient resources available to provide goods and services. More formally, it is hypothesized that:

> $H_{5\text{-}1}$. Contractor feasibility capacity will be positively associated with perceived contracting financial performance.
>
> $H_{5\text{-}2}$. Contractor management capacity will be positively associated with perceived contracting financial performance.
>
> $H_{5\text{-}3}$. Contractor financial capacity will be positively associated with perceived contracting financial performance.

Contract Length (Duration)

Government contracting is based on the contractual relationship between governments and contractors within a certain period of time. With respect to contract

duration, there continues to be two contradictory scholarly arguments. While some scholars have argued that longer contractual relationships allows contractors to engage in moral hazard during the contract period (Amirkanyan, 2010; Brown et al., 2007; Smith & Lipsky, 1993), others have argued that given longer relationships in government contracting, there may be greater likelihood that contractors have a chance to learn about a government's contracting out system and offer helpful suggestions for improvement of the current system, which in turn can lead to higher levels of contracting performance (Amirkhanyan et al., 2007; Kelman, 2002).

Consistent with these different theoretical and normative perspectives, empirical evidence on the relationship between awarding contracts of longer duration and contracting performance has also been unclear in the past and recent literature. For example, in Fernandez's two empirical studies (2007, 2009), it was found that duration of the contract appeared to have no effect on overall contracting performance. On the other hand, more recently conducted research by Amirkhanyan (2011) and Amirkhanyan et al. (2012) found a positive relationship, albeit somewhat limited, between the length of the contracting relationship and accountability effectiveness of government contractors and cooperation in contract implementation, respectively. The findings appear to suggest that contractors are more likely to cooperate in the implementation of long-term contracts, thereby, at least, keeping contractor performance constant during this period (Amirkhanyan et al., 2012).

Despite such inconsistent claims and findings, most of the contracting literature tends to adopt stewardship theory to explain the nature of and changes in contractual relationships and suggests that over time transactional relationships in the

contracting out process may turn into on-going relational contracting accompanied by goal-sharing, mutual understanding, trust, reputation, and collaboration between two main parties (e.g., Amirkhanyan et al., 2010, 2014; Brown et al., 2007; Mulgan, 1997; Sclar, 2000; Van Slyke, 2007). Indeed, it seems that such long-term contracting relations help contracting governments to overcome opportunistic behavior by contractors and provide greater opportunities for the parties to develop trust by facilitating learning with each other (Fernandez, 2007; 2009; Witesman & Fernandez, 2013). Stated more explicitly by Amirkhanyan et al. (2012, p. 345),

> Longer contractual relationships allow the parties to develop some familiarity with each other, promoting more frequent and informal communication, and a better understanding of each other's organizational cultures. Longer ties also suggest parties believe that they are benefiting in some way from the sustained collaborative relationships which may prevent contractors from behaving opportunistically.

Given this, it is expected that longer contracting relationships between government and contractors result in higher levels of contracting financial performance. This study therefore formulates hypothesis:

> H_6. The longer the contracting relationships between governments and contractors exist, the greater the likelihood that governments achieve higher levels of perceived contracting financial performance.

Type of Contractor (Contractor Ownership)

In the public administration literature, it has long been suggested that there is a disparity between contracted goods and service providers (deliverers) – particularly for-profit, nonprofit, and public organizations – in several ways, including environments, internal structure and processes, employee characteristics, and incentive structures (e.g., see Feeney & Rainey, 2010; Lee & Wilkins, 2011; Witesman &

Fernandez, 2013). In addition, there is a tendency by government to hire two different contracted providers – for-profit versus nonprofit contractors, in particular – according to the services delivered via local government contracts in practice. While for-profit organizations have long played a large role in the delivery of public services in the areas of commercial and residential solid waste disposal/refuse collection, public utilities and safety, parks and recreation, street repair, vehicle towing, legal services, and transportation (e.g., road construction and maintenance), nonprofit organizations have tended to be engaged in social service areas, such as cultural programs, childcare (e.g., day care facilities), health (e.g., drug treatment), and human service contracting (Cohen & Eimicke, 2008; Fernandez, 2007; Girth et al., 2012; Kettl, 1993; Lamothe & Lamothe, 2009; Salamon, 2002; Siegal, 1999; Smith & Lipsky, 1993; Van Slyke, 2002, 2003).

Recognizing such patterns in the contracting of for-profit and nonprofit organizations, scholars have drawn on the different aspects of each sector in the research on contractor in the specific context of government contracting. With respect to type of a contractor, they have used several terms interchangeably, such as type of service provider (e.g., Marvel & Marvel, 2009), contractor ownership (e.g., Amirkhanyan, 2010), or sector differences (e.g., Girth, 2012; Witesman & Fernandez, 2013). Meanwhile, they have argued that the contractor's sector status matters to effective contract management and performance (e.g., Girth, 2012). Interestingly, comparing for-profit organizations with nonprofit ones as counterparts of government contracting agencies has been much more common than simply comparing public organizations (here, government) with private organizations at large, even though it is

accepted that the three organizational sectors differ in the contracting out process. Given this perspective, therefore, this study also focuses on the cross-sector comparison of contract management and performance among service providers, assuming that there are clear differences in the manner in which each sector manages their contract and their interaction with government (public agencies) and uses public funds in their contracting out process.

In the literature, there is some evidence indicating that nonprofit contractors are more likely to engage in opportunistic behaviors compared to for-profit contractors. For instance, Ferris and Graddy (1986) and Amirkhanyan (2010) argued that the services delivered by for-profit contractors tend to be monitored more easily and for-profit contractors are able to maintain service quality and achieve cost-effectiveness (cost savings) due to economies of scales and tighter labor practices. According to Amirkhanyan et al. (2012, p. 346), legal environments (e.g., a tax exemption) and unique faith-based incentives embedded in nonprofit organizations may discourage them from being fully transparent in the use of public funds; thus, governments may be less likely to trust nonprofits compared to for-profits. In other words, nonprofit organizations lack financial incentives to guide organizational leadership and tend to prioritize responsiveness to more limited community groups rather than the public interest underlying equal access to services; in turn, they may be poorly managed, as other studies argued (e.g., Hansmann, 1980, 1987; Prager, 1994; Smith & Lipsky, 1993). Sometimes, they may act as aggressive political forces to lobby to secure government funds for their programs, for example, in human service

contracting (DeHoog, 1984; Kettl, 1993; Lamothe & Lamothe, 2009; Van Slyke, 2003).

Similarly, Witesman and Fernandez (2013) noted that "[n]onprofit providers at the local level may be more likely to be locally based and have stronger ties to elected officials and public managers than for-profits" (p. 707). Although nonprofit organizations appear to enjoy a variety of trust-related advantages (e.g., relatively minimal monitoring and awarding contracts of longer durations compared to for-profits) over their for-profit counterparts in the contracting process, there is no significant difference in contracting performance in terms of, for example, cost, quality of work, legal compliance, or customer satisfaction (Witesman & Fernandez, 2013).

In contrast to the argument presented above, in the nonprofit literature there has been a prevalent proposition that nonprofit organizations are the so-called, "better partners" for government (public organizations) due to their less hierarchical structure and integrated regulation and similar goals that are more committed to public values (e.g., Brown et al., 2007; Cohen, 2001; Dicke, 2002; Smith & Lipsky, 1993). Moreover, nonprofit organizations have been believed to be more attractive and trustworthy service providers since they are motivated by strong altruistic values and missions as well as their willingness to volunteer (Amirkhanyan, 2009; Van Slyke, 2009). As such, government contracting with nonprofit contractors can be more likely to result in improved performance (Amirkhanyan et al., 2008; Rainey & Steinbauer, 1999). Emphasizing this point, Amirkhanyan et al. (2012) stated that "[n]onprofit organizations may be less likely to take advantage of clients by raising prices or

cutting costs in situations where competition is limited and service quality is hard to verify such as in the field of social services" (p. 345).

On the other hand, the literature has suggested that for-profit organizations are basically driven by the profit motive and market share. In seeking efficiency gains in nature, they are more likely to be vulnerable to opportunism that may link to poor quality service delivery to citizens than other organizations (Brown & Potoski, 2005; Cohen, 2001; Ewoh, 1999; Rainey, 2009). According to Amagoh (2009, pp. 3-4),

> … for-profit firms, whether they are publicly or privately held, are motivated by profit, and consequently may focus more on innovation and efficiency. In contract, nonprofit organizations are more inclined to share similar missions with government, and thus may be more reliable contract partners. Rather than behaving opportunistically, a nonprofit might draw on its private philanthropic resources to augment services it delivers under government contract ...

Overall, it appears that in government contracting either of these viewpoints on sector differences between service providers could turn into a question of whether or not nonprofit organizations outperform for-profit ones in terms of contracting financial performance. Although both arguments above are plausible when predicting contracting financial performance in general contracting out situations, the latter argument seems to be more applicable in this study. As a result, this study posits that nonprofit organizations tend to behave less opportunistically compared to others in the contracting out process at the local level. Consistent with such a perspective, the hypothesis is outlined as follow:

> H_7. The more governments contract their goods and services with nonprofit organizations, the greater the likelihood that governments achieve higher levels of perceived contracting financial performance.

Other Factors

In addition to the main factors affecting financial performance in government contracting discussed above, this study also takes into account several other factors that potentially influence the likelihood of achieving satisfactory contracting financial performance. Even though the recent contracting out literature have not been tested extensively with respondents' demographic variables (e.g., see Fernandez, 2007, 2009; Girth, 2012; Yang et al., 2010), it should be worthwhile noting that respondents' basic information may be related to contracting financial performance since the dependent variables of this study are perceived ones.

In order to see whether there is a difference in perceived cost-effectiveness and financial accountability across different groups of contract managers, this study focuses on four individual factors based on survey respondents' demographic characteristics and basic information including age, gender, training experience, and years of working for government contracting out process in his/her current organization as with previous studies dealing with the comparison of perceptions (attitudes) of public or private managers on organizational performance (outcomes) and effectiveness (e.g., Amirkhanyan, 2010; Feeney & Bozeman, 2009; Feeney & Rainey, 2010; Fernandez, 2004; Kurland & Egan, 1999; Zeffane, 1994). Basically, it is expected that there may be significant differences in these factors between public and private contract managers, although it is not entirely clear how these variables affect contracting financial performance.

Thus, it is both necessary to control for them and interesting to empirically examine their associations even though the direction of hypothesized relationships

seem to be ambiguous. For example, the training experience on managing contracts that public and private contract managers have may influence the likelihood of achieving higher levels of perceived contracting financial performance. Perhaps, by and large, managers who attend more frequent training are more likely to think that contracting governments achieve satisfactory financial performance, whereas less trained managers may have a more critical view of contracting financial performance (or vice versa).

In addition, as in Dodd-McCue and Wright's (1996) study, one might expect that respondents who are relatively older and/or have been stayed longer in an organization are more likely to report that contracting governments achieve satisfactory financial performance. Similarly, according to Feeney and Rainey's (2010) study, this study posits that women and nonwhite respondents may be more accepting of personnel restrictions inside the workplace (that is, some individuals are more trusting their organizations than others) so that they might have more positive attitudes on organizational performance (here, contracting financial performance). Besides, it is possible that such relationships between each factor and perceived contracting financial performance may be different across each sector. Such discussion leads to the following hypotheses.

H_8. The perception of contracting financial performance will vary by age.

H_9. The perception of contracting financial performance will vary by gender.

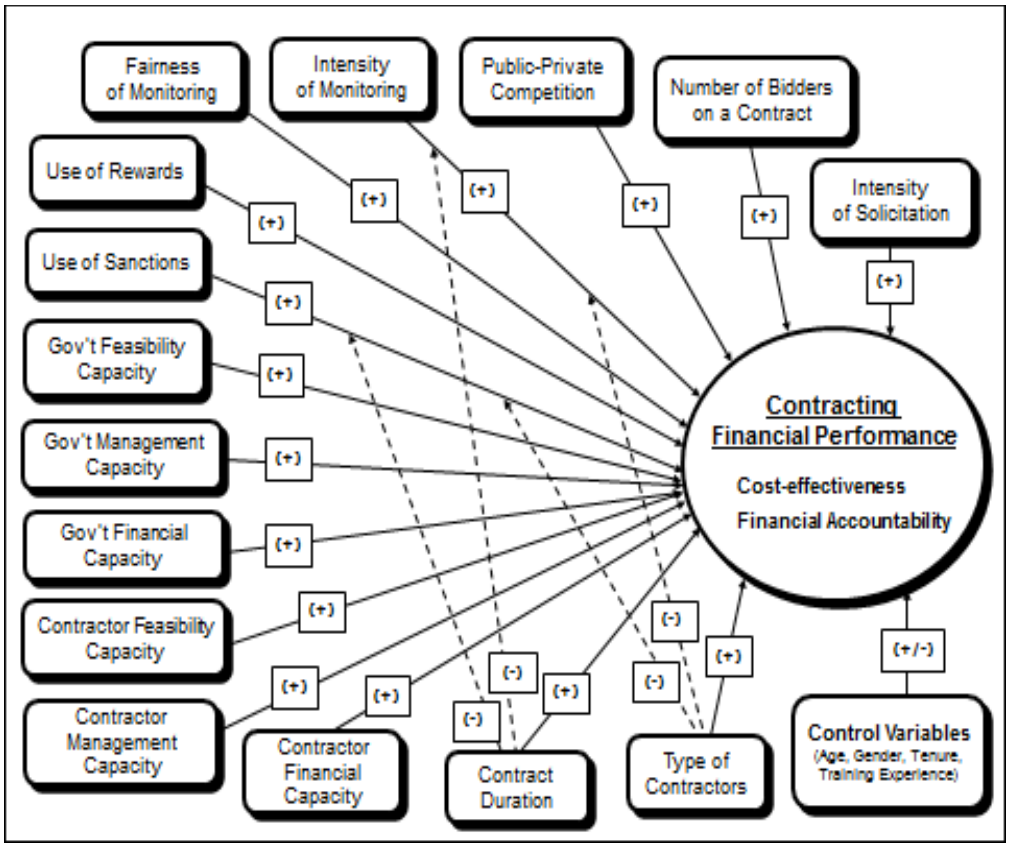
H_{10}. The perception of contracting financial performance will vary by training experience working under government contracts.

H_{11}. The perception of contracting financial performance will vary by working experience in government contracts in the current organization.

Empirical Model of Contracting Financial Performance

Within the given arguments, suggestions, and evidence above, this research developed a series of hypotheses that will be tested to demonstrate which factors will be more influential to higher levels of contracting financial performance. More broadly, it seems that the testable hypotheses reflect expected differences in the way public and private contract managers perceive current government contracting process and subsequent performance. In addition, other factors that are reasonably expected to be treated as control variables were demonstrated. In the next chapter, through quantitative analysis, this study will attempt to find sufficient evidence of direct effects and indirect effects among main independent variables to confirm previous research and warrant further research on contracting financial performance. For this analysis, an empirical model covering variables applied in this study is illustrated in Figure 3.2. In this path diagram, direct effects are illustrated in solid lines, whereas moderating effects are illustrated in dashed lines. The figure not only identifies diverse factors that need to be in place for satisfactory, higher levels of perceived contracting financial performance, but also provides a snapshot of the predicted effects of significant independent (direct) and moderating variables in each hypothesis to help with interpretation.

Figure 3.2 Empirical Model of Factors Affecting Perceived Contracting Financial Performance



Summary of Research Hypotheses

For the quantitative analysis, this study focused on the relationships between factors embedded in the contracting out process – (H1) competition; (H2) monitoring; (H3) monitoring-based incentives; (H4) government capacity; (H5) contractor capacity; (H6) contract length; and (H7) type of contractor, and perceived contracting financial performance (cost-effectiveness and financial accountability). Table 3.1 presents a summary of the hypotheses, indicating the direct associations of the factors with two different aspects of contracting financial performance and moderating roles of some factors in the relationships between each factor and contracting financial performance. 19 direct effects and 4 indirect effects were taken into account for the analyses. In sum, 23 possible hypotheses were formulated as follows.

- *Hypothesis 1-1:* The intensity of solicitation in the bidding process will be positively associated with perceived contracting financial performance.
- *Hypothesis 1-2:* The greater number of bidders on a contract, the greater the likelihood that governments achieve higher levels of perceived contracting financial performance.
- *Hypothesis 1-3:* Allowing public organizations (government) to participate in the bidding process for the same service delivery will be positively associated with perceived contracting financial performance.
- *Hypothesis 2-1:* The intensity of monitoring will be positively associated with perceived contracting financial performance.
- *Hypothesis 2-2:* The fairness of monitoring will be positively associated with perceived contracting financial performance.

- *Hypothesis 2-3:* The relationship between intensity of monitoring and perceived contracting financial performance will be weaker as the contracting relationship length is longer.
- *Hypothesis 2-4:* The relationship between intensity of monitoring and perceived contracting financial performance will be weaker as governments contract their goods and services with nonprofit organizations.
- *Hypothesis 3-1:* The use of rewards for satisfactory performance will be positively associated with perceived contracting financial performance.
- *Hypothesis 3-2:* The use of sanctions for unsatisfactory performance will be positively associated with perceived contracting financial performance.
- *Hypothesis 3-3*: The relationship between use of sanctions and perceived contracting financial performance will be weakened under long contracting relationships.
- *Hypothesis 3-4*: The relationship between use of sanctions and perceived contracting financial performance will be weaker when governments contract their goods and services with nonprofit organizations.
- *Hypothesis 4-1*: Government feasibility capacity will be positively associated with perceived contracting financial performance.
- *Hypothesis 4-2*: Government management capacity will be positively associated with perceived contracting financial performance.
- *Hypothesis 4-3*: Government financial capacity will be positively associated with perceived contracting financial performance.

- *Hypothesis 5-1*: Contractor feasibility capacity will be positively associated with perceived contracting financial performance.
- *Hypothesis 5-2*: Contractor management capacity will be positively associated with perceived contracting financial performance.
- *Hypothesis 5-3*: Contractor financial capacity will be positively associated with perceived contracting financial performance.
- *Hypothesis 6:* The longer the contracting relationships between governments and contractors exist, the greater the likelihood that governments achieve higher levels of perceived contracting financial performance.
- *Hypothesis 7*: The more governments contract their goods and services with nonprofit organizations, the greater the likelihood that governments achieve higher levels of perceived contracting financial performance.
- *Hypothesis 8*: The perception of contracting financial performance will vary by age.
- *Hypothesis 9*: The perception of contracting financial performance will vary by gender.
- *Hypothesis 10:* The perception of contracting financial performance will vary by training experience working under government contracts.
- *Hypothesis 11*: The perception of contracting financial performance will vary by working experience in government contracts in the current organization.

Table 3.1 Summary of Hypotheses and Expected Directions

Factors		Dimensions	Direct/ Moderating Effects	Hypotheses	Expected Direction
Organizational Factors	Competition	SOLICIT	Direct	H1-1	+
		LCOMP	Direct	H1-2	+
		PCOMP	Direct	H1-3	+
	Monitoring	IMONITOR	Direct	H2-1	+
		FMONITOR	Direct	H2-2	+
	Monitoring-based Incentives	REWARD	Direct	H3-1	+
		SANCTION	Direct	H3-2	+
	Government Capacity	GFECPTY	Direct	H4-1	+
		GMACPTY	Direct	H4-2	+
		GFICPTY	Direct	H4-3	+
	Contractor Capacity	CFECPTY	Direct	H5-1	+
		CMACPTY	Direct	H5-2	+
		CFICPTY	Direct	H5-3	+
Contextual Factors		LENGTH	Direct	H6	+
		NPROFIT	Direct	H7	+
Others (Demographic Factors)		AGE	Direct	H8	+ / −
		GENDER	Direct	H9	+ / −
		TRAIN	Direct	H10	+ / −
		YEAR	Direct	H11	+ / −
-		LENGTH * IMONITOR	Moderating	H2-3	−
		LENGTH * SANCTION	Moderating	H3-3	−
		NPROFIT * IMONITOR	Moderating	H2-4	−
		NPROFIT * SANCTION	Moderating	H3-4	−

Note: + represents a positive direction; - represents a negative direction between each factor and each dependent variable; SOLICIT represents Intensity of Solicitation; LCOMP represents Level of competition; PCOMP represents Public-Private Competition; IMONITOR represents Intensity of Monitoring; FMONITOR represents Fairness of Monitoring; REWARD represents Use of Rewards; SANCTION represents Use of Sanctions; GFECPTY represents Government Feasibility Capacity; GMACPTY represents Government Management Capacity; GFICPTY represents Government Financial Capacity; CFECPTY represents Contractor Feasibility Capacity; CMACPTY represents Contractor Management Capacity; CFICPTY represents Contractor Financial Capacity; LENGTH represents Contract Length (Duration); NPROFIT represents Type of Contractor; TRAIN represents Existence of Training Experience; and YEAR represents Years of Contracting Works in the Current Organization.

CHAPTER 4 RESEARCH DESIGN AND METHODOLOGY

As discussed earlier, there is a noticeable absence of empirical research on topics being examined in this study, particularly beyond the efficiency grounds based on cost savings through government contracting in general. Additionally, as detailed in the previous chapter, prior research on relevant topics has provided mixed evidence of the impacts of several factors on contracting performance in particular. In view of the fact that there are a relative scarcity of empirical research as well as a lack of valid evidence, the field of government contracting research may appear to call for the application of multiple research approaches. Amid this perspective, this study largely seeks to find enough knowledge and additional, significant insight in understanding of the factors affecting contracting financial performance, through an optimal research design.

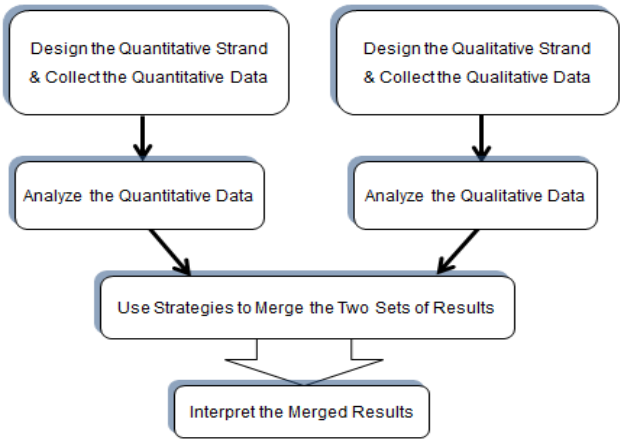
More specifically, this study is aimed to find multiple sources of evidence to answer main research question about how local governments can achieve financially effective contract management, accompanied with satisfactory financial performance—cost-effectiveness and financial accountability—during the entire contracting out process. Thus, this chapter provides explanations of the research design, focus, and methods in greater depth, focusing on data collection and analysis procedures. In addition, the chapter addresses pros and cons of each methodology and other related issues.

Research Design: A Mixed Methods Approach

Given the current government contracting setting, in order to better understand under which contextual conditions public funds can be spent in cost-effective, accountable, and transparent ways, methodologically, this study uses a mixed methods approach. A mixed methods is intrinsically one of the social science research procedures for collecting, analyzing, and further mixing or integrating both quantitative and qualitative data at a certain stage of the research process within a single study for the purpose of gaining a greater insight into research problem(s) or a phenomenon (Creswell, 2003; Creswell & Plano Clark, 2011; Tashakkori & Teddlie, 2003).

Among diverse mixed methods designs, a convergent parallel design, sometimes also known as concurrent Triangulation design (Creswell, Plano Clark, Gutmann, & Hanson, 2003), was chosen as the optimal research design of this study. Figure 4.1 displays basic procedures of the convergent parallel design.

Figure 4.1 Basic Procedures of the Convergent Parallel Design



Source: Adapted from Creswell & Plano Clark (2011, p.79)

In this design, two different sets of research methods—quantitative strand and qualitative strand—are conducted separately yet concurrently by researchers. For the analysis and interpretation, the researchers then directly compare and contrast quantitative statistical results with qualitative findings for corroboration and validation purposes, in other words, to obtain triangulated results about a single topic (Creswell & Plano Clark, 2011, p. 77). As outlined by Creswell and Plano Clark (2011), this design occurs

> [w]hen the researcher uses concurrent timing to implement the quantitative and qualitative strands during the same phase of the research process, prioritizes the methods equally, and keeps the strands independent during analysis and then mixes the results during the overall interpretation. (pp. 70-71)

By combining these two different approaches within one research design, it may entail much effort and expertise than expected in terms of data collection and analysis of each methodological approach. In an attempt to implement the quantitative and qualitative methods in a parallel strand and weight them equally, given somewhat contradictory results from the two data, researchers may have difficulty in interpreting them and face the situation which requires more follow-up research. Nonetheless, it seems that this research design has merit in several ways. First, a convergent parallel design enables researchers to find more reliable and critical evidence based on multi-level perspectives and heightened validity of results to support their research hypotheses and answer their research questions. In addition, it allows readers to develop more complete, contextualized understandings in the details of the situation.

Following the procedure of this mixed methods design, this study begins with two Web-based surveys to empirically test the proposed hypotheses illustrated in chapter 3 and answer the key research question. Next, qualitative data also collected

with semi-structured interviews to explore in-depth knowledge of the same topic being examined in the quantitative approach, as well as to capture more feasible strategies, conditions, and requirements that need to be in place for successful contract administration. In doing so, this study expects that once quantitative data is statistically examined, the qualitative data may validate or corroborate the quantitative results, or bring newer insights and deeper practical points into the research problem, regardless of similar evidence or not. During the mixed methods research procedure of this study, no intervention is conducted.

Focus of the Research: Target Population and Sample

This research focuses on local contractual relationships between government (agencies) and contractors in all contracted service areas that allow a combination for for-profit and nonprofit organizations at the local level. Therefore, as earlier mentioned, the unit of analysis of this study is public and private contract managers participating in a typical local government contract, regardless of specific service areas.

As noted in Chapter 1, the main reason why this study deals with the local-level government contracting is that historically, as the earliest innovators, local governments have long contracted out core public goods and services and the specific characteristics of local services are largely mundane routine based on pragmatic approaches (e.g., garbage collection, snow removal, and road maintenance) (Greene, 2002; Girth, 2010; Jang, 2006; Osborne & Gaebler, 1992; Savas, 1987). Another reason is that as local governments operate the closet to the citizens they service

compared to federal and state governments, they are technically responsible for the most extensive direct service delivery (Girth, 2010, p. 83). Yet, as Fernandez (2009) argued, in the case of a higher level of analysis deals with a governing body as unit of analysis (e.g., local government), it could be difficult to make a conclusion because interpretation of the results is more likely to be associated with ecological fallacy[1] (p. 76). Presumably, such challenge is partially due to that public organizations' contracting arrangements are highly influenced by not only hardly-expectable external environmental factors including political and economic situations and intergovernmental relations surrounding the local entities, but also intrinsic organization-level characteristics (e.g., organizational size, location, or culture). From this perspective, it seems to be reasonably appropriate that this study directly pays attention to a typical contract itself (called *public procurement* according to New Jersey Agency Procurement Laws) at the local level.

In the situation that local government contracts are being studied as the primary empirical vehicle of research, the target population of interest in this study should be local contract managers whose responsibility for management and performance of one or more contracts in all counties and municipalities, regardless of specific service areas.

Notably, this study is unique in that unlike previous studies focusing on general managers in local governance; it is only interested in understanding the perception of specialists engaged in government contracting, who are knowledgeable about the process, management, relevant policies and performance of local contracts,

[1] Ecological fallacy occurs when "drawing inferences at the individual level based on group-level data" (Diez-Roux, 1998, p.218), thereby resulting in the problems of internal and construct validity (Choi, 2009).

and further it considers a two-side representation of a contract as in previous studies (e.g., Amirkhanyan, 2010; Yang et al., 2009). As a consequence, in this study, the local contract managers can be divided into two groups by sector: (1) public contract managers and (2) private contract managers. It is assumed that each group is one of a small group of agency/organization representatives engaged in the contracting out process.

The former ones are local contract administrators (contracting officers) who provide technical assistance in the areas of contract preparation, control, monitoring, amendment and closeout, audit compliance, and service evaluation under the purview in public agencies. According to Cooper (2003), they may represent a procurement contracting officers in the integration phase, an administrative contracting officer in the operating phase, and a termination contracting officer in the separation or transformation stage and more specifically, they can be a project director, technical experts, cost accounting and auditing specialists, on-site or field inspectors, other monitoring officers, and liaison officers, at large, who ensure effective communications and prompt reporting (pp. 84-85). Aligning this perspective, as the main subject of interest, this study focuses on chief financial officers (CFOs), public purchasing officials (PPOs), public purchasing specialists (PPS) such as qualified purchasing agents (QPAs), acting township clerks, and acting directors and administrators who are working in purchasing department, procurement department, and sometimes finance department (in the absence of purchasing or procurement department/division) of each local government (counties and municipalities including cities, boroughs and townships).

As in Girth's research (2010, p. 85), this study views them as individual public manager who is generally a subject-matter-expert with responsibility to select, manage, and oversee contracts under their purview. Most of them may be more likely to have past experiences in the contracting process, training, and expertise for contracting out since they are able to be actively involved in a day-to-day management and performance of contracting out, including financial management, fiscal oversight, and monitoring. In a broad viewpoint, the composition of them can be represented on the list ranged from front-line managers, administrative personnel, to division heads (executive director, chief executive officer, or other top level administrator). This can be applied to the composition of private contract managers as well.

On the other hand, the latter ones are private contract managers who are working in the for-profit and nonprofit contracting organizations (contractors). They include all workers of procurement, professional, and service vendors responsible for the production and delivery of goods and services purchased by government agencies under the control and direction of the local governments and designed agencies.

When considered together, it can be reasonably expected that both public and private contract managers as two main stakeholders in on-going contractual interactions, despite a certain period, will have extensive knowledge about government contracting and as representatives of each sector, they, in their roles, are charged with administrative and cost efficiency, accountability, and integrity in the entire contracting out process. Meanwhile, they will be well aware of a variety of managerial challenges confronting themselves as well as opportunities available to them well in the workplace.

Through focused research, in turn, it seems that their two-side perspectives can make the research problem diagnoses more reliable and accurate. Specifically, they enable a researcher to find feasible results by the analysis that is most concerned with how local government can achieve higher levels of contracting financial performance and what strategies and conditions can help mitigate contractors' misuse of public funds that link to financial mismanagement and corruption. Overall, focusing on the two contract managers' practical viewpoints on the basis of substantial experiences and expertise appears to be worthy of scholarly attention.

In this study, the important choice made in establishing the sample frame for this study was to limit it to New Jersey local governments[2]. It is worth noting that the main data sources are drawn from local government contracting settings in the state of New Jersey for several reasons. In practice, serving a population of nearly 9 million (U.S. Census, 2014)[3], New Jersey consists of 21 counties and 565 municipalities as of 2014. By history, New Jersey has been involved in one of the largest metropolitan areas in the United States since a majority of the population lives in the counties surrounding New York City, Philadelphia, and the eastern Jersey Shore. In this context, New Jersey can be an interesting empirical study site because of the great political, economic, and demographic variation across the local entities.

In addition, as a strong-governor form of government, New Jersey has been consistently making visible executive efforts for statewide various contracts through Department of the Treasury, Division of Purchase and Property. According to the

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[2] The sample of this study deals with only general-purpose local governments with an exception of special-purpose local governments such as school districts.

[3] New Jersey, State & County QuickFacts, Available at http://quickfacts.census.gov/qfd/states/34000.html (Accessed July, 7, 2014).

Governor's budget[4] provided by the Office of Management and Budget, Department of Treasury, vendor purchases have increased from approximately 801 million dollars in Fiscal Year 1995 to 1,700 million dollars in Fiscal Year 2015, and even in October, 2012, as Hurricane Sandy approached the cost of New Jersey and caused historic devastation including loss of power and read property, Governor issued Executive Order 104 and state government established Sandy Recovery Division and has actively played a role in awarding various statewide emergency contracts. Along with such state-level government contracting works, local governments have not sparred from the active purchasing and procurement systems. Specifically, in accordance with New Jersey Local Public Contracts Law (N.J.S.A. 40A:11-1 *et seq.*), the governing body of the county and the municipality has statutory power to make purchases and enter into contracts awarded by a contracting agent for the provision or performance of goods and services. The contracted service areas largely fall into three broad categories: professional services, goods and commodities, and other general services that are nonprofessional per se. In addition, in support of public contracts equal employment opportunity compliance, state and local procurement practices consider small, disadvantages, and minority and women-owned businesses with some requirement exceptions. As such, it obviously seems that New Jersey local governments have undertaken numerous public goods and services contracted out in diverse service fields.

Lastly, another reason to choose New Jersey is due to the principal investigator (PI)'s limited time, cost, and relatively easier access to the sample within PI's reach,

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[4] See State of New Jersey, The Governor's FY 1995-2015 Budget – Detailed Budget, Available at http://www.state.nj.us/treasury/omb/publications/archives.shtml (Accessed February, 25, 2015).

despite unobservable heterogeneity and generalizability problems. In other words, it can be reasonably to conceive of obtaining data expeditiously from a proximal source directly accessible to the researcher, and therefore this study was confined to the state of New Jersey.

Quantitative Method and Data Collection

Data Collection Procedures

To test the hypotheses stated in Chapter 3, as previously noted, this study decided to send surveys to all public contract managers (who are working for contracting government) and private contract managers (as a contractor of contracting government) in the state of New Jersey. For collecting usable contact lists as the primary data of this research, the principal investigator (PI) directly searched for the samples for identifying survey recipients engaged in government contracting process. During this process, there is neither particular organizational support nor intervention for gathering relevant database and contact information.

First of all, for data of public contract managers, their contact information (here, e-mail address) were obtained from the official websites of all counties, cities, towns, townships, and boroughs in the state of New Jersey. In March, 2014, PI visited nearly 580 New Jersey local governments' official websites which were easily searchable. In the case of county and city governments which belong to relatively large jurisdictions among local entities, there are mostly searchable directory along with online contact listings of procurement officers such as qualified purchasing

agents (QPAs) and their relevant contact information were publicly open and easily available through their websites. On the other hand, in the case of municipal governments, generally known as small localities including townships and boroughs, the available contact information appeared to be relatively limited. Few of them even provided no contact list on their official websites, except for the direct, emergency contract information of municipal clerk, supervisor, or borough administrator.

Secondly, the data of private contract managers was also purposively collected, through the notice to bidders including past and current solicitations of request for proposals and qualifications as well as awarded contract information available to the public shown in each government website. Some of them were obtained from the database of New Jersey Selective Assistance Vendor Information (NJSAVI) (https://www20.state.nj.us/TYTR_SAVI/vendorSearch.jsp) which helps search registered vendors in New Jersey and then sorted out them by county and zip code. Moreover, in the absence of a procurement department, the information of contracting organizations was gathered directly from the city and county purchasing officials through e-mailed requests.

While identifying exact survey recipients with the directory of public and private contract managers, it is notable in advance that both contract managers in the sample can be a representative of each group but there is no confirmed information about that the two stakeholders of government contracting have been associated with the same contract. When collecting the e-mail address of local public contract managers, the principal investigator (PI) found that few chief financial officers in the sample have worked as purchasing agents and monitoring officers in their dual roles,

and in practice, he or she has played a role in managing various local contracts in two neighboring jurisdictions at the same time. In the case of county-level and city-level government, procurement division/departments tend to be operated independently from the division of Budget or Finance department in their governance structure. On average, there are several purchasing agents and experts more than at least two managers.

In addition, as Amirkhanyan (2010) pointed out, most contractors (e.g., national companies) tend to be operated either locally or across several neighboring jurisdictions. Thus, even though all local governments and their private contractors in the sample have been not engaged in the same contractual arrangements, this study does not necessarily limit the range of local contracts into the selected service contracted areas and further consider the independence of the observations in the sample by differentiating respondent's sector (public or private status) along with two different surveys (Amirkhanyan, 2011). As a consequence, it is reasonable to note that each group of the sample is proportionally represented in all locations with no bias of the result (Amirkhanyan, 2010, 2011).

Based on the process of data collection above, each targeted group of the sample was identified with an extensive attempt through searching and reviewing contract managers' information. In this way, the so-called, purposive (non-probability) sampling was conducted in this study in the purpose of capturing a broad range of typical local government contracts.

While developing the survey design and instrument, the researcher attempted to send the two draft surveys to the three procurement experts who have experiences

in government contracting for comments and identification of questions that were unclear, confusing, or not appropriate. Additionally, the draft of questionnaires was reviewed by dissertation committee members. This effort was due to not only heighten survey accuracy but also offset a decrease in nonresponse and other related bias. After correcting some potential problems identified in the pilot tests with two doctoral students of School of Public Affairs and Administration at Rutgers University, the final survey questionnaires were fairly refined in reasonable length and designed to be completed in about fifteen minutes to escape a low response rate.

Through the notice of Web-survey invitation, survey participants in the sample were recruited via e-mail from the researcher (see Appendix A). At this time, an informed consent form attached also was sent to the recipients in the sampling frame, which is similar to that of an e-mail invitation including, for example, introduction identifying the objective and significance of this study, the importance of respondent's participation, an estimated time that it will take to complete the survey, and confidentiality of the survey (see Appendix B). In this recruitment effort, the principal investigator (PI) used functional equivalents of motivating tools widely utilized in mail surveys to increase response rates, such as school letterhead and personalized signatures in a formal manner.

In April 15, the notice of approval letters was delivered to PI via e-mail from Rutgers University Institutional Review Board (IRB)[5]. Thus, during the third week and last week of April, 2014, the first round of two Web-based surveys was sent through *Qualtrics* to local public and private contract managers in the sample. The difference between the distribution dates of two surveys was attributable to that initial

[5] The Protocal IRB# is E14-440.

contact information of contractors mostly turned out currently not available sources. Even though some of them were collected from data provided by public contract officials, PI received a number of delivery fail messages with the e-mail addresses. It thus took few more weeks to gather more usable information regarding valid and deliverable addresses of private contract managers currently accessible and working for government contracts.

By distributing the survey URL, respondents were asked to click on the link provided that would direct them to the survey webpage hosted on *Qualtrics*. As a follow-up e-mail reminder, the second round of the surveys along with same questionnaires was sent restating the significance of the participant's input for this empirical study from May through June in 2014 (see Table 4.1).

Table 4.1 Survey Distribution Timeline

Sample	Distribution	Dates
Public Contract Managers	Initial survey invitation and survey sent to the sample via e-mail	April 16
	Second follow up letter sent to the sample via e-mail	May 13
Private Contract Managers	Initial survey invitation and survey sent to the sample via e-mail	April 30
	Second follow up letter sent to the sample via e-mail	June 4

Development of Survey Questionnaire

As the quantitative method of this research, this study employs two Web-based surveys, each of which has different respondents. The respondents of each survey include public contract managers and private contract managers, respectively. As previously explained, the principal investigator (PI) basically developed the

questionnaires based on the theories of government contracting and relevant previous studies and then revised them based on expert comments and pre-tests. In total, each survey instrument was composed of 25 questions for public contract managers and 21 questions for private contract managers, respectively, and mostly close-ended questions except for some items to be considered continuous variables (e.g., number of bidders on a contract, contract duration, and training hours).

The surveys were divided into a beginning section with a main question to capture respondents' perception of satisfactory contracting financial performance, a main experimental section along with a few general questions about the government contracting process, and a final section of basic demographic questions (see Appendix C). Next chapter will discuss each component of the questions in each group's survey in further detail.

Although two distinctive surveys were implemented separately, this study sufficiently designed them to ensure that survey questions and statements explicitly pertain to public and private contract manager's day-to-day work. The main content and feature of questionnaires is common to both public and private contract managers to answer the key question: how governments achieve cost-effectiveness and ensure financial accountability in their contracting out process? In other words, what are the main determinants of satisfactory financial performance in government contracting? Thus, it allows comparison of perceptions and opinions between the two groups. But interestingly, in each survey the way each group is asked is clearly distinctive. For example, for public contract managers, they were asked to answer a series of question beginning with "thinking about contracting in your agency, please choose the answers

below that best represent your views." By contrast, for private contract managers (contractors), they were asked beginning with "continuing to think about your organization's contracting opportunities with a government agency, please choose the answers below that best represent your view."

In addition, with respect to the questions regarding solicitation methods of the bidding process, while public contract managers were asked "how frequently does your agency use the following channels to release information on the bidding process for a typical contract?," private ones were asked "how frequently does your organization use the following channels to collect information on the bidding process for a typical contract?" Even though the formal expression to ask is different between the two groups, the main questions to capture variables and subsequent question items are same; in turn, this issue is not problematic.

Using the Web-based surveys, this study attempted to measure respondents' perceptions of the contracting financial performance (here, cost-effectiveness and financial accountability) and further some factors associated with the development of government contracting toward financially effective contracting out, accompanied with satisfactory financial performance, including *competition*; *monitoring*; *monitoring-based incentives*; *government's contract-management capacity*; *contractor's capacity*; c*ontract length (duration)*; and *type of contractor*. Through a series of questions about such issues in the survey, two-side participants were asked to choose the answers that best represent their views or to rate their level of agreement or disagreement about each item, except for some information (e.g., number of bidders

on a contract and contract duration) and demographic items (e.g., age, gender, and job title/position).

More importantly, as with Witesman and Fernandez's (2013) study, for public contract managers, this study asked him or her to limit survey answers to a single typical contract for the randomly selected, contracted service based on his/her experiences on government contracting. In doing so, this study seeks to produce a more representative sample of local government contracts with private contractors since it is likely that, each local government (or government agency) has more than one contractor on the same service type and even several contractors can in charge of one contract at the same time (e.g., in the case of subcontractors). With respect to the individual background-related questions, for instance, income, race, and educational level of managers, which can be deemed highly sensitive, were not considered in the survey.

Scholars have suggested that using Likert scale questions has been the most commonly used measurement in social sciences to reduce respondent's burden and increase reliability and validity of measurement (e.g., Dillman, Smyth, & Christian, 2008; Girth, 2010). Therefore, most items were designed to measure with five-point Likert scale questions which represent what the high scores indicate. The subjects' responses were automatically stored in the *Qualtrics* database that could be easily transformed into numeric data in Excel or statistical formats. As a result, during the survey process, this study was capable of recoding and maintaining the responses confidentially and reporting easily in aggregate form.

Preliminary Survey Results

After non-usable response data cleaning and adjustment for incorrect addresses and invalid ones due to retirements in two surveys, 662 public contract managers and 1013 private contract managers across the local governments of New Jersey are left in the final sampling frame, respectively. Surveys were sent via electronic mail to a convenience sample of two groups of contract specialists representing public and private sector. As of July, 31, 2014, nearly three months and half after the initial survey invitation, the survey yielded that of the 194 overall responses returned from public contract managers, 186 valid responses, with a response rate of 28.1 percent, whereas of the 289 overall responses received from private contract managers, 268 valid responses, with a response rate of about 26.5 percent.

Among these total valid responses from respondents (N = 454), approximately 41 percent were from public contract managers (n_1 = 186) and approximately 59 percent were from private contract managers (n_2 = 268). Due to the voluntary nature of Web-based surveys along with relatively low response rate and non-probability and self-selected (purposive) samples of this research, it is found that the respondents between public contract managers and private contract managers were not significant different in terms of selected characteristics.

Table 4.2 shows selected demographic comparison of sampled respondents on the basis of valid responses of two surveys. Most respondents of two sample groups were males (53% and 70%, respectively) than females (47% and 30%, respectively). A majority of them were apparently in their middle and elder ages (ranges from 45 to 54 and from 55 to 64) and their positions turned out mostly middle-level managers (28%

and 18%, respectively) and executive officers (36.3% and 54.1%, respectively) in their current organizations. But interestingly, in comparison, public contract managers in local governments were more likely to receive training (62%, average 17 hours) for government contracting as contract administrators than private ones (36%, average 10 hours), and further the average of their experiences working in contracting works (about 9 years) turned out longer than ones of private contract managers (about 8 years).

Table 4.2 Comparison of Sampled Respondents

Selected Characteristics	Public Contract Managers (Government)	Private Contract Managers (Contractors)
Gender		
Male	53%	70%
Female	47%	30%
Age		
Less than 25	-	1.9%
25-34	7%	10.8%
35-44	18.8%	20.8%
45-54	34.7%	23.9%
55-64	33.5%	38.1%
65 or older	6%	4.5%
Tenure (Average Years of Contracting Works)[1]	About 9 years	About 8 years
Position (Job Title)		
Front-line (street level) Worker	17.2%	7.4%
Administrative Personnel	15.5%	15.2%
Middle-level Manager	28%	18%
Executive Officer	36.3%	54.1%
Top-level Administrator/Department Head/CEO	3%	5.3%
Contract-related Training		
Experiences[2]	62%	36%
Average Training Hours[3]	17 hours	10 hours

Notes: (1) It was calculated based on approximate working years for contracting out in the respondent's current organization; (2) It was calculated based on positive answers of the question as to have you ever received regular training to support your role as a contract administrator; and (3) It was calculated based on approximate contract-related training hours respondents received in the last year.

Furthermore, Table 4.3 demonstrates the basic characteristics of private contract managers (contractors) focusing on the main service areas they provided and their types of ownership. They were also calculated based on overall valid responses of private contract managers. Notably, the following distinction is only applied to the side of private contract managers since for the sample of public contract manages, this study focused on only procurement division or purchasing department within each local government.

Table 4.3 Characteristics of Contractors in the Sampled Respondents

Selected Characteristics	Private Contract Managers (Contractors)
Service Areas of Current Organization[1]	
Public Safety and Legal Affairs	5.3%
Health and Human Services	9.3%
Education	5.7%
Environmental Protection	6.4%
Agriculture	3.2%
Administrative Services[2]	4%
Social Services[3]	2%
Transportation	13.4%
Housing and Economic Development	4.9%
Others	45.8%
Type of Contractor (Ownership)	
Nonprofit organization	23%
For-profit organization	77%

Notes: (1) This categorization was derived from the organizational structure based on New Jersey state-level public agencies and the portion of service areas was calculated based on the question about the main program activity provided by the respondent's current organization; (2) These areas largely include Banking and Industries, Treasury, Labor and Workforce Development, Corrections; and (3) These areas largely include Children and Families, Community Affairs, and Military and Veterans Affairs.

According to results in Table 4.3, sufficient variation is present of the service fields of the respondents' current contracting organizations. For example, private contract manager respondents identified their contracts as relating to others (45.5%),

transportation (13.4%), health and human services (9.3%), environmental protection (6.4%), education (5.7%), public safety and legal affairs (5.3%), housing and economic development (4.9%) and so forth. Of those contract managers who returned the survey, however, more than 70% respondents are working at for-profit organizations. It seems that nonprofit contract managers (23%) somewhat underrepresented in the sample. Nevertheless, diversified service areas of the respondents seem to contribute to the literature in that they help capture the richness of more feasible and practical strategies for effective local government contracting (Amirkhanyan, 2011).

Data Analysis Procedures

For the statistical analysis, first of all, the data from the questionnaires of two surveys were downloaded from *Qualtrics* and then exported to the statistical software in the corresponding format. All missing data were recorded as missing; no further data management was conducted. Based on total valid observations collected from the sample, this study provided variable specifications by constructing empirical measurement of each variable. Meanwhile, several moderating variables were also operationalized with multiplicative terms to test interacting effects. Next, by using STATA 13.1, descriptive statistics including central tendency (e.g., Mean, Min, and Max) and standard deviation of all variables were displayed. A correlation matrix of all variables was also provided to measure the strength and direction of the linear relationships between key variables in the model.

In order to test main hypotheses developed in the previous chapter, this study mainly utilized two statistical techniques: (1) a principal component factor analysis and (2) a multiple regression analysis – Ordered Logit (OLOGIT) regression and Ordinary Least Squares (OLS). Among all variables, some variables having multiple Likert-type ordinal indicators were factor analyzed to develop the measure of an index. During this process, this study tested the reliability of the scales for the variables using Cronbach's alpha (α) coefficients, which help check the minimum acceptable threshold (above 0.7). Also, before determining the final empirical model for the analysis, this study carefully performed a set of tests for multicollinearity using the variance inflation factors (VIF), and robustness to check potential heteroskedasticity in the error components of the model utilizing clustered robust standard errors (if applicable). More specifically, both White test and Breusch-Pagan test were performed for checking the presence of heteroskedasticity. Furthermore, several tests to correct potential methodological problems, for example, correlation, multicollinearity, normality of residuals, and model specification, will be employed.

Finally, two surveys were tested by the proposed model using OLOGIT regression and OLS regression, seen as extensively used in the social sciences research. In addition, following moderating effects of several independent variables as in the empirical model, this study added some interaction terms (integrated measures) to the variables, thereby controlling potential multicollinearity (overlapping) issues in the model and producing more rigorous estimation results. Overall, this methodological process seems to be suitable to estimate the direct and indirect effects of key factors on two measures presenting perceived contracting financial

performance (here, cost-effectiveness and financial accountability) in the local government contracting process. For the data measurement, analysis, and empirical findings will be discussed in further detail in the next chapter.

Pros and Cons of Web-based Survey

In the public administration and management field, using a survey as the primary method of research has been common and the survey itself has appeared to be one of the important data collection and measurement tools to examine research problems or answer research questions. Sometimes, researchers tend to use a combination of traditional mail survey and Web survey. Yet, in this study, only Web-based surveys were developed as a quantitative method and conducted to test empirical model described in the previous chapter. As the current Internet user population is gradually beginning to resemble to overall population of the Unites States, it is not new to witness the rapidly growing interest in Web-based surveys; in turn, researchers can deliver the survey content in a standardized way using self-administered methods and then collect data from potentially thousands of respondents, and the respondents can easily access to the survey and answer survey questions even though they are in distant locations (Couper, 2000; Wright, 2005). According to Fricker and Schonlau (2002), Web-based surveys are technically much faster and easier than other conventional survey modes (e.g., telephone survey and mail survey) because they help save time for the return delivery of the completed questionnaire. As such, they can lead to relevant cost savings (e.g., postage and printing costs) and less effort to administer the survey.

Notably, through *Qualtrics* system, this study could manage invalid, undeliverable e-mail addresses and the multiple responses from same participants. Once the e-mail list was imported to the system and saved in the panel, *Qualtrics* remembers systematically the participant's e-mail address along with their Internet IP addresses. Moreover, through such simplified system, researchers can determine the time of day the survey is opened and closed, and even control multiple completions by the same respondent or passing the survey along to others to complete before exporting the result. In this study, thus, such uncertainty over the validity of the data and measurement error could not be minimized.

Despite these advantages, Web-based surveys entail several challenges that researchers and participants can encounter during the process. First of all, Web-based surveys generally result in a lower response rate than mail surveys since the participants are less willing to complete a questionnaire (called non-response error/bias) and they may drop out the survey depending on the design of the survey (e.g., the entire length of survey questions or loading time to proceed) or sometimes the existence of financial incentives (e.g., a prize or gift certificate) (Couper, 2000; Wright, 2005). In addition, coverage error may arise from the fact that some of the framed sample cannot answer unless they are easily access to or use of the Web (Internet) in their working environments and even others (sometimes through their computer systems' censured system) are more likely to ignore the Web-based survey and e-mail invitation treating them as a spam.

According to Couper, Blair, and Triplett (1999), it was found that those who are disposed toward adopting new technology to a greater degree, such as the younger,

males, and the more educated, are more likely to be over-represented in the Web survey than in the mail survey. Admittedly, it has been widely recognized that Internet-based surveys using only samples of Internet users do not generalized to the general public. But, in this study, this challenge can be reduced since it is likely that, public and private contract managers are sufficiently computer literate and have both regular and easy access to the Internet; thus, it can be reasonably expected that the survey recipients can facilitate responding to the survey in the workplace.

More importantly, using surveys for the data collection naturally induces validity and reliability issues (e.g., nonresponse bias). Empirical research dealing with the survey data based on a (probability-driven) random sampling tends to provide a comparison of survey respondents and non-respondents with nonresponse bias test. This test is to see how significantly these two groups can be similar in terms of the common standard, for example, in mostly socio-demographic background (Wright, 2005), as well as how close the sample can estimate to the true value of the population parameter. Like this study, however, in an instance where the self-selected purposive samples in two Web-based surveys were not selected by a random sampling but a convenience (non-random) sampling, comparing both groups (here, respondents versus non-respondents) is very difficult to measure, and currently little is known about the information on nonresponse (Couper, 2000). Some scholars have suggested that the sample in a Web-based survey cannot be seen as random sample since there is no feasible method for selecting random samples from general e-mail addresses (e.g., for more information, see Gunn, 2002; Zanutto, 2001). Couper (2000) further stated this issue,

> … If an open invitation is issued on a Web portal to participate in a survey, the denominator of those eligible to participate is typically not known, and therefore the nonresponse rate is unknowable. This means that the measurement or evaluation of nonresponse error is tractable only in cases where the frame and
> the chance of selection are known (in other words, probability-based surveys). (p.473)

Lastly, the participants of Web-based surveys may face with concerns about security on the server and privacy issues. As previously noted, all responses were automatically saved in the *Qualtrics* system, thus, during the data collection, all participants has been protected by numerically coding each returned questionnaire, publishing aggregate results only, and keeping respondent's identity, that of his or her organization, and responses confidential as in informed consent form of each survey.

Qualitative Method and Data Collection

Data Collection Procedures

For the qualitative approach of the topic, like the quantitative part above, a purposive sampling method was utilized in this study. In terms of recruitment of participants, this study initially used purposive sampling to identify the sampling frame from the sample collected for Web-based surveys and then employed snowballing sampling due to lack of voluntary participation. By doing so, it was possible to ensure that only individuals familiar with the contracting out process that this study mainly focused on were interviewed as in previous studies on contracting out (e.g., Girth, 2012; Lambright, 2009). Such sampling methods were thus expected not only to gain access to people who are able to answer specific research questions

because of predetermined criteria, such as their knowledge, experiences, or specific characteristics, but also to result in greater depth and richness of the data collected (Teddlie & Yu, 2007).

In order to encourage a range of people from the general population to nominate, the importance of this research was electronically advertised by using the e-mail lists of public and private contract managers (see Appendix D). As a result, it was possible to recruit voluntary participants receiving the e-mail invitation or some of them were able to forward the e-mail to their colleagues who have been engaged in the contracting out process and were willing to participate in this study. Particularly, with regard to the recruitment efforts of private managers in contracting organizations (nonprofit or for-profit firms), it should be noted that this study attempted to diversify the service fields as with Amirkhanyan's (2011) research to mitigate the possibility of overrepresenting certain service areas.

Similar to the survey procedures, an informed oral consent form (here, verbal consent document for participation) was developed and approved by IRB, and then sent to participants via e-mail in the purposive sample to request an interview (see Appendix E). However, unlike quantitative method of this research, once the invitations to participate are agreed in a certain degree, the potential interview participants received the interview protocol (questions) beforehand, if necessary, prior to the schedule to conduct the interview. Through a follow-up email, they were informed that their interviews will be electronically recorded using either videotape or audiotape and transcribed verbatim (see Appendix D). Next, by sending additional follow-up e-mail to make the final arrangements for the interview, potential

interviewees who agreed in participation were asked to set up a meeting for interviews to schedule their convenient time and place. Needless to say, all eligible respondents participated voluntarily, based on the first willing to participate in this study.

The principal investigator (PI) conducted semi-structured in-person interviews with public and private contract managers since the aim of this study was basically to compare two different sector participants' practical and critical viewpoints on factors affecting contracting financial performance relying on their wide ranges of experiences. Both contract managers were provided opportunities to identify key roles of the contracting our process and further explain in detail the current government contracting our process in achieving higher levels of cost-effectiveness and financial accountability. They were interviewed separately in individual interviews on Rutgers campus or in the participant's office whichever more comfortable for the participants. The length of individual interviews ranged from approximately 25 to 60 mins and the average was about 30 mins.

At the beginning of each interview, the confidentiality of the individual being interviewed was guaranteed. Without asking any private information, all interviews were conducted in an open-ended style that encouraged the free flow of ideas. In other words, participants were free to not answer any of the questions posed about the organization or opt out of the interview at any time. Detailed notes were taken during the interviews and they were also transcribed later.

Development of Interview Questionnaire

The semi-structured interview questions were developed by the principal investigator (PI), and then they were reviewed by two experts with experience in government contracting out process. Consistent with the quantitative method, pilot testing was conducted with two volunteers (two doctoral students of School of Public Affairs and Administration at Rutgers University). And then the order of the protocol questions was revised slightly and additional probing questions were developed (Creswell & Plano Clark, 2011; Ivankova & Stick, 2007).

In the final Interview Protocol, all interview questions were open-ended and required an affirmative or a negative response along with some explanation as in Amirkhanyan's (2010) qualitative research. They include four large main questions and eight probing questions in total. It was designed that probing questions will not be asked if participant readily addresses certain issues when asked main questions (see Appendix F). Topics discussed in the interviews with public and private contract managers mainly included the general contracting out process, challenge (barrier) and advantage associated with a typical agency/organization contract, environment, and financial (monitoring) system that local public agencies have used. In addition, the respondents were asked to recommend techniques or requirements for financially effective contract management linked to satisfactory financial performance. More specifically, the interview questions (mostly opinions) were about ways to achieve cost-effectiveness (total cost savings) and to combat contractor's opportunism and fiscal corruption.

Preliminary Interview Results

All participants answered all interview questions. During the interview, the subjects were not asked to present their race, education level, and income level. A total of 23 semi-structured interviews were conducted from June 2014 to February 2015 with employees from 12 local government agencies and 11 contracted providers (here, 6 nonprofit organizations and 5 for-profit organizations).

Table 4.4 provides a breakdown of the interview participants' selected characteristics, mostly about basic demographic profile. For comparison purposes between the public and private sector, the characteristics of interviewees as private contract managers were constructed based on the sum of for-profit contractors and nonprofit ones. In the case of public contract managers, the majority of government agency employees who were interviewed were male (67%), average working years for contracting out in their agencies turned out 15 years, and they held executive-level administrative positions within their respective organizations. On the other hand, the majority of the private contractors including for-profit and nonprofit workers who were interviewed were female (56%) and their average working experience on government contracting was approximately 10 years. Most of them held middle-level and executive-level administrative positions within their current organizations. More specifically, while interviewees who are working in nonprofit organizations as a contractor included 60 % of female and 40% of male and their average working years was about 8.5 years, those who are working in for-profit organizations turned out the same percentages of female (50%) and male (50%) and they have worked in current organizations for about 14 years on average.

Table 4.4 Characteristics of Interview Participants

Selected Characteristics	Public Contract Managers (Government)	Private Contract Managers (Contractor)
Gender		
Male	67%	44%
Female	33%	56%
Tenure (Average Years of Contracting Works)	15 Years	10 Years
Position (Job Title)		
Front-line Worker	-	-
Administrative Personnel	-	-
Middle-level Manager	27%	40%
Executive Officer	64%	50%
Department Head/CEO	9%	10%

Data Analysis Procedures

As noted above, the Interview Protocol included open-ended yet directed questions in a flexible format. During the semi-structured in-person interviews, with the permission of interviewees, the content of interviews was tape-recorded and hand-written (if necessary). Particularly, hand-written notes were helpful to match audio-taped interview files in cases interviewees spoke too fast and/or technically their statements were not clearly heard. Besides, it should be noted that each recorded interview was phrased and typed in a written documentary form by the third person hired by the principal investigator (PI) to avoid any bias during the analysis phase. On average, to complete each interview transcript based on tape-recorded files, approximately one hour was taken by the audio typist. After that, each transcribed verbatim was checked again by PI who conducted the interviews for accuracy and errors. It is followed by analysis of each interview to identify patterns and key themes based on research questions and theory.

For the interview data analysis, a thematic analysis approach was employed in this study. The interview data were entered, managed, and analyzed using a qualitative software program, NVivo 10, which can generate and confirm themes from the analysis. Arguably, it was helpful to define connections between data and gain a closer look at what participants think and suggest (Charmaz, 2006).

Following Braun and Clarke's (2006) guidelines[6], the principal investigator (PI) conducted a thematic analysis in order to identify, analyze, and report on main patterns (themes) within the interview data. While analyzing the data, this study first classified the contract managers' responses by sector (public versus private), and then compared each manager's response on the ground of the predominance of themes embedded in this study, and finally attempted to integrate it by creating a table that contained multiple key themes. More specifically, based on conceptual framework in the literature, research question, and main purpose of this study, PI began to construct several theoretical nodes as an initial analysis. Such assigned nodes or the list of relevant codes were used to cluster responses and to help identify which certain factors are prevalent. With options of recoding and of combining (or separating) nodes, the nodes was revised and augmented through an inductive process; in turn, potential themes and subthemes were created, classified, and defined by PI as with Lambright's (2009) study. In other words, higher or lower response patterns within the data were found depending on the relative frequency of word (or word groups) that seems to be matched with each given theme. They showed that there was a high level of agreement

[6] Braun and Clarke (2006) recommended six steps in thematic analysis as follow: (1) step 1: data familiarization; (2) step 2: generating initial codes; (3) step 3: searching for themes; (4) step 4: reviewing themes; (5) step 5: defining and naming themes; and (6) step 6: producing the report. Source: available at http://blog.qsrinternational.com/organise-the-messiness-of-qualitative-analysis-demonstrating-the-audit-trail-in-nvivo/

or disagreement between public and private contract managers (two sectors) in terms of the relative emphasis given to each theme.

By clustering contract managers' responses, the relationships between themes and subthemes were visually represented in the (thematic) tree maps along with word clouds using NVivo 10. To increase confidence and overcome errors in the interpretation of results, PI did repeat this process at least twice, including retrieving from archive of interview transcripts), coding, counting the relative and absolute frequency of the assigned words, and developing themes and subthemes (Chi, 1997).

Pros and Cons of Semi-structured Interviews

Charmaz (2006) highlighted that "[i]nterviewers can sketch the outlines of the person's views by delineating the topics and drafting the questions" (p. 26). Indeed, face-to-face interviews can support non-response item in the survey as well as minimize respondent misinterpretation of questions and skip patterns (Fricker & Schonlau, 2002). In particular, unlike structured interviews with closed-ended questions, unstructured (or semi-structured) interviews are appropriate when the interviewer has limited knowledge about a topic or wants an insider perspective, allowing hypothesis testing and the quantitative analysis of interview responses (Leech, 2002). More specifically, the open-ended questions along with probing ones in semi-structured interviews are typically asked of each interviewee in a systematic and consistent order, but the interviewers are allowed freedom to probe far beyond the answers to their prepared standardized questions (Berg, 2009, p. 107). It may be with follow-up questions for clarification. As such, semi-structured interviews enable

researchers not only to gain the depth of detail from respondents, given interviewees are engaged in a realistic, honest conversation and discourse on the topic, but also to allow for some flexibility and deviation from the protocol.

Generally speaking, however, unlike quantitative data collection and analysis, qualitative ones including in-person interviews are technically time-consuming and complicated. For instance, if a digital recorder is used, the interview should be later be transcribed in the traditional fashion or downloaded into a computer and then converted to text by software program (Berg, 2009, p. 123). In addition, unanticipated and disconcerting events may occur prior to and during interviews. As suggested by Leech (2002), semi-structured interviews always do not provide a very consistent source of reliable data that can be compared across interviews. Roulston, deMarriais, and Lewis (2003) view that such challenge may arise due to (1) unexpected participant behaviors, (2) consequences of the researchers' own actions and subjectivities, (3) phrasing and negotiating questions, and (4) dealing with sensitive issues (p. 648).

CHAPTER 5 QUANTITATIVE DATA ANALYSIS AND RESULTS

This chapter presents the findings from two surveys with local public contract managers and private contract managers. As noted in the previous chapters, this dissertation basically aims to understand under which conditions local governments can achieve satisfactory contracting financial performance. Therefore, this study chose to develop self-reported surveys for empirically testing hypothesized relationships between organizational and contextual factors and contracting financial performance presented in Chapter 3.

Notably, this study surveyed two main stakeholders in local contractual relationships – public contract managers and private contract managers. The two surveys asked a number of questions about current local contracting out process, including the bidding process and monitoring and evaluation of contract performance along with rewards and sanctions. These questions were developed to explore and compare respondents' opinions and perceptions that were hypothesized to be potential correlates or determinants of higher level of contracting financial performance. The survey items were chosen by the researcher based on the contracting out literature (e.g., Fernandez, 2007, 2009; Girth, 2012) and a review of the earlier survey on similar topics conducted for the 2007 International City/County Management Association (ICMA) alternative service delivery survey. By doing so, this study might not only find reliable evidence on a set of determinants affecting contracting financial performance, but also explore whether or not there is variance in contract managers' perceptions toward financially effective contract management by sector.

In an effort to clarity such objectives of this research, this chapter deals with quantitative data analysis and measurement and reports empirical results along with their interpretations. Specifically, the chapter first elaborates a model specification for data analysis and then explains the measurement of each variable applied in the empirical model. In addition to such attempt of variable specification, the next discussion turns to the descriptive statistics for key variables and a series of multivariate statistical technique – Ordered logistic (OLOGIT) regression and Ordinary least squares (OLS) regression analyses. While applying each statistical model and interpreting the findings of each model, results are reported and more refined explanation is offered.

This chapter proceeds in four parts: First, a basic empirical model predicting contracting financial performance will be specified. Second, variable specification, data analysis, and results based on a survey of public contract managers will be discussed. Third, variable specification, data analysis, and results from another survey of private contract managers will be explained. Lastly, the two self-rated measures of contracting financial performance reported by contract managers in two different sectors will be statistically compared and analyzed with a discussion of the empirical findings and their implications in the context of government contracting management and performance.

Basic Empirical Model

For empirical analyses to test hypothesized relationships between diverse organizational and contextual factors and perceived contracting financial performance

in local government contracting settings, the model of this study to be estimated is as follow:

$$Y = f\,(C, M, I, G, T, L, N, D)$$

where *Y* represents perceived contracting financial performance (here, perceived cost-effectiveness and perceived financial accountability); *C* represents vector of competition variables (intensity of solicitation, level of competition, public-private competition); *M* represents vector of monitoring variables (intensity of monitoring methods and fairness of monitoring methods); *I* represents vector of monitoring-based incentive variables (use of rewards and use of sanctions); *G* represents vector of government capacity variables (government feasible capacity, management capacity, and financial capacity); *T* represents vector of contractor capacity variables (contractor feasible capacity, management capacity, and financial capacity); *L* represents contract length (duration); *N* represents type of contractor embedded in a typical local contract (nonprofit organizations versus others); and *D* represents vector of demographic variables (public and private managers' age, gender, training, and year of contracting experience).

Each component of the model is discussed above. In addition, the overall operational definitions for all research variables are presented in Table 5.13 and Table 5.35 below. Theoretical sources to construct survey items for each organizational and contextual factor (independent variables) as well as control variables are also addressed. As previously described, it should be noted that in this study, all index variables were averaged values for more than one ordinal response generated from the five Likert scale. Other variables were measured by categorical rating scales,

continuous, or dummy variables. In particular, some of control variables were recorded in the form of a binary (dummy) variable based on the original survey response (e.g., gender and training experience).

First Stage Analysis: Public Contract Managers' Perceptions

This study mainly relied on a measure asking managers whether and how local governments achieve satisfactory contracting financial performance in their government contracting out process. Accordingly, before determining the estimation model for the empirical analysis, this study created a set of variables measuring different aspects of organizational and contextual factors between a government agency and contractors. In other words, this study attempted to operationalize measurement of each variable to test the hypotheses.

Dependent Variables

There might be much debate in the literature about the best ways to measure contracting performance and identify certain scopes of the performance, but the literature has continuously suggested that contracting performance is neither easily measure nor identified by one aspect. Amid this perspective, previous studies have chosen a variety of contracting performance indicators, such as cost, service quality, continuity, legal compliance, customer satisfaction, or timeliness, in their empirical research (e.g., Fernandez, 2007, 2009); and have argued that a manager's perspective on organizational effectiveness or performance can play a peripheral role in measuring performance (e.g., Brewer, 2006; Stazyk & Goerdel, 2011). As such, the dependent

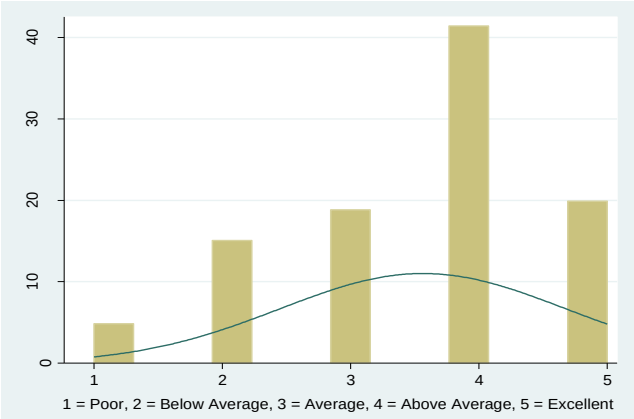
variables in the present study were obtained from survey questions asking managers how financially effective a typical contract in their agency/organization is at accomplishing its core areas relevant to the use of public funds. The survey results of the dependent variables are expected to help not only capture main stakeholders' perception of financial performance encountered in their contractual relationships, but also indicate whether the contractor is indeed performing poorly or mismanaging financial resources or not in certain areas.

As explained earlier, this study speculates that contracting financial performance should be assessed by multiple indicators; in turn, it has chosen to use two financial outcome measures—cost-effectiveness and financial accountability—based on theoretical perspectives discussed in Chapter 2. Admittedly, cost-effectiveness seems to be one of the widely known and used concepts for contracting performance in the literature (e.g., Amirkhanyan et al., 2011; Yang et al., 2009), whereas financial accountability seems to be underdeveloped issue in the contracting out literature, and to embed relatively less straightforward and more complex aspects. This study thus focused on the two individual dependent variables in different ways in the analysis. The two variables entail substantial differentials in the stages of measurement specification and empirical model using statistical tests.

(1) Cost-effectiveness For the main dependent variable representing contracting financial performance, this study directly paid attention to *cost-effectiveness* (known as cost savings) which explicitly reflects the extent to which a typical contract leads to total cost savings in the contracting out process. This measure has been identified as an important determinant as well as financial outcome of contracting out in the

literature (e.g., Brown & Potoski, 2003a; Hirsch, 1995; Savas, 2000); in turn, it has been frequently used as one of the contracting performance in prior empirical studies (e.g., Brudney et al., 2005; Fernandez, 2007, 2009; Hodge, 1998; Savas, 2000; Yang et al., 2010). Following this research trend, *cost-effectiveness* (denoted as Y1) is measured using a response to the following ordinal survey indicator: "Through a typical contract, how would you rate financial performance your agency can achieve in the area of total cost savings?" The response categories ranged from 1 = *poor* to 5 = *excellent*. Approximately 5% of respondents answered "*poor*"; 15% answered "*below average*"; 19% answered "*average*"; 41% answered "*above average*"; and 20% answered "*excellent*." In other words, about over 60% of the respondents positively indicated that their organization (here, government agency) is more likely to achieve satisfactory cost savings when public goods and services are contracted out. As can be shown in Figure 5.1, the responses on this variable are distributed in a nearly normal fashion around a mean of 3.565. In addition, the standard deviation of Y1 is 1.114 with 186 observations as shown in Table 5.14.

Figure 5.1 Public Contract Managers' Perceptions of Cost-effectiveness



(2) Financial Accountability As another main dependent variable in this study, *financial accountability* variable (denoted as Y2) was measured using responses to the question: "Through a typical contract, how would you rate financial performance your agency can achieve in the following areas?" Respondents answered the following five items on 5-point scales, where 1 = *poor* and 5 = *excellent*. The areas include:

- Cost control in the proper use of financial resources
- Managing fraudulent or criminal risks
- Protection of assets against financial corruption
- Use of public funds according to public purposes
- Transparent financial reporting/billing for goods and service delivery

Each item (area) above was developed specifically for this study. The literature has contended that contracting out tends to increase corruption and unethical behaviors of service providers over time, for example, fraudulent, criminal, or improper use of public funds, including abuse (mismanagement); conflicts of interest; and waste (cost overruns) at large (e.g., Auger, 1999; Donahue, 1989; Fernandez, 2007; Mulgan, 1997; Nightingale & Pindus, 1997; Savas, 2000; Stein, 1990; Van Slyke, 2003, 2009). Presumably, in government contracting settings, financial accountability may reflect the way of managing financial resources to counter corruption in general, and further encompass transparency, integrity, honesty, and legal compliance in the use of public funds in particular. Notwithstanding such significance of financial accountability in the government contracting process, little research has empirically conducted this

sensitive topic, as noted earlier in previous chapters. To the best of our knowledge, there are a few exceptional studies conducted by Fernandez (2007, 2009). His empirical studies appeared to pay attention to this accountability concept in a similar vein, not only by considering responsiveness to the government's requirements and compliance with the law as part of the overall contracting performance, but also by viewing them as key forms of contractor accountability (Cooper, 2003; Fernandez, 2009). In addition to these two dimensions, he developed one index variable on the overall contracting performance including actual cost, quality of work, timeliness, customer satisfaction and so forth.

Recognizing that there is a lack of scholarly research, this study borrowed the concept of financial accountability widely cited in the public administration literature and slightly modified it to construct diverse dimensions of financial accountability in the specific context of government contracting, by using previous scholarship (Brinkerhoff, 2003; Kearns, 1995; Mulgan, 1997) and a report of the Asian Development Bank and Organization for Economic Cooperation and Development (2006). By doing so, the five items above were finally characterized to capture the dimensions of perceived financial accountability as a proxy for contracting financial performance in the present study. Higher scores on these five scales indicated that the respondent's organization (here, government agency) is more likely to achieve higher levels of contracting financial performance in terms of cost control, managing fraud risks, protecting assets against corruption, using public funds according to public purposes (interests), and transparency; low scores indicated that the organization is less likely to do that.

As presented in Table 5.1 and Table 5.2, respondents mostly reported positive answers for each individual item indicating financial accountability variable. Interestingly, the highest rating of the contracting financial performance reported by respondents in the sample was about cost control in the proper use of financial resources. For this item, about 68% of the respondents answered with a 4 or above (*above average* and *excellent*, respectively). With respect to both transparent financial reporting/billing for goods and service delivery and use of public funds according to public purposes, approximately 65% and 64% of the respondents, respectively, indicated higher values including *above average* and *excellent*. Next, Yet, in terms of relatively sensitive items regarding management of fraudulent or criminal risks and protection of assets against financial corruption, nearly 58 % and 55%, respectively, of the respondents believed that the financial performance has been highly achieved (*above average* and *excellent*). In addition, across five items included in the survey, mean responses ranged from a high of 3.446 to a low of 3.715 (see Table 5.2). To get a better sense of the distribution of responses about financial accountability variable, this study illustrated a histogram for an index that was created from the aforementioned items (observation = 186, alpha score mean = 3.602) (see Figure 5.2 and Table 5.14). While all the means of each individual item are somewhat greater than 3.5, the distribution of responses about this variable was presented in a normal way as shown in Figure 5.2.

Table 5.1 Perception of Individual Items on Financial Accountability Variable

Survey Items (Financial Accountability Variable)	Poor	Below Average	Average	Above Average	Excellent
Cost control in the proper use of financial resources	13 (6.99)	24 (12.90)	22 (11.83)	85 (45.70)	42 (22.58)
Managing fraudulent or criminal risks	9 (4.84)	34 (18.28)	36 (19.35)	65 (34.95)	42 (22.58)
Protection of assets against financial corruption	9 (4.84)	36 (19.35)	39 (20.97)	67 (36.02)	35 (18.82)
Use of public funds according to public purposes	15 (8.06)	25 (13.44)	27 (14.52)	55 (29.57)	64 (34.41)
Transparent financial reporting/billing for goods and service delivery	10 (5.38)	28 (15.05)	27 (14.52)	61 (32.80)	60 (32.26)

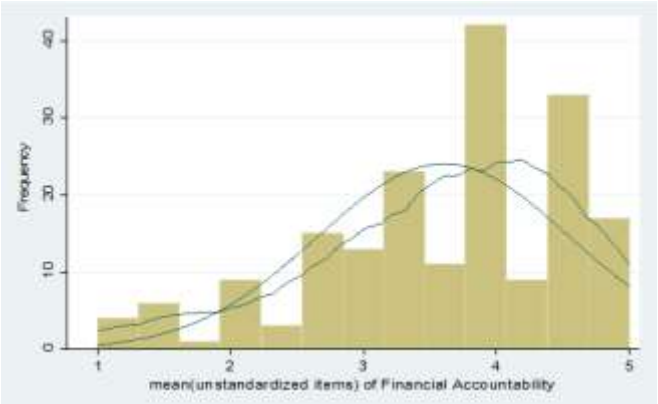
Note: Numbers represent frequency of the responses of each survey item and percentages of the responses in parentheses.

Table 5.2 Descriptive Statistics of Individual Items on Financial Accountability

Survey Items (Financial Accountability Variable)	Obs	Mean	SD	Min	Max
Cost control in the proper use of financial resources	186	3.640	1.169	1	5
Managing fraudulent or criminal risks	186	3.522	1.168	1	5
Protection of assets against financial corruption	186	3.446	1.144	1	5
Use of public funds according to public purposes	186	3.688	1.290	1	5
Transparent financial reporting/billing for goods and service delivery	186	3.715	1.217	1	5

Note: Obs means observation in the sample; SD refers to standard deviation.

Figure 5.2 Mean Distribution of Financial Accountability Variable



A composite scale was created after running principal component factor analysis along with varimax rotation methods in Stata 13. The factor analysis resulted in one component of the overall financial accountability, with an eigenvalue of 3.150 and about 63 percent of the variance in the five items, all other components had eigenvalues of less than 1.00. Table 5.3 presents the factor loading matrix. All five indicators had positive factor loading of .70 or higher on this component, without any high uniqueness. Specifically, the produced factor loadings for the five measured variables are "cost control in the proper use of financial resources" (0.709), "managing fraudulent or criminal risks" (0. 811), "protection of assets against financial corruption" (0.825), "use of public funds according to public purposes" (0.819), and "transparent financial reporting/billing for goods and service delivery" (0.800). It is worth noting that a reliability test of these five indicators yielded a Cronbach's alpha (α) coefficient of 0.852, which is a high degree of internal consistency among items. Given these results, the five items clearly could be integrated into one variable, in turn, one index variable (Y2) was constructed by averaging the values of those items.

Table 5.3 Factor Analysis of Financial Accountability Variable

Component(s)	Eigenvalue	Percentage of variance
1	3.150	.630
Indicators		Factor loadings
Cost control in the proper use of financial resources		0.709
Managing fraudulent or criminal risks		0.811
Protection of assets against financial corruption		0.825
Use of public funds according to public purposes		0.819
Transparent financial reporting/billing for goods and service delivery		0.800

Independent Variables

Turning to the independent variables for empirical analyses, this study focuses on 15 independent variables to capture the hypotheses outlined in the conceptual framework. In this study, the main independent variables are categorized into seven groups at large: (1) competition, (2) monitoring, (3) monitoring-based incentives, (4) government capacity, (5) contractor capacity, (6) contract duration (length), and (7) type of contractor. In order to examine the direct or indirect (moderating) impacts of those factors on contracting financial performance in the context of perceived cost-effectiveness and financial accountability, this study specified each measurement of the independent variables of interest as follows.

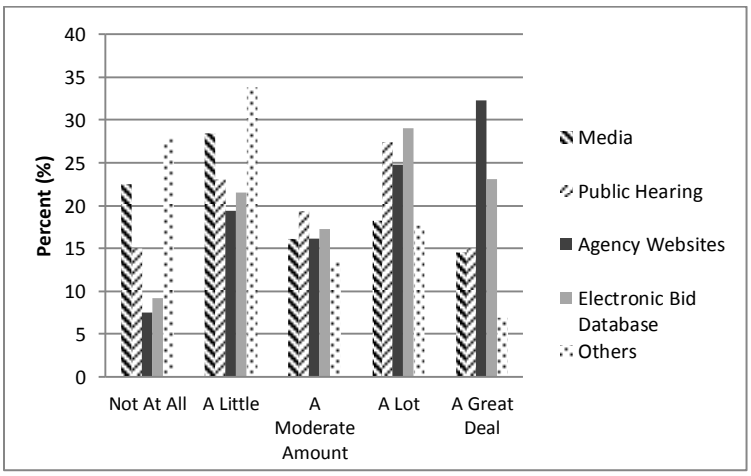
(1) Intensity of Solicitation in the bidding process Although public agencies' solicitation (advertisement) efforts to attract a number of potentially competent (or ideally the most capable) contractors into the government contracting setting have not been actively examined in the literature; scholars have envisioned the solicitation for bids as an antecedent of market competition in the bidding process (Amagoh, 2009; Brown et al., 2006; Girth, 2012; Hodge, 1999; Johnston & Girth, 2012). In particular, as Johnston and Girth (2012) and Shetterly (2000) contended that in addition to a wide range of solicitation channels to release related information, it might be important for public managers to invest enough time to find vendors since local government has been known as "thin" markets *per se* due to lack of sufficient competition and a dearth of bids (Girth, 2012).

Based on these perspectives, this study focused on the following survey question regarding the intensity of solicitation in the bidding process: "On average,

how frequently does your agency use the following channels to release information on the bidding process for a typical contract?": (1) media (e.g., News Paper, TV); (2) public hearing; (3) agency websites; (4) electronic bid database; and (5) others (e.g. Union, Professional Associations). Respondents were asked to report their opinion with a 5-point Likert scale (1 = *not at all* through 5 = *a greater deal*), where high values suggest that their organizations (here, government agencies) are more likely to spend time and efforts in finding potential contractor(s) for a typical contract, and low values indicate that the organizations are less likely to do that.

As Figure 5.3 displays, among 186 observations in total, public contract managers (and their public agencies) are more likely to use agency websites (*a lot*: nearly 25% and 32%, respectively) and electronic bid database (*a lot*: nearly 29% and 23%, respectively) to release bidding information to solicit potential contractors, compared to other channels.

Figure 5.3 Use of Solicitation Channels in the Bidding Process



To develop an index variable (SOLICIT) with five items, the principal component analysis method and varimax rotation method were applied. According to

Table 5.4, the factor analysis produced one component with an eigenvalue of 2.307 and explained about 46 percent of the variance, all other components had eigenvalues of less than 1.00. Factor loadings ranged from 0.647 to 0.701. Specifically, two of the five indicators had positive factor loading of over .70 on this component and the remaining three indicators measuring the intensity of solicitation had positive loading of .60 or higher on this component. The five indicators yielded a Cronbach's alpha (α) coefficient of 0.707, representing a moderate and acceptable level of internal reliability. The mean of SOLICIT is 3.020 and its standard deviation is 0.891 with 186 observations as shown in Table 5.14.

Table 5.4 Factor Analysis of Intensity of Solicitation Variable

Component(s)	Eigenvalue	Percentage of variance	
1	2.307	.461	
Indicators		Factor loadings	Uniqueness
Media (e.g., News Paper, TV)		0.688	0.526
Public Hearing		0.647	0.582
Agency Websites		0.701	0.508
Electronic Bid Database (e.g., eBID)		0.657	0.568
Others (e.g., Union, Professional Associations)		0.701	0.509

(2) Level of Competition in the Bidding Process In government contracting settings, market competition has been the essential individual factor that has received greatest attention in the literature (e.g., Amirkhanyan et al., 2007; Fernandez, 2007; 2009; Girth, 2012; Johnston & Girth, 2012). For example, in his two empirical studies, Fernandez (2007, 2009) adopted this factor as a main explanatory variable affecting the overall contracting performance and collected the responses with a 5-point ordinal indicator for the approximately number of providers who submitted bids or proposals for the contract. Despite weak empirical evidence in the results, this study expected

the level of competition in the bidding process to be positively related to higher levels of contracting financial performance. Following his measurement, the continuous predictor was developed to ask local public contract managers to give the number of potential service providers in the survey. To measure this variable (LCOMP), this study used a response to the survey question, "For a typical contract, how many vendors participate in the bidding process of your agency on average?" The mean of LCOMP is 5.054 and its standard deviation is 3.068 with 186 observations as shown in Table 5.14.

(3) Public-Private Competition A few studies have sought to examine the effect of public-private competition on the overall contracting performance (e.g., Fernandez, 2007, 2009) with the nominal format (a binary variable) reported in the survey. Despite weak evidence in the previous research, this study selected the public-private competition variable (PCOMP) as an explanatory factor affecting contracting financial performance. This study measured this variable using responses to the question, "Public organizations are allowed to bid on contracts with government agencies." Responses were recorded and ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). It appears to be important to note that about 43 percent of the respondents *strongly or somewhat disagreed* with the statement (20.52% and 22.76%, respectively). This proportion of the respondents are more than the proportion as those who *strongly agreed* (17.16%) and *somewhat agreed* (6.34%). The mean of PCOMP was 2.660 with a standard deviation of 1.168 with 186 observations (see Table 5.14).

(4) Intensity of Monitoring (After Awarding the Contract) Previous research on contracting out has indicated that rigorous monitoring should exist and they must be

conducted more frequently by the contracting government (Marvel & Marvel, 2007; Witesman & Fenandez, 2013). In Fernandez's (2007, 2009) empirical studies, as one of the main factors associated with contracting performance, he focused on the monitoring scope and intensity. With respect to the monitoring intensity varaible, he used six items on the frequency of local government's monitoring tools (procedures) to assess the contractor's performance, including inspections of work in progress, inspections of work completed, complaints monitoring, examining contractor reports, performance measurement systems, and citizen surveys. Following his measurement, this study developed similar survey questions. Thus, the respondents were asked to answer the question: "On average, for a typical contract, how much effort does your agency typically make in each of the following monitoring procedures?" It entailed seven items: (1) review of bi-weekly, monthly or quarterly self-reports; (2) analysis of financial/cost documents; (3) field observations (site visits); (4) citizen satisfaction surveys; (5) monitoring of citizen complaints; (6) independent audits (e.g., Comptroller's audit); and (7) others (e.g., Third party monitoring, Ombudsman). They were measured on a 5-point Likert-type scale (1 = *not at all* through 5 = *a greater deal*). As Table 5.5 shows, it is likely that the first three monitoring tools were used more frequently than the remaining four monitoring tools. Among all seven items, review of regularly produced self reports, field observations (site visits), and analysis of financial/cost documents turned out to be the most used method by local governments when focusing on responses of *a lot* and *a great deal*. Interestingly, independent audits and others conducted by third-party turned out to be less likely to be used among other monitoring methods.

Table 5.5 Perception of Individual Items on Intensity of Monitoring Variable

Survey Items (Intensity of Monitoring Variable)	Not At All	A Little	A Moderate Amount	A Lot	A Great Deal
Review of bi-weekly, monthly or quarterly self reports	26 (13.98)	40 (21.51)	50 (26.88)	**46 (24.73)**	**24 (12.90)**
Analysis of financial/cost documents	22 (11.83)	51 (27.42)	50 (26.88)	**43 (23.12)**	**20 (10.75)**
Field observations (site visits)	23 (12.37)	46 (24.73)	52 (27.96)	**45 (24.19)**	**20 (10.75)**
Citizen satisfaction surveys	44 (23.66)	49 (26.34)	47 (25.27)	**29 (15.59)**	**17 (9.14)**
Monitoring of citizen complaints	41 (22.04)	47 (25.27)	46 (24.73)	**32 (17.20)**	**20 (10.75)**
Independent audits (e.g., Comptroller's audit)	43 (23.12)	42 (22.58)	65 (34.95)	**31 (16.67)**	**5 (2.69)**
Others (e.g., Third-party monitoring, Ombudsman)	50 (26.88)	47 (25.27)	46 (24.73)	**30 (16.13)**	**13 (6.99)**

Note: Numbers represent frequency of the responses of each survey item and percentages of the responses in parentheses.

To measure this variable, this study attempted to create an index variable through factor analysis, utilizing all seven items under the same question. After running principal component factor analysis and varimax rotation, these seven items were successfully integrated into a single factor. As illustrated in Table 5.6, the factor analysis produced one component with an eigenvalue of 3.932 and explained about 56 percent of the variance, all other components had eigenvalues of less than 1.00. Factor loadings ranged from 0.649 to 0.846. Specifically, the produced factor loadings for the seven items are "review of bi-weekly, monthly or quarterly self reports" (0.773), "analysis of financial/cost documents" (0. 745), "field observations (site visits)" (0.730), "citizen satisfaction surveys" (0.784), "monitoring of citizen complaints" (0.705), "independent audits" (0.649), and "others" (0.846). The Cronbach's alpha (α) coefficient was .869, suggesting a high degree of internal consistency of each

aggregate measure. For the empirical analysis, mean values across the items were used to operationalize these variables.

Table 5.6 Factor Analysis of Intensity of Monitoring Variable

Component(s)	Eigenvalue	Percentage of variance	
1	3.932	.562	
Indicators		Factor loadings	Uniqueness
Review of bi-weekly, monthly or quarterly self reports		0.773	0.403
Analysis of financial/cost documents		0.745	0.445
Field observations (site visits)		0.730	0.468
Citizen satisfaction surveys		0.784	0.386
Monitoring of citizen complaints		0.705	0.504
Independent audits (e.g., Comptroller's audit)		0.649	0.578
Others (e.g., Third-party monitoring, Ombudsman)		0.846	0.284

(5) Fairness of Monitoring Procedures In addition to the intensity of monitoring after awarding the contract, this study focused on the fairness of monitoring procedures when measuring contractor's performance. Scholars have suggested that it is important for public agencies to use well-designed monitoring tools that help collect accurately the quality and quantity of services being delivered (Amirkhanyan et al., 2007). To measure such procedural aspect of government's monitoring tools, this study relied on same survey items as shown in intensity of monitoring variable above, using a Likert-scale of 1 (*not at all*) – 5 (*a great deal*) that asks respondents to report on the extent of fairness (appropriateness) of monitoring measurement embedded in their agencies' monitoring procedures. Specifically, the relevant question was: "On average, in most of your agency's contract, how appropriate is each measurement of the following monitoring procedures?" The items were: (1) review of bi-weekly, monthly or quarterly self-reports; (2) analysis of financial/cost documents; (3) field observations (site visits); (4) citizen satisfaction

surveys; (5) monitoring of citizen complaints; (6) independent audits (e.g., Comptroller's audit); and (7) others (e.g., Third party monitoring, Ombudsman).

According to the survey results (see Table 5.7), it is likely that, public contract managers perceived higher levels of fairness (appropriateness) of internal monitoring methods (known as arms-length contract monitoring tools *per se*) as in previous studies (e.g., Amagoh, 2009; Brown et al., 2006; Dicke, 2002; Rehfuss, 1989) more than ones of external ones. In other words, public contract managers are more likely to view that the first three items (review of self report, analysis of financial/cost documents, and field observations) known as typical monitoring methods in the contracting out process seem to be much appropriately conducted at the local level, compared to the four latter items (citizen satisfaction surveys, citizen complaints, independent audits and other monitoring methods by third-party).

Table 5.7 Perception of Individual Items on Fairness of Monitoring Procedures

Survey Items (Fairness of Monitoring Procedures Variable)	Not At All	A Little	A Moderate Amount	A Lot	A Great Deal
Review of bi-weekly, monthly or quarterly self reports	**33 (17.74)**	40 (21.51)	30 (16.13)	**48 (25.81)**	**35 (18.82)**
Analysis of financial/cost documents	**21 (11.29)**	49 (26.34)	38 (20.43)	**44 (23.66)**	**34 (18.28)**
Field observations (site visits)	**25 (13.44)**	37 (19.89)	32 (17.20)	**61 (32.80)**	**31 (16.67)**
Citizen satisfaction surveys	**60 (32.26)**	34 (18.28)	47 (25.27)	**38 (20.43)**	**7 (3.76)**
Monitoring of citizen complaints	**46 (24.73)**	35 (18.82)	36 (19.35)	**43 (23.12)**	**26 (13.98)**
Independent audits (e.g., Comptroller's audit)	**39 (20.97)**	45 (24.19)	56 (30.11)	**34 (18.28)**	**12 (6.45)**
Others (e.g., Third-party monitoring, Ombudsman)	**46 (24.73)**	36 (19.35)	50 (26.88)	**31 (16.67)**	**23 (12.37)**

Note: Numbers represent frequency of the responses of each survey item and percentages of the responses in parentheses.

Because no previous research has actively attempted to measure this concept in the existing literature, this study basically conducted an exploratory factor analysis to reduce the items and create scales. After running a factor analysis of these survey items using principal components factor analysis along with varimax rotation, this study found that the seven measures of fairness of monitoring procedures did validate a single factor structure. In other words, following one-factor solution, all seven items loaded positively on one index variable (here, denoted as FIMONITOR), producing an eigenvalue of 3.835 and about 54.8% of the variance explained. As illustrated in Table 5.8, all indicators had positive factor loading of .70 or higher on one component. A scale reliability analysis of each factor yielded the Cronbach's alpha (α) coefficient of .862, respectively, which exceed the minimum acceptable threshold. Given such a high degree of internal consistency of each aggregate measure, this study used mean values of all seven survey items.

Table 5.8 Factor Analysis of Fairness of Monitoring Variable

Component(s)	Eigenvalue	Percentage of variance	
1	3.835	.548	
Indicators		Factor loadings	Uniqueness
Review of bi-weekly, monthly or quarterly self reports		0.733	0.462
Analysis of financial/cost documents		0.754	0.432
Field observations (site visits)		0.793	0.372
Citizen satisfaction surveys		0.703	0.506
Monitoring of citizen complaints		0.723	0.477
Independent audits (e.g., Comptroller's audit)		0.683	0.534
Others (e.g., Third-party monitoring, Ombudsman)		0.786	0.383

(6) Use of Rewards As one of the monitoring-based incentives based on service provider performance, this study measured the use of rewards (e.g., contract renewal/extension, and bonus) provided by a public agency. In the literature, financial

incentives, such as gain sharing, contract renewal based on good performance, and bonus for reaching certain goals, were considered as one factor leading to good contracting performance (e.g., Cooper, 2003; Fernandez, 2007, 2009). For similar reasons, this study expected the use of rewards to be associated with higher levels of contracting financial performance. Thus, the survey created an ordinal variable based on the following question: "How likely is it that your agency provides rewards to contractors when satisfactory financial performance is achieved?" (1 = *very unlikely*, 2 = *somewhat unlikely*, 3 = *undecided*, 4= *somewhat likely*, 5 = *very likely*).

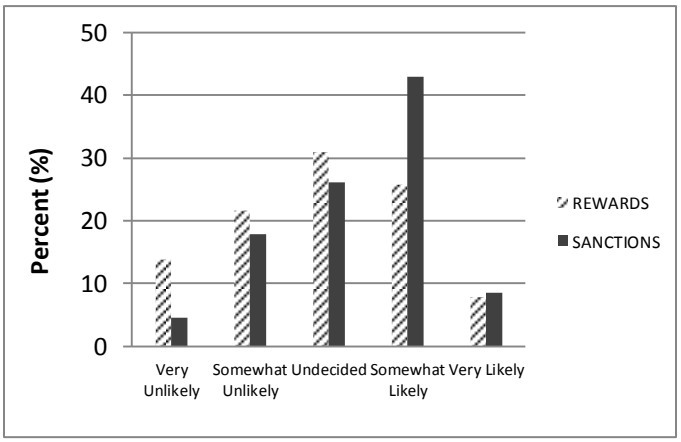
Among 186 observations in total, approximately 29% of the sample reported that a public agency is unlikely to provide rewards of highly performing contractors (*very unlikely* was about 10% and *somewhat unlikely* was 19%, respectively), whereas about 41% of the respondents positively answered the use of rewards (*somewhat likely* was about 28% and *very likely* was 13%, respectively). The use of rewards scale (REWARD) has a mean of 3.161 and a standard deviation of 1.165 (see Table 5.14).

(7) Use of Sanctions This study also attempted to measure of use of sanctions (e.g., financial penalties, threat of contract termination, and litigation) used by a public agency. In Shetterly's (2000) empirical study, a penalty provision had a significant influence on the cost reduction when residential refuse collection was contracted out. Fernandez (2007, 2009) and Girth (2012) suggested that the reliance of governments on sanctions may contributed to improving the effectiveness of outsources public services and higher levels of the overall contracting performance. Consistent with this prediction, this study developed a relevant survey question to represent the perceived level of use of sanctions by public agencies. Respondents were asked the question as

to “How likely is it that your agency uses sanctions to contractors when unsatisfactory financial performance (e.g., corruption) is detected?” Consistent with the question on use of rewards above, there were five possible response categories (1 = *very unlikely* through 5 = *very likely*). Among 186 observations in total, approximately over 50 percent of the respondents reported that their agencies are likely to use sanctions of poorly performing contractors (*somewhat likely* was about 38% and *very likely* was about 13%, respectively), which is much bigger than the proportions of negative answers (*very unlikely* was only 5% and *somewhat unlikely* was 13%, respectively). The use of sanctions scale (SANCTION) has a mean of 3.414 and a standard deviation of 1.048 (see Table 5.14).

Interestingly, based on local public contract managers’ experiences and perceptions, it should be noted that compared with the likelihood to use rewards by public agencies above, the likelihood to use sanctions by public agencies appears to be higher as shown in Figure 5.4.

Figure 5.4 Likelihood to Use Rewards and Sanctions



(8) Government Capacity Scales: Feasibility, Management, and Financial Capacity

As one dimension representing government capacity, this study speculated that before/after awarding the contract, the contracting government (public agencies) needs to have enough stable and sufficient staffing and sustainability of financing (Amirkhanyan et al., 2007; Girth, 2012; Liu et al., 2007). As Brown and Potoski (2003b) and Fernandez (2004, 2009) suggested, public managers should determine whether particular services will be contracted out, check sufficient market competition, and evaluate the bidder's capacity to perform the work prior to awarding the contract by hiring trained staffs and legislative study groups. Additionally, government agencies also need the capacity to bid on the contract, select a provider, and negotiate the contract (Brown & Potoski, 2003b; Cohen & Eimicke, 2000, 2008). Such capacity may rely on features of public managers such as educational level, working experience with contracting firms, and the communication/interaction with contracting firms (Lee & Kingley, 2009). Amid this perspective, this study posited that government capacity regarding the contracting out process can be divided into three aspects, specifically, feasibility capacity before awarding the contract, management capacity representing government's contract implementation and evaluation capacity after awarding the contract, and financial capacity representing government's (or public agencies) financial resources and support for contracting out. In the survey, such aspects of government capacity were measured by a short, convenient form on a 5-point Likert-type scale developed by the previous studies (e.g., Brown & Potoski, 2003b; Girth, 2012; Lee & Kingsley, 2009; Liu et al., 2007). Thus, respondents were

given a list of items and asked to rate their level of agreement, ranging from 1 = *strongly disagree* to 5 = *strongly agree*.

According to the final responses of this question (see Table 5.9), the distribution of answers generally appears to be positively skewed. When this study focused on both somewhat agree and strongly agree responses, the highest agreement of the statement was about a capacity for effective communication in sharing information with contractors (*somewhat agree* = about 33% and *strongly agree* = about 46%, respectively). Next, public managers perceived that their agency/department is more likely to have managers who have higher levels of education *somewhat agree* = about 47% and *strongly agree* = about 28%, respectively), and sufficient time to administer contracts effectively (*somewhat agree* = about 27% and *strongly agree* = about 47%, respectively). And nearly 70% of the respondents answered positively for the statements regarding having a legal team to reach agreement on the actual contract, personnel with expertise in contract administration and sufficient staff to monitor contractor's performance. But interestingly, the item about a capacity for sustainable financing to contractors turned out the lowest agreement among the nine items (*somewhat agree* = about 25% and *strongly agree* = about 18%, respectively).

Table 5.9 Perception of Individual Items on the Overall Government Capacity

Survey Items (Government Capacity Variable)	Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
(1) Have managers who have higher levels of education	10 (5.38)	13 (6.99)	23 (12.37)	**88 (47.31)**	**52 (27.96)**
(2) Have a legal team to	5	2	48	**81**	**50**

reach agreement on the actual contract	(2.69)	(1.08)	(25.81)	**(43.55)**	**(26.88)**
(3) Have personnel with expertise in contract administration	6 (3.23)	18 (9.68)	35 (18.82)	**46 (24.73)**	**81 (43.55)**
(4) Have sufficient staff to monitor contractor's performance	4 (2.15)	17 (9.14)	35 (18.82)	**55 (29.57)**	**75 (40.32)**
(5) Have sufficient time to administer contracts effectively	4 (2.15)	8 (4.30)	36 (19.35)	**50 (26.88)**	**88 (47.31)**
(6) Have a capacity for effective communication in sharing information with contractors	5 (2.69)	11 (5.91)	23 (12.37)	**61 (32.80)**	**86 (46.24)**
(7) Make timely payment to contractors	5 (2.69)	30 (16.13)	49 (26.34)	**42 (22.58)**	**60 (32.26)**
(8) Have a capacity for sustainable financing to contractors	9 (4.84)	36 (19.35)	61 (32.80)	**46 (24.73)**	**34 (18.28)**
(9) Have past experience in the contracting out process	20 (10.75)	18 (9.68)	32 (17.20)	**66 (35.48)**	**50 (26.88)**

Note: Numbers represent frequency of the responses of each survey item and percentages of the responses in parentheses.

To create index variables, this study focused on the following nine statements: It is likely that public agencies (1) have managers who have higher levels of education; (2) have a legal team to reach agreement on the actual contract; (3) have personnel with expertise in contract administration; (4) have sufficient staff to monitor contractor's performance; (5) have sufficient time to administer contracts effectively; (6) have a capacity for effective communication in sharing information with contractors; (7) make timely payment to contractors; (8) have a capacity for sustainable financing to contractors; and (9) have past experience in the contracting out process. Given such statements, this study first conducted a principal component factor analysis along with a varimax rotation method. As predicted, it was found that

nine measures of government capacity failed to validate a single factor structure. Instead, the responses were divided into three factors (scales) as illustrated in Table 5.10.

When focusing on factors loaded and grouped in an order, this study found that the first eigenvalue of the scale (GMACPTY) was 2.700, the second one of the scale (GFECPTY) was 2.331, and the third one of the scale (GFICPTY) was 1.761, respectively, along with about 75% of the total cumulative variance.[1] In terms of the government feasibility capacity (GFECPTY) factor, three items were found to be strongly correlated with each other, specifically, items regarding (1) managers who have higher levels of education, (2) a legal team to reach agreement on the actual contract, and (3) past experiences in the contracting out process. With respect to the government management capacity (GMACPTY) factor, four items were grouped together, including items regarding (1) personnel with expertise in contract administration; (2) sufficient staff to monitor contractors' performance; (3) sufficient time to administer contracts effectively; and (4) a capacity for effective communication in sharing information with contractors. Lastly, for the government financial capacity (GFICPTY) factor, two remaining items were grouped together, including (1) timely payment to contractors and (2) a capacity for sustainable financing to contractors. For these three scales, almost all individual indicators had positive factor loading of .70 or higher on each component. It is also worth noting that a reliability test of these three scales yielded a Cronbach's alpha (α) coefficient of .830, .850, and .746, respectively, in an order (here, GFECPTY, GMACPTY, and

[1] More specifically, the three scales have 30%, 25,9% and 19,6% of the variance explained for each scale, respectively.

GFICPTY, respectively). They suggest that averaging related items for each scale for the empirical analysis turned out a higher level of internal reliability. Given this result, this study safely used the mean values of three government capacity scales for the empirical analysis.

Table 5.10 Factor Analysis of Government Capacity Variables

Variables/Scales	Survey Questions	Components (3) / Factor Loadings (Factor 1 vs. 2 vs. 3)			Uniqueness
Government Feasibility Capacity (GFECPTY)	Have managers who have higher level of education	0.220	**0.832**	-0.005	0.257
	Hire a legal team to reach agreement on the actual contract	0.270	**0.851**	0.210	0.158
	Have past experiences in the contracting out process	0.148	**0.783**	0.391	0.212
Government Management Capacity (GMACPTY)	Have personnel with expertise in contract administration	**0.861**	0.212	-0.022	0.212
	Have sufficient staff to monitor contractor's performance	**0.837**	0.161	-0.002	0.273
	Have sufficient time to administer contracts effectively	**0.773**	0.208	0.265	0.389
	Have a capacity for effectiveness communication in sharing information with contractors	**0.699**	0.265	0.217	0.395
Government Financial Capacity (GFICPTY)	Make a timely payment to contractors	0.167	0.064	**0.870**	0.211
	Have a capacity for sustainable financing to contractors	-0.022	0.333	**0.830**	0.200

Note: Extraction method: Principal component analysis. Rotation method: Varimax with Kaiser normalization. The values in boldface show that the survey questions measure three different variables.

(9) Contractor Capacity Scales: Feasibility, Management, and Financial Capacity

Previous studies have suggested that before awarding/negotiating the contract by the purchasing government, private contracting firms' (contractors) capacity (e.g., resources, financial capability, and past experiences) should be evaluated to check if

the potential contractors can keep providing a particular service during the period, manage the contract effectively according to the contract, and achieve better performance ultimately (Girth, 2012; Witesman & Fernandez, 2013). In other words, private contracting organizations need adequate administrative, technical capacity based on sufficient time, staff, and unique expertise to ensure that services are delivered effectively and resources are efficiently distributed (Amirkhanyan et al., 2007, 2012; Brown et al., 2006; DeHoog, 1990; Fernandez, 2004, 2009; Girth, 2012; Kettl, 1993; Liu et al., 2007; Romzek & Johnston, 1999).

As with previous studies, this study developed survey items concerning contractor's capacity in three different aspects including feasibility capacity, management/staffing capacity, and financial capacity at large. In the survey, respondents were asked to rate their level of agreement, ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Specifically, the items followed by this question were: It is likely that contractors (1) have a capacity for negotiation in drafting the contract; (2) have skilled managers with technical expertise in contract management; 3) have sufficient time to administer contracts effectively; and (4) have sufficient staff to implement performance self-monitoring; (5) have sufficient resources available to provide goods and services; and (6) have previous experience performing the work.

As shown in Table 5.11, when focusing on the responses representing *somewhat agree* and *strongly agree*, over 70% of the respondents admitted that contractors tend to have skilled managers with technical expertise in contract management (*somewhat agree* = 31.18% and *strongly agree* = 39.25%, respectively) and sufficient time to administer contracts effectively (*somewhat agree* = 34.41% and

strongly agree = 40.32%, respectively). Next, about 67% of the respondents agreed that it is likely for contractors to have sufficient staff to implement performance self-monitoring. But interestingly, public managers perceived that contractors are less likely to have sufficient resources available to provide goods and services since only about 30% of the respondents agreed on the statement.

Table 5.11 Perception of Individual Items on the Overall Contractor Capacity

Survey Items (Contractor Capacity Variable)	Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
1) Have a capacity for negotiation in drafting the contract	12 (6.45)	32 (17.20)	49 (26.34)	**50 (26.88)**	**43 (23.12)**
2) Have skilled managers with technical expertise in contract management	6 (3.23)	14 (7.53)	35 (18.82)	**58 (31.18)**	**73 (39.25)**
3) Have sufficient time to administer contracts effectively	-	14 (7.53)	33 (17.74)	**63 (34.41)**	**75 (40.32)**
4) Have sufficient staff to implement performance self-monitoring	-	16 (8.60)	45 (24.19)	**59 (31.72)**	**66 (35.48)**
5) Have sufficient resources available to provide goods and services	33 (17.74)	35 (18.82)	62 (33.33)	**32 (17.20)**	**24 (12.90)**
6) Have previous experience performing the work	25 (13.44)	43 (23.12)	35 (18.82)	**56 (30.11)**	**27 (14.52)**

Note: Numbers represent frequency of the responses of each survey item and percentages of the responses in parentheses.

Based on the hypotheses of this study, this study attempted to reduce the related items and create scales in the form of an index variable. For this reason, a principal component factor analysis along with a varimax rotation method was employed. As Table 5.12 displays, the analyses of the aforementioned six items extracted three factors based on factors loaded. In other words, this study followed

three-factor solution (the cumulative proportion of variance criteria met with 3 components to satisfy the criterion of explaining nearly 77% of the total variance), with the first factor labeled CMACPTY having an eigenvalue of 2.113 (35.21% of the variance explained), the second factor labeled CFECPTY having an eigenvalue of 1.471 (24.52% of the variance explained), and the third factor labeled CFICPTY having an eigenvalue of 1.018 (16.97% of the variance explained), all other components had eigenvalues of less than 1.00.

Specifically, the first comprised three items including skilled managers with technical, expertise in contract management, sufficient time to administer contracts effectively, and sufficient staff to implement performance self-monitoring; the second comprised two items including a capacity for negotiation in drafting the contract and previous experience performing the work; and the third comprised one remaining item regarding sufficient resources available to provide goods and services. All items had positively factor loading of .70 or higher on each component. Like government capacity variables (three scales), the three measures of contract capacity variables were integrated by using a mean value, the Cronbach's alpha (α) values of contractor feasibility capacity (CFECPTY) and contractor management capacity (CMACPTY) were .697 and .777, respectively. They represent a moderate degree of internal consistency of each aggregate measure. For the analysis, mean values across the items were used to operationalize these variables. But, it should be noted that this study failed to create a separate index variable regarding contractor financial capacity (CFICPTY) since it had only one item loaded based on the factor analysis. This study thus used this variable independently when analyzing the empirical models.

Table 5.12 Factor Analysis of Contractor Capacity Variables

Variables/Scales	Survey Questions	Components/ Factor Loadings (Factor 1 vs. 2 vs. 3)			Uniqueness
Contractor Feasibility Capacity (CFECPTY)	Have a capacity for negotiation in drafting the contract	0.206	**0.817**	0.143	0.269
	Have previous experience performing the work	-0.092	**0.856**	-0.114	0.247
Contractor Management Capacity (CMACPTY)	Have skilled managers with technical expertise in contract management	**0.780**	0.263	-0.005	0.323
	Have sufficient time to administer contracts effectively	**0.856**	-0.015	-0.066	0.262
	Have sufficient staff to implement performance self-monitoring	**0.849**	-0.043	0.014	0.278
Contractor Financial Capacity (CFICPTY)	Have sufficient resources available to provide goods and services	-0.029	0.004	**0.990**	0.019

Note: Extraction method: Principal component analysis. Rotation method: Varimax with Kaiser normalization. The values in boldface show that the survey questions measure three different variables.

(10) Contract Length As not only one of the contract characteristics but also a salient factor affecting contracting financial performance, a number of scholars have provided empirical evidence between the relationship between contract duration and contracting performance (e.g., Amirkhanyan, 2011; Amirkhanyan et al., 2012; Fernandez, 2007, 2009; Witesman & Fernandez, 2013) but the direction turned inconclusive. Recognizing these contradictory scholarly arguments and inconclusive findings, this study employed contract duration as a control variable in the model.

Through the survey, a relevant question was developed: “Approximately, how long has your agency’s contract typically been in operation for the specific service you purchase?” Respondents were simply asked to specify the number of years. Thus, this

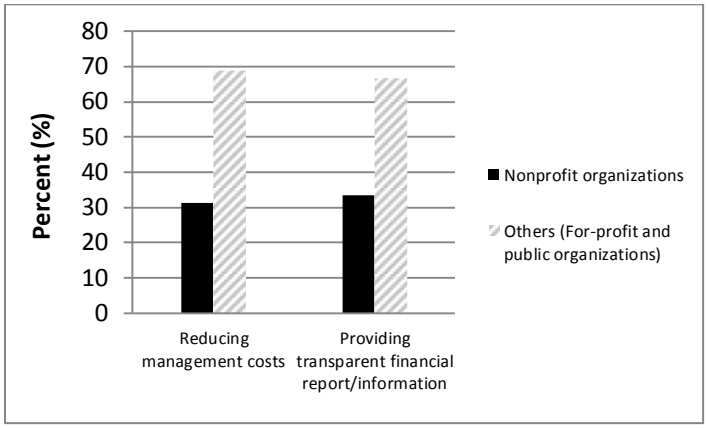
study measured his variable (LENGTH) as the number of years that respondent's current organization has engaged in a contractual relationship with a local government agency (numeric, continuous variable). The mean of LENGTH is about 10 years and its standard deviation is 9.483 with 186 observations as shown in Table 5.14.

(11) Type of Contractor The literature has suggested that type of contractor may influence the level of contracting financial performance but still there has been inconclusive arguments and evidence on which organization (nonprofit versus for-profit) is more likely to engage in opportunistic behaviors in the context of government contracting (e.g., Witesman & Fernandez, 2013). Nonetheless, this study followed a relational contracting approach which tends to put more values on nonprofit organizations as trustworthy contractors (e.g., Amirkhanyan, 2009; Amirkhanyan et al., 2008; Van Slyke, 2009). To reflect the organizational ownership as a factor affecting contracting financial performance, this study thus developed two relevant survey questions in the survey. The questions were: "What type of a contractor works best at reducing management costs?" and "What type of a contractor works best at providing transparent financial report/information in the use of public funds?" But it should be noted that these questions were not originally recorded as a binary (dichotomous) variable but instead were classified into three types – nonprofit organization, for-profit organization, and public organization (government).

Based on the respondents' responses, however, this study recoded them again and then created two dummy variables identifying satisfactory contractors by sector for each area (here, the reduction of management costs and the provision of transparent financial report/information in the use of public funds). The first dummy

variable indicates whether nonprofit organizations outperform other types of contractors (for-profit firm and public organization) in terms of reducing management costs, and the second dummy variable indicates whether the organization is a nonprofit rather than others (for-profit firm and public organization) with respect to providing transparent financial report/information. In other words, these variables were coded as "1" for nonprofit organization and as "0" for other organizations.

Figure 5.5 Public Contract Managers' Perceptions of Each Area by Sector



As Figure 5.5 shows, for both questions, similar result was found. While about 32% of the respondents reported that nonprofit organizations are more likely to work best at reducing management costs, about 37% of the respondents answered that nonprofit organizations are more likely to work best at providing transparent financial report/information in the use of public funds.

Depending on the dependent variable (here, cost-effectiveness or financial accountability), this variable (each area) was applied to each empirical model. For the empirical analyses of this research, each variable was used as the type of contractor variable separately since such variables appeared to match two dependent variables of

this research (cost-effectiveness (Y1) and financial accountability (Y2), respectively). Thus, each variable was labeled as NPROFIT1 and NPROFIT2, respectively. Depending on the dependent variable (Y1 or Y2), this variable was applied to each model. According to Table 5.14 displaying descriptive statistics, the mean of NPROFIT1 and NPROFIT2 was 0.317 and 0.371, respectively. With both 186 observations in total, the standard deviation was 0.467 and 0.484, respectively (see Table 5.14).

Control Variables

Given the available data, for the multivariate analyses, this study included four control variables based on respondents' demographic characteristics and basic information (age, gender, training experience, and years of working for government contracting out process in his/her current organization). As previously noted in Chapter 3, it is expected that respondents' personal factors may lead to variances in the way they view (and the extent to which they support) local contractual relationships between governments and private contractors, accompanied by financial outcomes. It should be noted that according to the responses in two surveys, most of respondents did not report the actual hours of training so that this study only decided to focus on whether respondents received the training regarding the contracting out process before.

In addition, in terms of the supervisory status (job position), it is likely that most of respondents work as more than middle-level managers (for more information, see Table 4.2) so that this survey item was not counted in the analysis.

(1) Age In the survey, respondents were asked to report their ages (AGE) with six different ranges from less than 25 through 65 or older (1 = *less than 25*, 2 = *25-34*, 3 = *35-44*, 4 = *45-54*, 5= *55-64*, and 6 = *65 or older*). In other words, AGE was applied as an ordinal variable in the model. Among 186 observations in total, the majority of the respondents were between 45 and 64 in their ages (34.7% in the age group *45-54* and 33.5% in the age group *55-64*, respectively).

(2) Gender Based on respondents' answers, the gender variable (GENDER) was recorded as a dummy variable in order to control its effects on perceived dependent variables (1 = *female*, 0 = *male*). Among the entire respondents, about 53% was male, whereas the remaining 47% was female.

(3) Training Experience This study included a question that asks about the contract-related training experiences of respondents. The survey question was "Have you ever received regular training to support your role as a contract administrator?" Respondents could answer "yes" or "no" for this question. Thus, a dummy variable is used in the analysis. The training experience (TRAIN) was recorded as a "1" when a respondent has ever received the training or was recorded as "0" when a respondent has not. Among total 186 observations, approximately about 62 percent of the sample reported that they have experience having training, which is relatively much higher than one of private contract managers (36%).

(4) Year of Contracting Experience To measure respondents' years of contracting experiences (YEAR), this study used the following question: "Approximately how many years have you worked with government contracts in your current organization?" Respondents were directly asked to specify the number of years of

government contracting experience (YEAR). As in previous studies (e.g., Dodd-McCue & Wright, 1996; Feeney & Bozeman, 2009; Fernandez, 2004), this study used this numeric, continuous variable to examine how respondents' work experience can shape perceptions of contracting financial performance. The mean of YEAR is 8.995 (nearly 9 years) and its standard deviation is 7.277 with 186 observation as indicated in Table 5.14.

Table 5.13 Measurement of Variables (Public Contract Managers)

Dependent Variables: Contracting Financial Performance	
Cost-effectiveness (Y1) (Fernandez, 2009; Savas; 2000)	'Through a typical contract, how would you rate financial performance your agency achieve in the area of total cost savings?' (1 = *poor*; 2= *below average*; 3= *average*; 4= *above average*; 5 = *excellent*)
Financial Accountability (Y2) Cronbach's Alpha: 0.852 (Cooper, 2003; Kearns, 1995; Mulgan, 1997)	'Through a typical contract, how would you rate financial performance your agency can achieve in the following areas?': (1) cost control in the proper use of financial resources; (2) managing fraudulent or criminal risks; (3) protection of assets against financial corruption; (4) use of public funds according to public purposes; and (5) transparent financial reporting/billing for goods and service delivery (1 = *poor* through 5 = *excellent*)
Independent Variables	
Intensity of Solicitation Cronbach's Alpha: 0.707 (Amagoh, 2009; Brown et al., 2006; Girth, 2012)	'On average, how frequently does your agency use the following channels to release information on the bidding process for a typical contract?': (1) media; (2) public hearing; (3) agency websites; (4) electronic bid database; and (5) others (1 = *not at all* through 5 = *a great deal*)
Level of Competition (Fernandez, 2009; Girth, 2012)	'For a typical contract, how many vendors participate in the bidding process of your agency on average?' (Continuous variable)
Public-Private Competition (Fernandez, 2009)	'Public organizations are allowed to bid on contracts with government agencies' (1 = *strongly disagree* through 5 = *strongly agree*)
Intensity of Monitoring Cronbach's Alpha: 0.869 (Fernandez, 2009; Marvel & Marvel, 2007)	'On average, for a typical contract, how much effort does your agency typically make in each of the following monitoring procedures?': (1) review of bi-weekly, monthly or quarterly self reports; (2) analysis of financial/cost documents; (3) field observations (site visits); (4) citizen satisfaction surveys; (5) monitoring of citizen complaints; (6) independent audits; and (7) others (1 = *not at all* through 5 = *a great deal*)

Fairness of Monitoring Procedures Cronbach's Alpha: 0.862 (Amagoh, 2009; Amirkhanyan, 2011; Brown et al., 2006)	'On average, in most of your agency's contract, how appropriate is each measurement of the following monitoring procedures?': (1) review of bi-weekly, monthly or quarterly self reports; (2) analysis of financial/cost documents; (3) field observations (site visits); (4) citizen satisfaction surveys; (5) monitoring of citizen complaints; (6) independent audits; and (7) others (1 = *not at all* through 5 = *a great deal*)
Use of Rewards (Fernandez, 2009; Girth, 2012)	'How likely is it that your agency provides rewards (e.g., contract renewal/extension, and bonus) to contractors when satisfactory financial performance is achieved?' (1 = *very unlikely* through 5 = *very likely*)
Use of Sanctions (Fernandez, 2009; Girth, 2012)	'How likely is it that your agency uses sanctions to contractors when unsatisfactory financial performance (e.g., corruption) is detected?' (1 = *very unlikely* through 5 = *very likely*)
Government Feasibility Capacity Cronbach's Alpha: 0.830 (Liu et al., 2007)	'It is likely that public agencies: (1) have managers who have higher levels of education; (2) hire a legal team to reach agreement on the actual contract; and (3) have past experience in the contracting out process' (1 = *strongly disagree* through 5 = *strongly agree*)
Government Management Capacity Cronbach's Alpha: 0.850 (Brown & Potoski, 2003b; Fernandez, 2009)	'It is likely that public agencies: (1) have personnel with expertise in contract administration; (2) have sufficient staff to monitor contractors' performance; (3) have sufficient time to administer contracts effectively; and (4) have a capacity for effective communication in sharing information with contractors' (1 = *strongly disagree* through 5 = *strongly agree*)
Government Financial Capacity Cronbach's Alpha: 0.746 (Liu et al., 2007)	'It is likely that public agencies: (1) make timely payment to contractors; and (2) have a capacity for sustainable financing to contractors' (1 = *strongly disagree* through 5 = *strongly agree*)
Contractor Feasibility Capacity Cronbach's Alpha: 0.697 (Amirkhanyan et al., 2012; Girth, 2012)	'It is likely that contractors: (1) have a capacity for negotiation in drafting the contract; and (2) have previous experience performing the work' (1 = *strongly disagree* through 5 = *strongly agree*)
Contractor Management Capacity Cronbach's Alpha: 0.777 (Brown et al., 2006; Girth, 2012)	'It is likely that contractors: (1) have skilled managers with technical expertise in contract management; (2) have sufficient time to administer contracts effectively; and (3) have sufficient staff to implement performance self-monitoring' (1 = *strongly disagree* through 5 = *strongly agree*)
Contractor Financial Capacity (Liu et al., 2007)	'It is likely that contractors have sufficient resources available to provide goods and services' (1 = *strongly disagree* through 5 = *strongly agree*)
Contract Length (Amirkhanyan et al., 2012; Girth, 2012)	'Approximately, how long has your agency's contract typically been in operation for the specific service you purchase?' (Continuous variable)

Type of Contractor (Amirkhanyan, 2009; Girth, 2012)	'What type of a contractor works best at reducing management costs?' and 'What type of a contractor works best at providing transparent financial report/information in the use of public funds?' (1 = *nonprofit organization*, 0 = *others including for-profit and public organizations*)
Control Variables	
Age	Respondent's age in six categorical ranges (1= *less than 25*, 2 = *25-34*, 3 = *35-44*, 4 = *45-54*, 5 = *55-64*, and 6 = *65 or older*)
Gender	Respondent's gender (1 = *female*, 0 = *male*: Binary variable)
Training Experience	Respondent's training experience as a contract administrator (1 = *yes*, 0 = *no*: Binary variable)
Year of Contracting Works	The number of years the respondent has worked with government contracts in his/her current organization (Continuous variable)

Results

As noted above, although the two dependent variables – perceived cost-effectiveness and financial accountability – are commonly constructed by the Likert-type scale measures for public contract managers' attitudinal responses, they were operationalized differently. The first dependent variable, perceived cost-effectiveness (Y1), is ordinal so that this study employed an ordered logit regression (OLOGIT) analysis with a proportional odds specification for Model 1, whereas the second dependent variable, perceived financial accountability (Y2) is an index variable, in turn, the data are analyzed using ordinary least squares (OLS) regression for Model 2.

Before running the regressions, missing data that stem from non-response for some questions were excluded by the listwise deletion function rather than using weights to deal with nonresponse error and including missing data, in turn, the final survey sample amounted to 186 valid sample numbers. Based on the measurement of survey items, Table 5.14 provides the descriptive statistics of the variables included in Model 1 and Model 2. According to this result, the mean scores suggest that respondents (here, public contract managers) indicated that the greater likelihood of achieving financial accountability (Y2) rather than cost-effectiveness (Y1). In addition, among other variables, the majority of respondents reported the higher likelihood of performing government management capacity (GMACPTY) and contractor management capacity (CMACPTY) during the contracting out process.

All of the variables in this study were measured based on self-reported responses that came from the New Jersey local contractors, which can lead to common method (source) bias. Thus, as suggested by Podsakoff and Organ (1986) and Cho and

Perry (2012), this study used Harman's single-factor test to examine the seriousness of common method bias. The analysis revealed that 15 different factors were retained, and the first factor (the highest eigenvalue) explained nearly 11% (11.03 percent) of the variance which was less than 50%. Thus, the result shows that the common method bias is not of great concern.

Table 5.14 Descriptive Statistics of All Variables (Public Contract Managers)

Variables (N=186)	Mean	SD	Min	Max
Cost-effectiveness (Y1)	3.565	1.114	1	5
Financial Accountability (Y2)	3.602	0.950	1	5
SOLICT	3.020	0.891	1	5
LCOMP	5.054	3.068	2	25
PCOMP	3.602	0.977	1	5
IMONITOR	2.750	0.910	1	5
FMONITOR	2.861	0.967	1	4.571
REWARD	3.161	1.165	1	5
SANCTION	3.414	1.048	1	5
GFECPTY	3.781	0.945	1	5
GMACPTY	4.048	0.884	1	5
GFICPTY	3.489	1.024	1	5
CFECPTY	3.261	1.050	1	5
CMACPTY	3.991	0.831	1.667	5
CFICPTY	2.866	1.243	1	5
LENGTH	10.093	9.483	1	40
NPROFIT1	0.317	0.467	0	1
NPROFIT2	0.371	0.484	0	1
AGE	4.032	1.080	1	6
GENDER	0.527	0.501	0	1
TRAIN	0.618	0.487	0	1
YEAR	8.995	7.277	1	32

(1) Result of Perceived Cost-effectiveness (Model 1)

As previously noted, this study used an ordered logit regression (OLOGIT) analysis to test hypotheses in Model 1. The OLOGIT regression has been known as a maximum likelihood estimation technique and thus it allows us to examine predicted

probabilities across particular levels of interest by assuming that independent variables either increase or decrease the likelihood of achieving a particular outcome on the dependent variable as well as the values of the latent variable in general (Long, 1997; Stazyk & Goerdel, 2011, p. 661). Before running OLOGIT regression, this study checked for potential methodological problems that may affect the results of the analysis by testing for correlation, multicollinearity, the parallel regression assumption, and model specification (omitted-variable bias) in an order.[2]

First, this study provided a correlation matrix of Model 1, but no multicollinearity problem existed (see Table 5.15). As predicted, almost all main independent variables were positively and statistically correlated with cost-effectiveness (Y1), with Pearson coefficient ranging from .130 to .654.[3] Particularly, one can observe that public-private competition (PCOMP) turned out the largest correlation in a relationship with the dependent variable (r = .654, p < .01). Next, the use of sanction (SANCTION) and use of reward (REWARD) are also more strongly correlated with the dependent variable (r = .482, and r = .379, respectively, p < .01) than other factors. In addition, when focusing on the correlation coefficients (r) between independent variables, it was found that the relationship between government management capacity (GMACPTY) and government feasibility capacity (GFECPTY) and the relationship between government financial capacity (GFICPTY) and government feasibility capacity (GFECPTY) were highly correlated; they have the second and fourth highest correlation, respectively, among the variables in the model

[2] This study followed the tests in an order, provided by a book named *Regression Models for Categorical Dependent Variables using STATA*, written by Long and Freese (2006).

[3] Among main independent variables, the following four variables (intensity of solicitation, level of competition, contractor feasibiltycapacity, and contractor financial capacity) were barely correlated with cost-effectiveness.

(r = .493, p < .01; r = .449, p < .01). Overall, there are no correlation coefficients above 0.5 in Model 1, suggesting that there is no need to compose interaction terms. This study also tested the multicollinearity problem focusing on the variance inflation factor (VIF) as in Hamilton (2006). No multicollinearity threat seems to exist. The highest VIF value and average VIF in the model were 1.83 (government feasibility capacity variable denoted as GFECPTY) and 1.24, respectively. Most of the other values were below 2.0, suggesting that multicollinearity is not an issue for the empirical analysis.

Next, this study checked the parallel regression assumption with two tests as follow. First of all, the LR test was employed to check if the coefficients for all variables are simultaneously equal (Long & Freese, 2006). For the LR test (known as an approximate likelihood-ratio test of proportionality of odds across response categories), this study used the command *omodel* to compute an approximate LR test. The result of the test provided Chi^2 (69) = 78.48 or Chi^2 (57) = 73.63 and *Prob* > Chi^2 = 0.2036 or *Prob* > Chi^2 = 0.0683, which suggest that the parallel assumption is not significantly violated since $P > 0.05$. In other words, the parallel regression assumption cannot be rejected in Model 1. To be clear, this study also ran the Wald test (also known as Brant test) with the command *brant, detail* to test the parallel regression for each variable individually (e.g., for more information, see Brant, 1990; Long, 1997). As shown in Table 5.16, Chi-square value of 15.25 (P > Chi^2 = 1,000, df =69) for the Brant test and the model may not be problematic since the p-values of all variables are greater than 0.05 (P > Chi^2 = 0.05), suggesting that the parallel assumption has been not significantly violated. Based on the results of these two tests,

it should be noted that Model 1 has no significant violations of the parallel regression assumption.

Table 5.15 Correlation of Variables in Model 1

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(1) Y1	1.000																			
(2) SOLICTT	-0.028	1.000																		
(3) LCOMP	0.102	0.004	1.000																	
(4) FCOMP	0.654***	0.095	0.121*	1.000																
(5) IMONITOR	0.130*	0.146**	0.145**	0.005	1.000															
(6) FMONITOR	0.169**	0.073	-0.042	0.179**	0.117	1.000														
(7) REWARD	0.379***	0.096	0.160**	0.329***	0.004	0.111	1.000													
(8) SANCTION	0.482***	0.057	0.234***	0.370***	-0.091	0.108	0.390***	1.000												
(9) GFECPTY	0.335***	0.106	0.077	0.275***	-0.049	0.253***	0.155**	0.235***	1.000											
(10) GMACPTY	0.174**	0.094	0.125*	0.101	0.033	0.320***	0.100	0.236***	0.493***	1.000										
(11) GFICPTY	0.166**	0.090	-0.010	0.192***	-0.006	0.226***	-0.090	0.111	0.449***	0.254***	1.000									
(12) CFECPTY	0.017	0.097	0.059	0.109	0.064	-0.104	-0.001	0.004	0.124*	0.126*	0.094	1.000								
(13) CMACPTY	0.137*	0.027	0.080	0.186**	0.225***	0.081	-0.013	0.098	0.157**	0.155**	0.153**	0.146**	1.000							
(14) CFICPTY	0.067	0.070	0.037	-0.032	0.092	-0.097	-0.017	-0.025	-0.182**	-0.058	-0.116	0.015	-0.041	1.000						
(15) LENGTH	-0.174**	0.095	0.090	-0.097	0.065	-0.007	-0.009	-0.093	0.024	-0.019	0.057	0.027	-0.116	-0.125*	1.000					
(16) NPROFIT1	-0.098	0.034	-0.030	-0.056	-0.019	0.085	0.062	0.097	0.011	0.058	0.086	0.023	-0.016	-0.094	0.048	1.000				
(17) AGE	0.003	-0.096	0.035	-0.012	-0.029	0.067	-0.021	0.004	-0.066	-0.038	0.081	-0.015	0.047	0.036	-0.020	0.055	1.000			
(18) GENDER	-0.042	-0.075	0.020	-0.046	0.100	-0.103	-0.098	-0.126*	0.085	-0.128*	0.032	0.010	0.076	-0.007	-0.002	-0.164**	-0.022	1.000		
(19) TRAIN	-0.019	0.108	0.027	0.042	-0.044	-0.103	0.015	0.109	0.064	0.010	-0.030	0.048	-0.013	0.067	-0.120	-0.011	0.084	0.098	1.000	
(20) YEAR	-0.015	0.014	0.061	-0.040	-0.046	-0.046	-0.002	0.008	0.097	0.036	-0.086	0.014	-0.030	-0.023	0.004	0.110	0.186**	0.109	0.213***	1.000

Note: *p<.10, **p<.05, ***p<.01

Table 5.16 Result of Brant Test (Model 1)

Variables	Chi2	P>Chi2	df
All	15.25	1.000	69
SOLICIT	0.28	0.964	3
LCOMP	1.84	0.606	3
PCOMP	1.20	0.753	3
IMONITOR	0.00	1.000	3
FMONITOR	0.40	0.940	3
REWARD	0.71	0.782	3
SANCTION	2.02	0.569	3
GFECPTY	3.89	0.274	3
GMACPTY	0.37	0.947	3
GFICPTY	3.88	0.275	3
CFECPTY	0.05	0.997	3
CMACPTY	1.10	0.777	3
CFICPTY	0.91	0.823	3
LENGTH	0.02	0.999	3
NPROFIT1	0.57	0.903	3
AGE	1.38	0.709	3
GENDER	0.63	0.890	3
TRAIN	1.05	0.789	3
YEAR	0.31	0.959	3
LENGTH * IMONITOR	0.02	0.999	3
LENGTH * SANCTION	0.05	0.997	3
NPROFIT * IMONITOR	3.26	0.354	3
NPROFIT * SANCTION	0.16	0.984	3

Lastly, this study conducted a test of the model specification to check whether Model 1 has any omitted variables. Specifically, to test for omitted-variable bias, this study used the *linktest* command. As a result, the *p*-value of _hatsq (0.659) was not significant since it was higher than the usual threshold of .05 (95% significance) then this study failed to reject the null and confirmed that Model 1 was correctly specified.

In addition, using the survey data on public contract managers' perception, this study followed a series of hierarchical procedure shown in previous studies dealing with the moderating effects of independent variables in addition to their direct main effects on the organizational performance (e.g., Choi & Rainey, 2010; Fernandez,

2009). More specifically, the model 1 for perceived cost-effectiveness categorizes the independent variables into nine sets and enters them in the following order: control variables (step 1), the main effects of competition (step 2), the main effects of monitoring (step 3), the main effects of monitoring-based incentives (step 4), the main effects of government contract-management capacity (step 5), the main effects of contractor capacity (step 6), the main effects of two contextual factors (here, contract duration (length) and type of contractor) (step 7), the moderating effects of type of contract duration (length) (step 8), and the moderating effects of type of contractor focusing on the case of nonprofit contractors (step 9).

Table 5.17 and Table 5.18 show results of the hierarchical ordered logit regression analyses predicting perceived cost-effectiveness. The former one focuses on the logistic regression coefficient indicating the relationship (its magnitude) between each independent variable and the dependent variable. On the other hand, the latter one focuses on the ordered nature of the responses. The odds ratio demonstrates the change in the predicted logged odds of experiencing an event or having a characteristic for a one-unit change in the independent variables (Ha & Feiock, 2012). Hence, it is useful to interpret the result in that the proportional odds show us how the variance in each independent variable improves or reduces the likelihood, or odds, of the occurrence of each of the different stages of the dependent variable (McCullagh, 1980).

Next, this study reported the final empirical result of Model 1. The result of ordered logit regression analysis (OLOGIT) pertaining to the first dependent variable, cost-effectiveness (Y1), is presented in Table 5.19. Even though a series of

hierarchical ordered logistic regression analyses were conducted, this study only focused on the final model for the interpretation. Since the effect sizes of independent variables on a dependent variable in an ordered logit regression model can be more easily interpreted in the form of changes in the odds, this study focused on both coefficients and odds ratios of variables to interpret the results.[4] This OLOGIT model (Model 1) is significant at the 0.001 level regarding Chi-square value (Prob > χ^2 = 0.000); in turn, such results suggest that this model generally fits the data well. However, it should be noted that unlike OLS regression analysis, the fit of this model cannot be simply determined from *R*-squared measures when using the OLOGIT regression analysis. Nonetheless, its McFadden's R^2 (also known as Pseudo R^2) and Count R^2 can provide some insight into overall explanatory value of the model.[5] In this case, the result suggests that the model has a moderate yet acceptable explanatory power since McFadden's R^2 is 0.307 and since Count R^2 is 0.608. Following Ha and Feiock's (2012) study, one can argue that Model 1 correctly predicts the observed values by approximately 60%.

Unlike earlier expectation, 8 out of 15 main independent variables were found to have statistically significant influences on the perceived cost-effectiveness. In addition, both 1 out of 4 control variables and 1 out of 4 moderating effects provided significant results. First of all, focusing on coefficients of the main factors in an order, among three components of competition factor in the bidding process, only public-

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[4] As Long and Freese (2006) noted, holding all other variables constant, while an odds ratio more than 1 suggests that a unit change in the independent variable relates to an increase in the odds of the dependent variable, an odds ratio less than 1 indicates that a unit change in the independent variable is associated with a decrease in the odds of the dependent variable.

[5] According to Ha and Feiock (2012), there are no clear guidelines as to what constitutes an acceptable model fit with this statistic (Pseudo R^2). Therefore, using Count R^2 can be a more natural interpretation since it presents the percentage of correct predictions.

private competition (PCOMP) produced a significant result at the $p < .01$ level. This result offers strong support for hypothesis 1-3 (odds ratio of 5.09). It reaffirms the argument that it is likely that governments engaged in the bidding process help foster competition, as previous studies (Fernandez, 2007; Greene, 2002; Hefetz & Warner, 2004) indicated.

In terms of monitoring effects, only intensity of monitoring (IMONITOR) had a positive association with the dependent variable at the $p < .01$ level, offering evidence in support of hypothesis 2-1 (odds ratio of 1.831). The effects of monitoring-based incentives, use of rewards (REWARD) and sanctions (SANCTION), as were hypothesized, were found to be positively associated with the dependent variable. More specifically, comparing the two coefficients and odds ratios, this study found that the impact of use of rewards on perceived cost-effectiveness was greater than the impact of use of sanctions on perceived cost-effectiveness. One could explain that one unit increase in the use of rewards increased the odds of perceived cost-effectiveness by a factor of 1.505, and each additional unit of the use of sanctions increased the probability of achieving higher levels of perceived cost-effectiveness by a factor of 1.340. They thus showed support for hypotheses 3-1 and 3-2. These findings are in line with the existing literature (Fernandez, 2009; Girth, 2012; Kettl, 1993; Lambright, 2009; Shetterly, 2000; Yang et al., 2010), suggesting that using monitoring-based incentive provisions is likely to play a critical role in maintaining effective government–contractor relationships accompanied with satisfactory contracting performance.

Moreover, unlike hypotheses proposed in this study, the effects of government capacity and contractor capacity variables (only hypothesis 4-1 and hypothesis 5-3) were marginally supported. Among the three components of each government capacity factor and contractor capacity factor, respectively, only government feasibility capacity (GFECPTY) and contractor financial capacity (CFICPTY) are found to have a positive association with achieving higher levels of perceived cost-effectiveness (odds ratio of 1.517 and 1.354, respectively). Specifically, the effect of government feasibility capacity (GFECPTY) is marginally significant at the 0.10 level and the effect of contractor financial capacity (CFICPTY) is significant at the 0.05 level. Others have no effect at all. This result is likely to suggest that the greater the government feasibility capacity in the contracting out process, the greater likelihood of achieving higher levels of perceived cost-effectiveness (total cost savings). It is also likely that the greater the contractor financial capacity, the higher odds of achieving higher levels of perceived cost-effectiveness (total cost savings). Simply put, it confirms Fernandez's (2007), Liu et al.'s (2007), and Lee and Kingley's (2009) observations that successful contracting out accompanied with higher levels of performance depends on government capacity and contractor capacity.

Turning to the contextual factors, contract length was found to have a negative effect on the dependent variable (odds ratio of 0.909), which, in turn, hypothesis 6 was not supported. In addition, the influence of type of contractor (NPROFIT) had a strong yet negative effect on the dependent variable since the highest coefficient (-5.296) at the 0.01 level among the main explanatory variables in the model. Alternatively, this result means that NPROFIT has the lowest odds ratio of 0.005 (see Table 5.19).

Interestingly, this result is exactly contrary to the hypothesis 7, but it is worthwhile noting that public contract managers tend to perceive that nonprofit contractors can be less likely to result in improved cost-effectiveness. In other words, nonprofit organizations may lack the profit motive in the context of efficiency gain, compared to for-profit ones. Such result appears to be in accordance with previous studies (Amirkhanyan, 2010; Hansmann, 1980; Prager, 1994; Smith & Lipsky, 1993).

Among the control variables, only training experience (TRAIN) is found to be statistically significant but has a negative impact on the dependent variable at the 0.01 level (odds ratio of 0.498). Such result shows that training experiences was associated with lower perceived cost-effectiveness. It can be interpreted that the greater training experiences public contract managers have, the less likelihood that they perceive the possibility of total cost savings in the local government contracts. As such, hypothesis 10 was supported.

Consistent with hypothesized moderating effects of contextual factors, four interactions were included in Model 1. As shown in Table 5.19, most of them failed to offer evidence of the interactions between factors but there is one exception. Only the moderating (indirect) effect of nonprofit contractors (NPROFIT) on the use of sanctions (NPROFIT*SANCTION) are found to be statistically significant at the 0.05 level (odds ratio of 2.529) but positive, as opposed to the expectation. It suggests that the relationship between use of sanctions and perceived cost-effectiveness will be greater when local governments contract their goods and services with nonprofit organizations.

Table 5.17 Hierarchical OLOGIT Regression Results of Cost-effectiveness
: Focus on Coefficient (Model 1)

Effects	Variables	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9
Control Variables	AGE	-0.016 (0.128)	-0.019 (0.130)	-0.037 (0.131)	-0.016 (0.133)	-0.016 (0.136)	-0.005 (0.137)	-0.014 (0.137)	-0.007 (0.138)	-0.018 (0.141)
	GENDER	-0.109 (0.267)	-0.118 (0.283)	-0.026 (0.286)	0.192 (0.297)	0.152 (0.303)	0.155 (0.307)	0.073 (0.311)	0.054 (0.312)	0.019 (0.318)
	TRAIN	-0.064* (0.282)	-0.304* (0.297)	-0.325* (0.300)	-0.447* (0.309)	-0.473* (0.312)	-0.572* (0.320)	-0.624* (0.322)	-0.664* (0.326)	-0.698** (0.326)
	YEAR	0.003 (0.018)	0.008 (0.020)	0.006 (0.020)	0.001 (0.020)	0.007 (0.020)	0.003 (0.020)	0.002 (0.021)	0.002 (0.021)	0.001 (0.021)
Competition	SOLICIT		-0.230 (0.163)	-0.171 (0.165)	-0.251 (0.172)	-0.254 (0.174)	-0.262 (0.174)	-0.238 (0.173)	-0.226 (0.174)	-0.197 (0.176)
	LCOMP		0.007 (0.044)	0.024 (0.045)	-0.034 (0.047)	-0.042 (0.048)	-0.040 (0.048)	-0.034 (0.048)	-0.031 (0.049)	-0.051 (0.050)
	PCOMP		1.783*** (0.191)	1.774*** (0.192)	1.561*** (0.200)	1.528*** (0.206)	1.563*** (0.216)	1.535*** (0.217)	1.550*** (0.218)	1.627*** (0.220)
Monitoring	IMONITOR			0.361** (0.163)	0.268* (0.169)	0.238* (0.171)	0.336* (0.182)	0.313* (0.182)	0.454* (0.250)	0.755*** (0.282)
	FMONITOR			0.130 (0.155)	0.091 (0.160)	0.005 (0.171)	0.025 (0.173)	0.052 (0.174)	0.008 (0.180)	0.038 (0.182)
Monitoring-based Incentives	REWARD				0.338** (0.149)	0.333** (0.150)	0.336** (0.153)	0.358** (0.154)	0.364** (0.154)	0.409*** (0.156)
	SANCTION				0.611*** (0.179)	0.593*** (0.182)	0.567*** (0.184)	0.593*** (0.188)	0.541*** (0.208)	0.292*** (0.221)
Government Capacity	GFECPTY					0.352* (0.210)	0.477** (0.219)	0.471** (0.217)	0.472** (0.217)	0.416* (0.220)
	GMACPTY					0.042 (0.196)	0.023 (0.203)	0.028 (0.023)	0.030 (0.204)	0.055 (0.210)
	GFICPTY					-0.100 (0.167)	-0.095 (0.167)	-0.056 (0.168)	-0.055 (0.168)	-0.068 (0.170)
Contractor Capacity	CFECPTY						-0.125 (0.146)	-0.105 (0.147)	-0.114 (0.147)	-0.079 (0.149)
	CMACPTY						0.118 (0.192)	0.084 (0.195)	0.078 (0.196)	0.037 (0.196)
	CFICPTY						0.317** (0.123)	0.284** (0.124)	0.282** (0.124)	0.303** (0.125)
Other Contextual Variables	LENGTH							-0.023* (0.016)	-0.084* (0.066)	-0.095* (0.067)
	NPROFIT							-0.539*** (0.330)	-0.512*** (0.332)	-5.296*** (1.663)
Moderating Effects of Length	LENGTH x IMONITOR								0.014 (0.018)	0.019 (0.018)
	LENGTH x SANCTION								0.006 (0.012)	0.006 (0.012)
Moderating Effects of Nonprofit	NPROFIT x IMONITOR									0.569 (0.390)
	NPROFIT x SANCTION									0.928** (0.385)
Log Likelihood		-270.482	-213.916	-211.299	-200.630	-198.689	-194.885	-192.464	-191.993	-187.545
LR *chi-square*		0.31***	113.45***	118.68***	140.02***	143.91***	151.51***	156.35***	157.29***	166.19***
McFadden's R^2		0.001	0.210	0.219	0.259	0.266	0.280	0.289	0.291	0.307
Count R^2		0.344	0.618	0.618	0.597	0.586	0.613	0.597	0.608	0.608

Note: Observations (N) = 186, Standard errors in parentheses. *significant at .10 level, **significant at .05 level, ***significant at .01 level.

Table 5.18 Hierarchical OLOGIT Regression Results of Cost-effectiveness : Focus on Odds Ratio (Model 1)

Effects	Variables	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9
Control Variables	AGE	0.985 (0.130)	0.982 (0.127)	0.964 (0.126)	0.985 (0.131)	0.985 (0.138)	0.996 (0.138)	0.987 (0.139)	0.994 (0.139)	0.983 (0.139)
	GENDER	0.897 (0.240)	0.889 (0.251)	0.974 (0.279)	1.212 (0.360)	1.164 (0.353)	1.167 (0.359)	1.076 (0.334)	1.056 (0.330)	1.019 (0.324)
	TRAIN	0.938* (0.264)	0.738* (0.219)	0.723* (0.216)	0.639* (0.197)	0.623* (0.194)	0.564* (0.181)	0.536* (0.173)	0.515** (0.168)	0.498** (0.162)
	YEAR	1.003 (0.018)	1.008 (0.020)	1.006 (0.020)	1.001 (0.020)	1.007 (0.020)	1.003 (0.021)	1.002 (0.021)	1.002 (0.021)	1.001 (0.021)
Competition	SOLICIT		0.795 (0.129)	0.843 (0.139)	0.778 (0.134)	0.776 (0.135)	0.770 (0.134)	0.788 (0.136)	0.798 (0.139)	0.821 (0.145)
	LCOMP		1.007 (0.045)	1.025 (0.046)	0.966 (0.046)	0.959 (0.046)	0.961 (0.046)	0.966 (0.047)	0.969 (0.047)	0.950 (0.048)
	PCOMP		5.947*** (1.136)	5.893*** (1.133)	4.765*** (0.952)	4.608*** (0.950)	4.772*** (1.032)	4.643*** (0.1005)	4.711*** (1.026)	5.090*** (1.121)
Monitoring	IMONITOR			1.437** (0.114)	1.344* (0.130)	1.314* (0.135)	1.412* (0.130)	1.389* (0.133)	1.530* (0.159)	1.831*** (0.132)
	FMONITOR			1.139 (0.177)	1.095 (0.175)	1.005 (0.172)	1.025 (0.178)	1.053 (0.183)	1.009 (0.181)	1.063 (0.175)
Monitoring-based Incentives	REWARD				1.402* (0.209)	1.400** (0.210)	1.400** (0.214)	1.431** (0.221)	1.440** (0.222)	1.505*** (0.235)
	SANCTION				1.842** (0.330)	1.810** (0.329)	1.763** (0.325)	1.809** (0.339)	1.717*** (0.358)	1.340*** (0.297)
Government Capacity	GFECPTY					1.422* (0.298)	1.612** (0.353)	1.602** (0.347)	1.603** (0.348)	1.517* (0.333)
	GMACPTY					1.043 (0.205)	1.024 (0.208)	1.021 (0.207)	1.031 (0.210)	1.056 (0.222)
	GFICPTY					0.905 (0.151)	0.909 (0.152)	0.946 (0.159)	0.947 (0.159)	0.935 (0.159)
Contractor Capacity	CFECPTY						0.993 (0.129)	0.900 (0.133)	0.893 (0.132)	0.924 (0.138)
	CMACPTY						1.125 (0.216)	1.088 (0.212)	1.081 (0.211)	1.037 (0.204)
	CFICPTY						1.372** (0.169)	1.329** (0.165)	1.326** (0.165)	1.354** (0.169)
Other Contextual Variables	LENGTH							0.978 (0.015)	0.919* (0.061)	0.909* (0.061)
	NPROFIT							0.583*** (0.193)	0.599*** (0.199)	0.005*** (0.008)
Moderating Effects of Length	LENGTH x IMONITOR								1.014 (0.018)	1.019 (0.019)
	LENGTH x SANCTION								1.006 (0.012)	1.006 (0.012)
Moderating Effects of Nonprofit	NPROFIT x IMONITOR									1.767 (0.690)
	NPROFIT x SANCTION									2.529** (0.975)
Log Likelihood		-270.482	-270.482	-213.916	-211.299	-200.630	-198.689	-194.885	-192.464	-191.993
LR *chi-square*		0.31***	0.31***	113.45***	118.68***	140.02***	143.91***	151.51***	156.35***	157.29***
McFadden's R^2		0.001	0.001	0.210	0.219	0.259	0.266	0.280	0.289	0.291
Count R^2		0.344	0.344	0.618	0.618	0.597	0.586	0.613	0.597	0.608

Note: Observations (N) = 186, Standard errors in parentheses. *significant at .10 level, **significant at .05 level, ***significant at .01 level.

Table 5.19 Result of Ordered Logit Estimation for Cost-effectiveness (Model 1)

Variables	Coefficient	Standard Error	Odds Ratio
Intensity of Solicitation (SOLICIT)	-0.197	0.176	0.821
Level of Competition (LCOMP)	-0.051	0.050	0.950
Public-Private Competition (PCOMP)	1.627***	0.220	5.090
Intensity of Monitoring (IMONITOR)	0.755***	0.282	1.831
Fairness of Monitoring (FMONITOR)	0.038	0.182	1.063
Use of Rewards (REWARD)	0.409***	0.156	1.505
Use of Sanctions (SANCTION)	0.292***	0.221	1.340
Government Feasibility Capacity (GFECPTY)	0.416*	0.220	1.517
Government Management Capacity (GMACPTY)	0.055	0.210	1.056
Government Financial Capacity (GFICPTY)	-0.068	0.170	0.935
Contractor Feasibility Capacity (CFECPTY)	-0.079	0.149	0.924
Contractor Management Capacity (CMACPTY)	0.037	0.196	1.037
Contractor Financial Capacity (CFICPTY)	0.303**	0.125	1.354
Contract Length (LENGTH)	-0.095*	0.067	0.909
Type of Contractor (NPROFIT)	-5.296***	1.663	0.005
AGE	-0.018	0.141	0.983
GENDER	0.019	0.318	1.019
TRAIN	-0.698**	0.326	0.498
YEAR	0.001	0.021	1.001
LENGTH * IMONITOR	0.019	0.018	1.019
LENGTH * SANCTION	0.006	0.012	1.006
NPROFIT * IMONITOR	0.569	0.390	1.767
NPROFIT * SANCTION	0.928**	0.385	2.529
Cut 1	1.276	1.727	
Cut 2	3.845	1.726	
Cut 3	6.277	1.778	
Cut 4	8.962	1.832	
Log Likelihood		-187.545	
Observations (*N*)		186	
LR χ^2 (23)		166.19***	
Prob > χ^2		0.000	
McFadden's R^2		0.307	
Count R^2		0.608	

Note: *p<.10, **p<.05, ***p<.01 (two-tailed test)

(2) Result of Financial Accountability (Model 2)

Before running Ordinary Least Squares (OLS) regression analysis, this study conducted some diagnostics regarding Model 2. In order to check for potential methodological problems that may possibly influence the results of the analysis, this study tested for correlation, multicollinearity, homoscedasticity, normality of residuals (the existence of outliers) and model specification (omitted-variable bias)[6].

Table 5.20 reports the result of correlations among all variables in Model 2. According to the correlation matrix, as predicted, most independent variables (e.g., solicitation efforts, internal monitoring, use of reward and sanction, contractor capacity) were positively and significantly correlated with financial accountability (here, dependent variable of Model 2). Particularly, one can observe that contractor feasibility capacity (CFCPCITY) and the use of sanction (SANCTION) are more strongly correlated with the dependent variable since they have $r = .737$ ($p < .01$) and $r = .622$ ($p < .01$), respectively, in the model. The predictors (between independent variables) were only moderately correlated with each other as the correlation coefficients were below .5, with the strongest correlation between contract administrative capacity (CACPCITY) and contract feasibility capacity (CFCPCITY) ($r = .495$, $p < .01$). Thus, correlation analysis indicated that multicollinearity did not exist among the independent variables.

[6] This study followed the tests in an order, provided by Stata Web Books, Regression with Stata, Chapter 2 – Regression Diagnostics. UCLA: Institute for Digital Research and Education, Available from http://www.ats.ucla.edu/stat/stata/webbooks/reg/chapter2/statareg2.htm (accessed August 1, 2014) and Oscar Torres-Reyna's (2007) Linear Regression using Stata, Princeton University. Available from http://www.princeton.edu/~otorres/Regression101.pdf (accessed August 1, 2014).

Table 5.20 Correlation of Variables in Model 2

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(1) Y1	1.000																			
(2) SOLICTT	0.326***	1.000																		
(3) LCOMP	0.113	0.077	1.000																	
(4) PCOMP	0.099	0.062	0.018	1.000																
(5) IMONITOR	0.571***	0.012	0.039	0.103	1.000															
(6) FMONITOR	0.132*	-0.011	0.043	-0.047	0.033	1.000														
(7) REWARD	0.251***	0.052	0.016	0.081	0.083	0.113	1.000													
(8) SANCTION	0.622***	0.330***	0.076	0.218***	0.241***	0.051	0.021***	1.000												
(9) GFECPTY	0.011	0.090	-0.113	-0.065	-0.021	-0.1798*	-0.013	-0.075	1.000											
(10) GMACPTY	0.008	0.001	-0.057	-0.060	-0.127	-0.086	-0.040	0.031	0.431***	1.000										
(11) GFICPTY	0.092	0.099	0.113	-0.021	-0.098	0.126*	0.023	0.021*	0.102	0.171***	1.000									
(12) CFECPTY	0.737***	0.244***	0.014	0.187**	0.346**	0.016	0.205***	0.411**	-0.033	-0.014	-0.013	1.000								
(13) CMACPTY	0.553***	0.012	0.056	0.158*	0.353***	0.014	0.222***	0.247**	-0.001	-0.011	-0.033	0.495***	1.000							
(14) CFICPTY	0.023	0.178	0.161*	0.021	-0.077*	-0.098	0.045	-0.029	0.011	0.121	0.125	-0.098	0.033	1.000						
(15) LENGTH	0.078	0.034	0.012*	-0.097	0.015	0.101	0.059	-0.160**	-0.101	-0.022	-0.028	-0.028	-0.103	0.002	1.000					
(16) NPROFIT	-0.101	-0.022	0.185*	-0.121	-0.113	-0.081	0.064	-0.113	0.118	0.104	-0.126*	-0.075	0.126*	0.023	0.023	1.000				
(17) AGE	-0.007	-0.007	0.026	1.123	0.024	0.010	0.008	0.087	0.022	-0.12	-0.023	0.010	0.008	0.026*	0.066	-0.112	1.000			
(18) GENDER	0.122**	-0.032	0.056	0.233	0.012	0.072	-0.060	-0.092	-0.076	0.137	0.223	0.072	-0.060	0.011	0.013	0.063	0.116*	1.000		
(19) TRAIN	-0.021	0.009	-0.014	0.019	-0.072	-0.068	-0.101	-0.026	0.017	0.015	0.294	-0.068	-0.101	0.012*	0.014	0.019	0.012	0.012	1.000	
(20) YEAR	0.104	0.131	0.157	0.011	0.008	-0.045	0.022	0.052	0.001	0.083	-0.015	-0.045	0.022	0.048	0.082	-0.027	-0.052	0.001	0.043	1.000

Note: *p<.10, **p<.05, ***p<.01

Moreover, through the variance-inflation factor (VIF) test, this study confirmed that there was no sign of multicollinearity threat of the independent variables in the model. This test provided a mean VIF of only 1.26 and the largest individual VIF at 1.80 (government feasibility capacity variable denoted as GFECPTY).

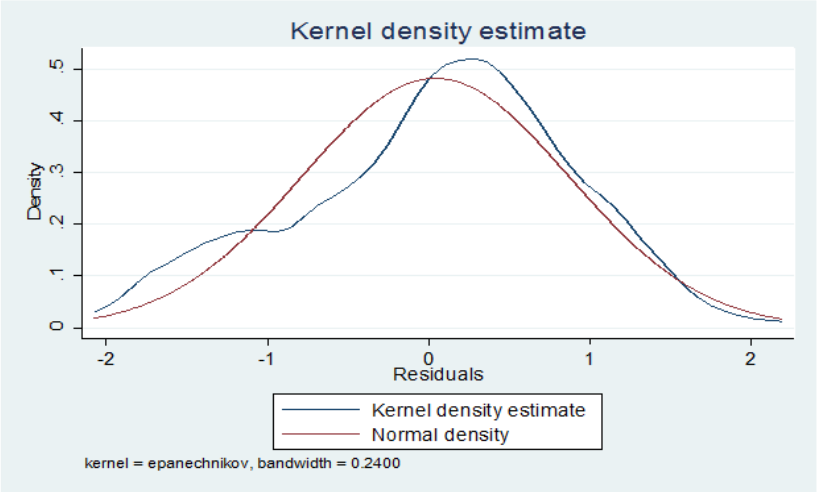
This study also performed a set of robustness tests for heteroskedasticity. After conducting White's test and Breusch-Pagan test[7], it was found no existence of heteroskedasticity in the residuals of the model. Additionally, a histogram of the standardized residuals appeared to illustrate a normal distribution despite slightly skewed (see Figure 5.6). One might doubt the normal pattern based on the density plots, in turn, this study also rechecked for this problem as follow. Residual analyses detected two influential outliers in the model (studentized residuals were greater than 3 in absolute value). To test the sensitivity of the model to these two outliers, OLS regression was run dropping each of the outliers from the analysis. Yet, dropping each of the outliers failed to cause any meaning changes such as the direction of regression coefficients, significance level, R^2, F value, and substantive interpretations. In other words, because the outliers did not appear to influence the main relationships significantly, they were reasonably included in the analysis.

Finally, in order to test for omitted-variable bias, this study used the *ovtest* and *linktest* commands. In the first command, the result provided that *Prob* > F = 0.4054, which means that there is no evidence of omitted variables. In other words, no more variables are needed in the model. In the second command, similarly, the *p*-value of

[7] While the p-value of White's test was 0.4655, the p-value of Breusch-Pagan test was 0.1112. Both tests confirmed that this study would not have to reject the null hypothesis that the variance of the residuals is homogenous.

_hatsq (0.106) was not significant since it was higher than the usual threshold of .05 (95% significance). Thus, this study failed to reject the null and instead concluded that the model was correctly specified.

Figure 5.6 Result of Kernel Density Estimate (Model 2)



Based on the data on public contract managers' perception, this study also conducted ordinary least squares (OLS) regression analysis to estimate the directions and magnitudes of the relationships between independent variables and dependent variable (Y2). Due to the interaction terms (moderating effects of some variables like Model 1), this study run the hierarchical OLS regression analysis predicting perceived financial accountability (see Table 5.22).

Given this result, the final empirical result of OLS regression pertaining to the second dependent variable – perceived financial accountability (Y2) is reported in Table 5.23. Model 2 yields more than moderate R-squared values, indicating R^2 of 0.6255 and adjusted R^2 of 0.5723, respectively. The *F*-statistic also reveals the model fit is sufficient to rule out the hypothesis that no independent variable has a significant

effect on the dependent variable (Prob > F = 0.000). Overall, the result of Model 2 suggests acceptable explanatory powers to examine the hypotheses. Contrary to expectations, however, all explanatory variables are not statistically significant. Only 9 out of 15 main independent variables and 1 out of 4 moderating effects had significant associations with the dependent variable (see Table 5.23).

When focusing on effects of competition-oriented variables, this study finds that the individual impacts differ substantially across three items. Consistent with the result of Model 1, intensity of solicitation channels (SOLICIT) had no impact on the dependent variable. But, as hypothesized, the level of competition (LCOMP) and the public-private competition (PCOMP) were found to be significantly and positively associated with the likelihood of achieving a higher level of perceived financial accountability (Y2) at the p <.10 and the p <.05 level, respectively. Thus, hypothesis 1-2 and hypothesis 1-3 are supported.

In terms of monitoring-related variables, as opposed to Model 1, intensity of monitoring tools (IMONITOR) had no effect on perceived financial accountability, whereas the fairness of monitoring methods (FMONITOR) had a positive effect on perceived financial accountability. In other words, public contract managers reported that having fair monitoring methods (procedures) are more likely to lead to increased contracting financial performance in the context of transparent use of public funds. More specifically, when focusing on standardized coefficient (here, Beta), one can interpret that one standard deviation increase in the fairness of monitoring methods leads to an increase in the likelihood for local governments to achieve a higher level of

perceived financial accountability by 13.3 percent (at the $\alpha = .05$ level). This result confirms hypothesis 2-2.

The effects of monitoring-based incentives, use of rewards (REWARD) and sanctions (SANCTION), provided a mixed result. While the use of rewards (REWARD) has no effect on perceived financial accountability, the use of sanctions (SANCTION) has a positive and significant effect on perceived financial accountability (coefficient of 0.356 at the $p < .01$ level). In other words, given that local government agencies are more likely to use sanctions, it is more likely that they achieve higher levels of perceived financial accountability. This study thus finds support for hypothesis 3-2.

With regard to effects of government contract-management capacity, two components, government feasibility capacity (GFECPTY) and government management capacity (GMACPTY), turned out to increase the likelihood of achieving higher levels of perceived financial accountability. Table 5.25 shows that the effect of GFECPTY and GMACPTY are significant at the 0.01 level (two-tailed test); in turn, such result confirms hypotheses 4-1 and 4-2. More specifically, between the two, the former one has a slightly bigger impact on the dependent variable than the latter one (coefficient of 0.289 and 0.243, respectively). However, when it comes to effects of contractor capacity, this study can find support for only hypothesis 5-2 that contractor management capacity (CMACPTY) has a positive association with the perceived financial accountability.

Consistent with hypothesis 6, the positive and significant association between contract length (LENGTH) and perceived financial accountability is found in the

empirical result of Model 2, suggesting the importance of long-term contracting relationship in contract implementation. In other words, this result is in accordance with previous studies (e.g., Amirkhanyan, 2011; Amirkhanyan et al., 2007, 2012; Kelman, 2002). In contrast, as opposed to the earlier hypothesis 7, type of contractor (NPROFIT) turned out to have a negative relationship with perceived financial accountability although it is statistically significant at the 0.01 level. Perhaps, public contract managers may be less likely to trust nonprofit contractors compared with others since nonprofit contractors have unique legal environment (e.g., a tax exemption, relatively minimal monitoring, and longer contract durations); thus, they tend to be more engaged in opportunistic behaviors in the use and management of public funds.

In addition, all control variables included in the regression analysis do not have any significant associations with perceived financial accountability.

Turing to the interaction terms (moderating effects), this study finds an interesting result because the result is same as the one shown in the empirical result of Model 1 above. Although all hypotheses regarding moderating effects in Model 2 were not supported, the moderating effect of nonprofit contractors on the relationship between use of sanctions and perceived financial accountability (NPROFIT * SANCTION) is positive and significant at the 0.01 level. Unlike prior expectation outlined in the conceptual framework, it seems that the relationship between use of sanctions and perceived financial accountability will be greater when governments contract their goods and services with nonprofit organizations.

Table 5.21 Hierarchical OLS Regression Results of Financial Accountability : Focus on Coefficient (Model 2)

Effects	Variables	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9
Control Variables	AGE	-0.052 (0.066)	-0.045 (0.061)	-0.061 (0.061)	-0.055 (0.052)	-0.009 (0.046)	-0.013 (0.046)	-0.013 (0.045)	-0.016 (0.046)	-0.001 (0.045)
	GENDER	-0.146 (0.141)	-0.122 (0.130)	-0.103 (0.132)	-0.011 (0.113)	-0.021 (0.100)	-0.035 (1.000)	-0.037 (0.099)	-0.047 (0.100)	-0.068 (0.098)
	TRAIN	-0.134 (0.148)	-0.096 (0.136)	-0.105 (0.138)	-0.001 (0.118)	-0.065 (0.102)	-0.055 (0.102)	-0.028 (0.102)	-0.042 (0.103)	-0.071 (0.102)
	YEAR	0.006 (0.010)	0.008 (0.009)	0.007 (0.009)	0.007 (0.008)	0.001 (0.007)	0.002 (0.007)	0.002 (0.007)	0.001 (0.007)	0.001 (0.007)
Competition	SOLICIT		-0.032 (0.073)	-0.029 (0.075)	-0.041 (0.064)	-0.060 (0.055)	-0.054 (0.055)	-0.062 (0.056)	-0.056 (0.056)	-0.062 (0.056)
	LCOMP		0.047** (0.021)	0.051** (0.021)	0.013* (0.019)	0.001* (0.016)	0.001* (0.016)	0.002* (0.016)	0.004* (0.017)	0.011* (0.016)
	PCOMP		0.343*** (0.064)	0.330*** (0.065)	0.144** (0.060)	0.110** (0.053)	0.097* (0.054)	0.104* (0.054)	0.102* (0.054)	0.119** (0.054)
Monitoring	IMONITOR			-0.045 (0.074)	0.021 (0.063)	0.062 (0.055)	0.040 (0.056)	0.032 (0.056)	0.033 (0.078)	0.008 (0.087)
	FMONITOR			0.068* (0.069)	0.029* (0.059)	0.106* (0.055)	0.109* (0.055)	0.105* (0.056)	0.114** (0.057)	0.131** (0.056)
Monitoring-based Incentives	REWARD				0.042 (0.056)	0.041 (0.048)	0.050 (0.049)	0.050 (0.048)	0.055 (0.049)	0.071 (0.048)
	SANCTION				0.502*** (0.064)	0.433*** (0.056)	0.425*** (0.056)	0.432*** (0.056)	0.401*** (0.061)	0.356*** (0.062)
Government Capacity	GFECPTY					0.312*** (0.066)	0.305*** (0.067)	0.302*** (0.066)	0.298*** (0.066)	0.289*** (0.065)
	GMACPTY					0.238*** (0.066)	0.229*** (0.067)	0.231*** (0.066)	0.239*** (0.067)	0.243*** (0.066)
	GFICPTY					-0.052 (0.053)	-0.058 (0.053)	-0.066 (0.053)	-0.066 (0.053)	-0.066 (0.052)
Contractor Capacity	CFECPTY						-0.025 (0.047)	-0.029 (0.047)	-0.029 (0.047)	-0.049 (0.047)
	CMACPTY						0.118* (0.061)	0.138** (0.061)	0.141** (0.062)	0.143** (0.060)
	CFICPTY						-0.018 (0.039)	-0.009 (0.039)	-0.011 (0.040)	-0.011 (0.023)
Other Contextual Variables	LENGTH							0.011** (0.005)	0.002** (0.021)	0.026** (0.023)
	NPROFIT							-0.048* (0.102)	-0.033* (0.103)	-1.396*** (0.503)
Moderating Effects of Length	LENGTH x IMONITOR								-0.001 (0.006)	-0.002 (0.006)
	LENGTH x SANCTION								0.005 (0.004)	-0.002 (0.004)
Moderating Effects of Nonprofit	NPROFIT x IMONITOR									0.137 (0.115)
	NPROFIT x SANCTION									0.286*** (0.097)
Constant		3.750***	2.407***	2.367***	1.325***	0.135***	0.113***	0.268***	0.174***	0.071***
F-value		0.67	4.62	4.80	10.66	11.12	11.81	12.13	11.91	11.76
R^2		0.015	0.186	0.191	0.424	0.579	0.589	0.601	0.604	0.626
Adjusted R^2		0.007	0.154	0.150	0.388	0.545	0.548	0.555	0.553	0.572

Note: Observations (N) = 186, Standard errors in parentheses. *significant at .10 level, **significant at .05 level, ***significant at .01 level.

Table 5.22 Result of OLS Estimation for Financial Accountability (Model 2)

Variables	Coefficient	Standard Error	Beta (β)
Intensity of Solicitation (SOLICIT)	-0.062	0.056	-0.058
Level of Competition (LCOMP)	0.011*	0.016	0.034
Public-Private Competition (PCOMP)	0.119**	0.054	0.128
Intensity of Monitoring (IMONITOR)	0.008	0.087	0.008
Fairness of Monitoring (FMONITOR)	0.131**	0.056	0.133
Use of Rewards (REWARD)	0.071	0.048	0.082
Use of Sanctions (SANCTION)	0.356***	0.062	0.379
Government Feasibility Capacity (GFECPTY)	0.289***	0.065	0.287
Government Management Capacity (GMACPTY)	0.243***	0.066	0.226
Government Financial Capacity (GFICPTY)	-0.066	0.052	-0.071
Contractor Feasibility Capacity (CFECPTY)	-0.049	0.047	-0.054
Contractor Management Capacity (CMACPTY)	0.143**	0.060	0.126
Contractor Financial Capacity (CFICPTY)	-0.011	0.039	-0.014
Contract Length (LENGTH)	0.026**	0.023	0.257
Type of Contractor (NPROFIT)	-1.396***	0.503	-0.712
AGE	-0.001	0.045	-0.001
GENDER	-0.068	0.098	-0.036
TRAIN	-0.071	0.102	-0.036
YEAR	0.001	0.007	0.002
LENGTH * IMONITOR	-0.002	0.006	-0.067
LENGTH * SANCTION	-0.002	0.004	-0.053
NPROFIT * IMONITOR	0.137	0.115	0.205
NPROFIT * SANCTION	0.286***	0.097	0.526
Constant	0.071***	0.507	
Observations (*N*)		186	
F-value		11.76	
Prob > *F*		0.000	
R^2		0.626	
Adjusted R^2		0.572	

Note: *p<.10, **p<.05, *** p<.01 (two-tailed test)

Second Stage Analysis: Private Contract Managers' Perceptions

In the same attempt to construct measures of public contract managers' perceptions, private contract managers' perceptions were operationalized and then analyzed. This section explains the variable measurement and then reports results of the data analysis for Model 3 and Model 4 in an order.

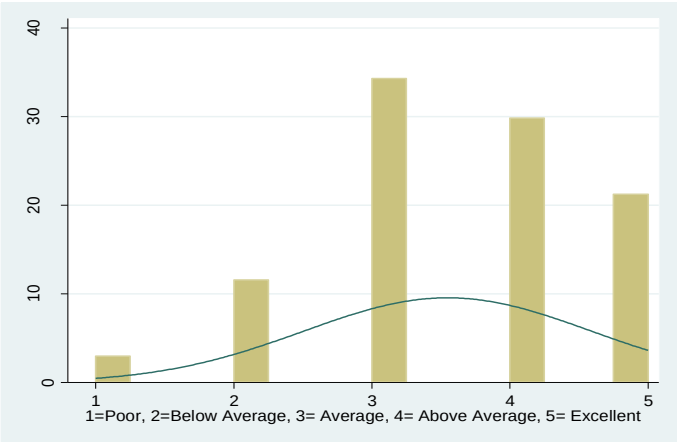
Dependent Variables

In line with the first quantitative stage for the empirical analysis, the second quantitative stage adopted the dependent variable with two dimensions of perceived contracting financial performance: (1) cost-effectiveness and (2) financial accountability.

(1) Cost-effectiveness In the second survey, the main dependent variable *cost-effectiveness* (denoted as Y1) reflects private contract managers' perceptions regarding the extent to which contractors (themselves) reduce total cost in the contracting out process. Specifically, the following survey question was used: "As a contractor, how would you rate your organization's financial performance in the area of total cost savings?" There were five possible response categories: (1) *poor*, (2) *below average*, (3) *average*, (4) *above average*, and (5) *excellent*. As Figure 5.7 shows, not to our surprise, approximately over 50% of the respondents were very confident by stating that their organizations' financial performance regarding total cost savings is likely to be more than average (*above average*: 29.85%, and *excellent*: 21.27%, respectively). Additionally, it should be noted that the scores on this scale range widely from a low of 1 to a high of 5 (a perfect score), and they are distributed in a nearly normal fashion

around a mean of 3.549. In addition, the standard deviation of Y1 is 1.043 with 268 observations as shown in Table 5.36. Overall, it is found that there is ample variation in the cost-effectiveness variable across respondents in the sample.

Figure 5.7 Private Contract Managers' Perceptions of Cost-effectiveness



(2) Financial Accountability In order to generate *financial accountability* variable (denoted as Y2), which represents one key aspect of contracting financial performance of this research, a composite scale was created using mean values after running principal component factor analysis along with a varimax rotation method in Stata 13. Through the survey question about "As a contractor, how would you rate your organization's financial performance in the following areas?" respondents were asked to rate on five-point scale the level of following financial performance items:

- Cost control in the proper use of financial resources
- Managing fraudulent or criminal risks
- Protection of assets against financial corruption
- Use of public funds according to public purposes

- Transparent financial reporting/billing for goods and service delivery

Such five survey items, ranging from 1 (*poor*) to 5 (*excellent*), were included to create the index variable, which measures the extent to which contractors ensure transparent and accountable use of public funds according to the contract in the contracting out process. As predicted, for each individual item indicating financial accountability variable, respondents in the sample reported similarly and largely positively responded the statements (see Table 5.23). For example, in terms of the use of public funds according to public purposes, and transparent financial reporting/billing for goods, over 60% of the respondents answered that their organizations are likely to be more than average (*above average* and *excellent*). Next, with respect to managing fraudulent or criminal risks, approximately 57% of the respondents answered positively (including *above average* and *excellent*). For the protection of assets against financial corruption and cost control in the proper use of financial resources and, about 54% and 53% of the respondents, respectively, provided very positive responses of each statement.

Table 5.23 Perception of Individual Items on Financial Accountability Variable

Survey Items (Financial Accountability Variable)	Poor	Below Average	Average	Above Average	Excellent
Cost control in the proper use of financial resources	9 (3.36)	32 (11.94)	84 (31.34)	**91 (33.96)**	**52 (19.40)**
Managing fraudulent or criminal risks	10 (3.73)	39 (14.55)	65 (24.25)	**77 (28.73)**	**77 (28.73)**
Protection of assets against financial corruption	8 (2.99)	44 (16.42)	71 (26.49)	**77 (28.73)**	**68 (25.37)**
Use of public funds according to public purposes	7 (2.61)	36 (13.43)	61 (22.76)	**85 (31.72)**	**79 (29.48)**

Transparent financial reporting/billing for goods and service delivery	1 (0.37)	40 (14.93)	56 (20.90)	**85 (31.72)**	**86 (32.09)**

Note: Numbers represent frequency of the responses of each survey item and percentages of the responses in parentheses.

The factor analysis resulted in one component of the overall financial accountability, with an eigenvalue of 2.549 and about 51 percent of the variance in the five items, all other components had eigenvalues of less than 1.00. Table 5.24 presents the factor loading matrix. Almost all factor loadings appeared to have positive factor loading of .70 on this component. Specifically, the produced factor loadings for the five measured variables are "cost control in the proper use of financial resources" (0.696), "managing fraudulent or criminal risks" (0.712), "protection of assets against financial corruption" (0.731), "use of public funds according to public purposes" (0.745), and "transparent financial reporting/billing for goods and service delivery" (0.685). A reliability test of these five indicators yielded a Cronbach's alpha (α) coefficient of reliability of .759, suggesting a moderate degree of internal consistency among items.

Table 5.24 Factor Analysis of Financial Accountability Variable

Component(s)	Eigenvalue	Percentage of variance	
1	2.549	.510	
Indicators		Factor loadings	Uniqueness
Cost control in the proper use of financial resources		0.696	0.516
Managing fraudulent or criminal risks		0.712	0.493
Protection of assets against financial corruption		0.731	0.466
Use of public funds according to public purposes		0.745	0.445
Transparent financial reporting/billing for goods and service delivery		0.685	0.531

In addition, in order to get a better sense of the distribution of responses about financial accountability, Figure 5.8 illustrates a histogram for an index that was created from the aforementioned items (Observation = 268, Mean = 3.655). While the shape of distribution seems to be skewed, it presents that this scale ranged in a normal distribution. Accordingly, it is reasonably noted that the mean value of financial accountability variable can serve as the measure of financial accountability. Table 5.25 shows descriptive information of each item presenting financial accountability.

Figure 5.8 Mean Distribution of Financial Accountability Variable

Table 5.25 Descriptive Statistics on Individual Items of Financial Accountability

Survey Items (Financial Accountability Variable)	Mean	SD	Min	Max
Cost control in the proper use of financial resources	3.541	1.040	1	5
Managing fraudulent or criminal risks	3.642	1.151	1	5
Protection of assets against financial corruption	3.571	1.125	1	5
Use of public funds according to public purposes	3.720	1.105	1	5
Transparent financial reporting/billing for goods and service delivery	3.802	1.061	1	5

Note: N (Observation) = 268; SD refers to standard deviation.

Independent Variables

As illustrated earlier, in this study, the main independent variables are categorized into seven groups at large: (1) competition, (2) monitoring, (3) monitoring-based incentives, (4) government capacity, (5) contractor capacity, (6) contract length, and (7) type of contractor. Given this, this study has focused on a couple of such organizational and contextual factors that may be positively or negatively associated with contracting financial performance. In order to examine the direct or indirect (moderating) impacts of those factors on contracting financial performance in the context of perceived cost-effectiveness and financial accountability, this study specified each measurement of the independent variables of interest as follows.

(1) Intensity of Solicitation in the bidding process In the current study, as one of the important factors representing the level of competition in the bidding process, the intensity of solicitation (advertisement for bids) was considered. To measure the intensity of solicitation in the bidding process, the index variable (denoted as SOLICIT) was created by factor analyzing the responses to the following five items: "Based on your experience with your organization's contracts, how frequently does your organization use the following channels to collect information on the bidding process for a typical contract?": (1) media (e.g., News Paper, TV); (2) public hearing; (3) agency websites; (4) electronic bid database; and (5) others (e.g. Union, Professional Associations). Given these questions, respondents were asked to answer each item on a five-point Likert scale: 1 (*not at all*) through 5 (*a great deal*). Figure 5.9 shows that private contract managers tended to use both public agency websites and electronic bid database very frequently (*a lot*: nearly 21% and 28%, respectively,

a great deal: nearly 13% and 22%, respectively) to collect relevant information on the bidding process, compared to other channels.

In order to develop an index variable, the principal component analysis along with a varimax rotation method was applied. According to the result (see Table 5.26), the factor analysis produced one component with an eigenvalue of 2.324 and explained 46.5 percent of the total variance, all other components had eigenvalues of less than 1.00. Factor loadings ranged from 0.610 to 0.743. In other words, two of the five indicators had positive factor loading of over .70 on this component and the remaining three indicators measuring the intensity of solicitation had positive loading of .60 or higher on this component. The five indicators yielded a Cronbach's alpha (α) coefficient of .709, representing a moderate and acceptable level of internal reliability.

Figure 5.9 Use of Solicitation Channels in the Bidding Process

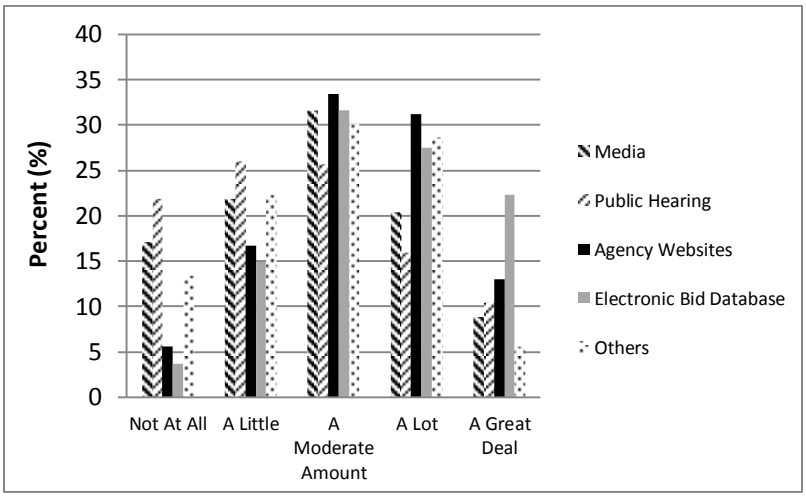


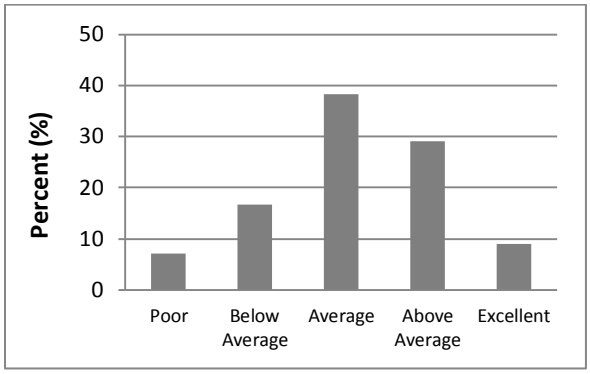
Table 5.26 Factor Analysis of Intensity of Solicitation Variable

Component(s)	Eigenvalue	Percentage of variance	
1	2.324	0.465	
Indicators		Factor loadings	Uniqueness
Media (e.g., News Paper, TV)		0.743	0.448
Public Hearing		0.677	0.542
Agency Websites		0.732	0.465
Electronic Bid Database (e.g., eBID)		0.638	0.593
Others (e.g., Union, Professional Associations)		0.610	0.528

(2) Level of Competition in the Bidding Process Unlike surveys of public contract managers, private contract managers were directly asked to rate the bidding process operated by government agencies in one categorical item. The survey question was: "On average, for a typical contract, how would you rate the bidding process operated by government agencies in the level of competition?" The survey used Likert-type question with answers ranging from 1 (*poor*) to 5 (*excellent*).

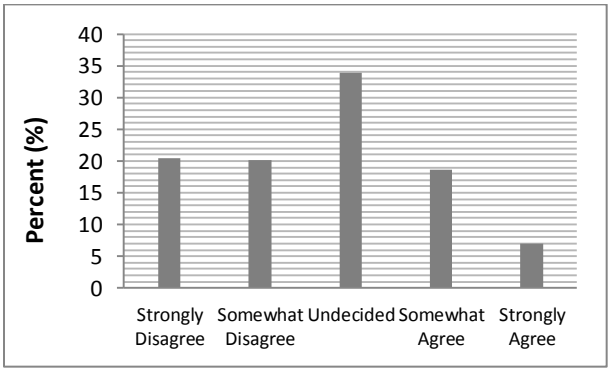
Figure 5.10 displays that most respondents moderately and positively responded to the level of competition in the local government's bidding process. Among 268 observations in total, nearly 38% of the respondents answered that the level of competition in the current bidding process is average. But interestingly, the proportion of respondents who place higher value on the level of competition (sum of *above average* and *excellent* is about 38%) is larger than one of those who place lower value on it (sum of *poor* and *below average* is about 24%). The level of competition scale (LCOMP) has a mean of 3.153 and a standard deviation of 1.033 (see Table 5.36).

Figure 5.10 Perception of Level of Competition in the Bidding Process Variable



(3) Public-Private Competition As with previous studies (e.g., Fernandez, 2007, 2009), public-private competition was also measured with one item in this study. Respondents were asked to read the statement and tell to what extent they agreed that "Public organizations are allowed to bid on contracts with government agencies." The ordinal scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Interestingly, as Figure 5.11 shows, approximately 40 percent of the respondents strongly disagreed or somewhat disagreed with the statement (20.15 % and 20.15%, respectively) and this is more than the proportion as those who strongly agreed (7.09%) and somewhat agreed (18.66%). The mean public-private competition (PCOMP) measure was 2.724 with a standard deviation of 1.186 with 268 observations (see Table 5.36).

Figure 5.11 Perception of Public-Private Competition Variable



(4) Intensity of Monitoring (After Awarding the Contract) Following Fernandez's (2007, 2009) empirical studies, this study operationalized intensity of monitoring after awarding the contract using several variables. This study measured intensity of monitoring reported by contractors (private contract managers) themselves using mean values created from responses to the question about "On average, how frequently does your organization experience monitoring of financial performance by a public agency in each of the following areas?" For this question, there were seven item categories: (1) review of bi-weekly, monthly or quarterly self-reports; (2) analysis of financial/cost documents; (3) field observations (site visits); (4) citizen satisfaction surveys; (5) monitoring of citizen complaints; (6) independent audits (e.g., Comptroller's audit); and (7) others (e.g., Third party monitoring, Ombudsman). These items are ordinal-based on 5-point Likert-type scale (1 = *not at all* through 5 = *a greater deal*) for which the scales anchors varied.

As Table 5.27 shows, most respondents considerably provided negative attitudes and perceptions on each monitoring effort provided by local public agencies (governments). In particular, compared to the first three items (review of self report, analysis of financial/cost documents, and field observations) known as typical monitoring methods in the contracting out process, the four latter items (citizen satisfaction surveys, citizen complaints, independent audits and other monitoring methods by third-party) seem to be less frequently used at the local level from private contractors' viewpoint.

Table 5.27 Perception of Individual Items on Intensity of Monitoring Variable

Survey Items (Intensity of Monitoring Variable)	Not At All	A Little	A Moderate Amount	A Lot	A Great Deal
Review of bi-weekly, monthly or quarterly self reports	**60 (22.39)**	**58 (21.64)**	84 (31.34)	37 (13.81)	**29 (10.82)**
Analysis of financial/cost documents	**47 (17.54)**	**64 (23.88)**	86 (32.09)	37 (13.81)	**34 (12.69)**
Field observations (site visits)	**49 (18.28)**	**62 (23.13)**	77 (28.73)	59 (22.01)	**21 (7.84)**
Citizen satisfaction surveys	**91 (33.96)**	**66 (24.63)**	68 (25.37)	30 (11.19)	**13 (4.85)**
Monitoring of citizen complaints	**84 (31.34)**	**62 (23.13)**	69 (25.75)	24 (8.96)	**29 (10.82)**
Independent audits (e.g., Comptroller's audit)	**47 (17.54)**	**68 (25.37)**	92 (34.33)	40 (14.93)	**21 (7.84)**
Others (e.g., Third-party monitoring, Ombudsman)	**67 (25.00)**	**69 (25.75)**	72 (26.87)	34 (12.69)	**26 (9.7)**

Note: Numbers represent frequency of the responses of each survey item and percentages of the responses in parentheses.

In order to create an index variable reflecting the intensity of monitoring tools, this study used all seven items. As Table 5.28 displays, the factor analysis produced one component with an eigenvalue of 3.593 (51.3 percent of the total variance explained), all other components had eigenvalues of less than 1.00. Factor loadings ranged between 0.691 and 0.793. As such, it is reasonable to note that approximately all seven indicators had positive factor loading of .70 or higher on this component. This result confirms that the seven measures of IMONITOR validate the single factor structure. In addition, a scale reliability analysis of the seven survey items yielded a Cronbach's alpha (α) coefficient .839, indicating a quite higher level of internal reliability.

Table 5.28 Factor Analysis of Intensity of Monitoring Variable

Component(s)	Eigenvalue	Percentage of variance	
1	3.593	0.513	
Indicators		Factor loadings	Uniqueness
Review of bi-weekly, monthly or quarterly self reports		0.709	0.498
Analysis of financial/cost documents		0.771	0.405
Field observations (site visits)		0.745	0.445
Citizen satisfaction surveys		0.721	0.480
Monitoring of citizen complaints		0.691	0.551
Independent audits (e.g., Comptroller's audit)		0.793	0.520
Others (e.g., Third-party monitoring)		0.769	0.409

(5) Fairness of Monitoring Procedures In the survey, respondents were given a list of a public agency's monitoring effort items similar to the previous study questions above. Based on their experiences and opinions about current monitoring system and procedures by government agencies, they were asked to indicate the extent to which the following items were conducted fairly (measure appropriately) on average: (1) review of bi-weekly, monthly or quarterly self-reports; (2) analysis of financial/cost documents; (3) field observations (site visits); (4) citizen satisfaction surveys; (5) monitoring of citizen complaints; (6) independent audits (e.g., Comptroller's audit); and (7) others (e.g., Third party monitoring, Ombudsman). Private contract managers then rated seven items, ranging from 1 (*not at all*) to 5 (*a great deal*). It should be noted that similar to the responses of intensity of monitoring variables explained above, private contract managers are more likely to have negative evaluation of the fairness of monitoring procedures used by local public agencies. As Table 5.29 displays, among the total seven items, over 60% of the respondents critically indicated a negative view on the fairness of citizen satisfaction surveys (*not at all*: 26.49% and *a little*: 23.73%, respectively), monitoring of citizen complaints (*not at all*: 23.13% and

a little: 23.88%, respectively), and other monitoring methods by third-party (*not at all*: 22.39% and *a little*: 32.09%, respectively). For the remaining four items, on average, over 40 % of the respondents responded that public agencies' monitoring procedures (tools) were not conducted fairly.

Table 5.29 Perception on Individual Items of Fairness of Monitoring Procedures

Survey Items (Fairness of Monitoring Procedures Variable)	Not At All	A Little	A Moderate Amount	A Lot	A Great Deal
Review of bi-weekly, monthly or quarterly self reports	**49 (18.28)**	**61 (22.76)**	69 (25.75)	66 (24.63)	23 (8.58)
Analysis of financial/cost documents	**37 (13.81)**	**78 (29.10)**	83 (30.97)	51 (19.03)	19 (7.09)
Field observations (site visits)	**34 (12.69)**	**79 (29.48)**	78 (29.10)	53 (19.78)	24 (8.96)
Citizen satisfaction surveys	**71 (26.49)**	**77 (28.73)**	66 (24.63)	35 (13.06)	19 (7.09)
Monitoring of citizen complaints	**62 (23.13)**	**64 (23.88)**	65 (24.25)	53 (19.78)	24 (8.96)
Independent audits (e.g., Comptroller's audit)	**47 (17.54)**	**73 (27.24)**	81 (30.22)	50 (18.66)	17 (6.34)
Others (e.g., Third-party monitoring, Ombudsman)	**60 (22.39)**	**86 (32.09)**	67 (25.00)	36 (13.43)	19 (7.09)

Note: Numbers represent frequency of the responses of each survey item and percentages of the responses in parentheses.

Consistent with the IMONITOR variable, in order to create an index variable reflecting the fairness of monitoring procedures (measurement), this study used the aforementioned seven items. Principal component factor analysis and varimax rotation produced a single factor on which these seven items loaded. The initial eigenvalue of the scale was 4.109 (about 59 percent of the total variance explained), all other components had eigenvalues of less than 1.00 (see Table 5.30). Factor loadings ranged between 0.712 and 0.874, which means that all seven indicators had positive factor loading of .70 or higher on this component. In addition, the Cronbach's alpha (α)

coefficient was .879, indicating a high level of internal reliability. Given this, mean values across survey items of this analysis can reasonably be utilized as a measure of fairness of monitoring procedures (FMONITOR).

Table 5.30 Factor Analysis of Fairness of Monitoring Variable

Component(s)	Eigenvalue	Percentage of variance	
1	4.109	0.587	
Indicators		Factor loadings	Uniqueness
Review of bi-weekly, monthly or quarterly self reports		0.712	0.516
Analysis of financial/cost documents		0.776	0.398
Field observations (site visits)		0.717	0.486
Citizen satisfaction surveys		0.821	0.325
Monitoring of citizen complaints		0.668	0.554
Independent audits (e.g., Comptroller's audit)		0.874	0.236
Others (e.g., Third-party monitoring)		0.857	0.265

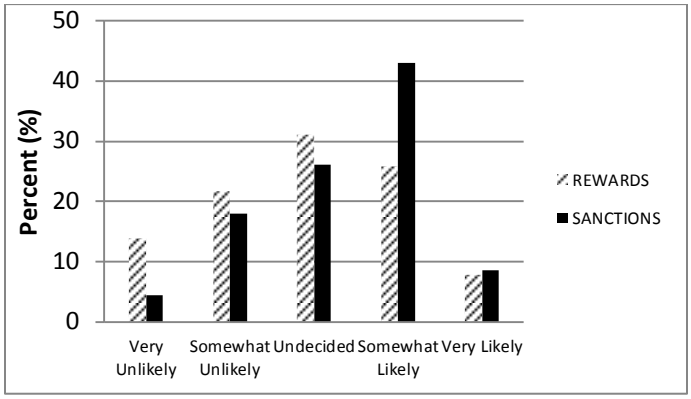
(6) Use of Rewards As one of the monitoring-based incentives based on service provider (here, contractor) performance, this study attempted to measure of use of rewards (e.g., contract renewal/extension, and bonus) provided by a public agency. Thus, it created an ordinal variable based on the following question in the survey: "How likely is it that a public agency provides rewards to your organization when satisfactory financial performance is achieved?" (1 = *very unlikely*, 2 = *somewhat unlikely*, 3 = *undecided*, 4= *somewhat likely*, 5 = *very likely*). Among 268 observations in total, approximately 35% of the sample reported that a public agency is unlikely to provide rewards of highly performing contractors (*very unlikely* was 13.81% and *somewhat unlikely* was 21.64%, respectively). Nearly 31% of the respondents answered neutral (*undecided*) and 34% of them reported that a public agency is likely to provide rewards of highly performing contractors (*somewhat likely* was 25.75% and *very likely* was 7.84%, respectively). The use of rewards scale has a mean of 2.922 and

a standard deviation of 1.157 (see Table 5.36). In the empirical model, this variable was denoted as REWARD.

(7) Use of Sanctions This study also included a measure of use of sanctions (e.g., financial penalties, threat of contract termination, and litigation) used by a public agency. Respondents were asked the question as to "How likely is it that a public agency uses sanctions when unsatisfactory financial performance is detected?" Consistent with the question on use of rewards above, there were five possible response categories (1 = *very unlikely* through 5 = *very likely*). But interestingly, among 268 observations in total, approximately 52% of the sample reported that a public agency is likely to use sanctions of poorly performing contractors (*somewhat likely*: 42.91% and *very likely*: 8.58%, respectively), which is more than two times of the proportions of negative answers (*very unlikely* was 4.48% and *somewhat unlikely* was 17.91%, respectively). The use of sanctions scale has a mean of 3.332 and a standard deviation of 1.012 (see Table 5.36). This ordinal variable was denoted as SANCTION for the analysis.

Moreover, it is important to note that, in contract to the likelihood to use rewards above, based on private contract managers' experiences and perceptions, the likelihood to use sanctions by public agencies appears to be higher as shown in Figure 5.12. More specifically, in comparison, about 35% of the respondents confidently stated that it is "*somewhat unlikely*" and "*very unlikely*" for a public agency to provide rewards, while over 50% of the respondents reported that it is "*somewhat likely*" and "*very likely*" that the agency will be able to use sanctions.

Figure 5.12 Likelihood to Use Rewards and Sanctions



(8) Government Capacity Scales: Feasibility, Management, and Financial Capacity

In support of previous studies (e.g., Brown & Potoski, 2003a , 2003b; Fernandez, 2007, 2009; Girth, 2012; Liu et al., 2007; Yang et al., 2009), this study accounted for government's contract-management capacity as one important factor affecting contracting financial performance. As a result, the survey presented 9 statements regarding government capacity about which respondents were asked to rate their level of agreement, ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Specifically, the nine ordinal indicators of government capacity were: It is likely that public agencies (1) have managers who have higher levels of education; (2) have a legal team to reach agreement on the actual contract; (3) have personnel with expertise in contract administration; (4) have sufficient staff to monitor contractor's performance; (5) have sufficient time to administer contracts effectively; (6) have a capacity for effective communication in sharing information with contractors; (7) make timely payment to contractors; (8) have a capacity for sustainable financing to contractors; and (9) have past experience in the contracting out process.

Interestingly, most respondents indicated their higher level of agreement with the following nine statements as shown in Table 5.31. Among them, the statement having the highest agreement from the respondents is about the likelihood that public agencies have past experience in the contracting out process. Specifically, about 72% of the respondents agreed on that statement (*somewhat agree* = 34.33% and *strongly agree* = 37.69%, respectively). Also, over 60% of the respondents agreed the likelihood that public agencies have managers who have higher levels of education, a legal team to reach agreement on the actual contract, personnel with expertise in contract administration, and sufficient staff to monitor contractor's performance.

Next, the statements about sufficient time to administer contracts effectively (57.46% including *somewhat agree* and *strongly agree* responses), make timely payment to contractors (57.46% including *somewhat agree* and *strongly agree* responses), and a capacity for sustainable financing to contractors (52.62% including *somewhat agree* and *strongly agree* responses) were followed. And most surprisingly, it is found that the lowest agreement among the nine items was about the capacity for effective communication in sharing information with contractors (*somewhat agree* = 22.01% and *strongly agree* = 25.75%, respectively). In other words, only about 48% of the respondents responded that public agencies tend to communicate effectively in sharing information with contractors.

Table 5.31 Perception of Individual Items on the Overall Government Capacity

Survey Items (Government Capacity Variable)	Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
1) Have managers who have higher levels of education	9 (3.36)	30 (11.19)	68 (25.37)	**91 (33.96)**	**70 (26.12)**

2) Have a legal team to reach agreement on the actual contract	8 (2.99)	43 (16.04)	50 (18.66)	**93 (34.70)**	**74 (27.61)**
3) Have personnel with expertise in contract administration	19 (7.09)	42 (15.67)	46 (17.16)	**92 (34.33)**	**69 (25.75)**
4) Have sufficient staff to monitor contractor's performance	31 (11.57)	37 (13.81)	39 (14.55)	**98 (36.57)**	**63 (23.51)**
5) Have sufficient time to administer contracts effectively	25 (9.33)	33 (12.31)	56 (20.90)	**84 (31.34)**	**70 (26.12)**
6) Have a capacity for effective communication in sharing information with contractors	33 (12.31)	49 (18.28)	58 (21.64)	**59 (22.01)**	**69 (25.75)**
7) Make timely payment to contractors	26 (9.70)	46 (17.16)	42 (15.67)	**48 (17.91)**	**106 (39.55)**
8) Have a capacity for sustainable financing to contractors	38 (14.18)	38 (14.18)	51 (19.03)	**66 (24.63)**	**75 (27.99)**
9) Have past experience in the contracting out process	5 (1.87)	36 (13.43)	34 (12.69)	**92 (34.33)**	**101 (37.69)**

Note: Numbers represent frequency of the responses of each survey item and percentages of the responses in parentheses.

As noted in Chapter 4, based on previous studies (e.g., Brown & Potoski, 2003b; Girth, 2012; Lee & Kingsley, 2009; Liu et al., 2007), this study differentiated the overall government capacity into three sub-aspects: (1) government feasibility capacity before awarding the contract, (2) government management capacity (including implementation and evaluation of performance) after awarding the contract, and (3) government financial capacity. While the former one was developed by Brown & Potoski's (2003b), Fernandez's (2007, 2009), and Lee and Kingsley's (2009) empirical studies, the two latter ones were taken by Girth's (2012) and Liu and his colleagues' (2007) studies. Recognizing such government capacity concept, this study

basically conducted an exploratory factor analysis to reduce the items and create scales.

To develop an index variable, first of all, this study ran a principal component factor analysis along with a varimax rotation method, with all nine items under the relevant survey question. As predicted, it is found that the nine measures of government capacity failed to validate a single factor structure. Even though each item might be conceptually interrelated with each other, the result of factor loading of each item extracted three factors (see Table 5.32).

Specifically, government feasibility capacity (denoted as GFECPTY) comprised the following four statements: It is likely that public agencies (1) have managers who have higher levels of education; (2) hires a legal team to reach agreement on the actual contract; and (3) has past experiences in the contracting out process. On the other hand, government management capacity (denoted as GMACPTY) after awarding the contract comprised the following three statements: It is likely that public agencies (1) have personnel with expertise in contract administration; (2) have sufficient staff to monitor contractors' performance; (3) have sufficient time to administer contracts effectively; and (4) has a capacity for effective communication in sharing information with contractors. Lastly, government financial capacity (denoted as GFICPTY) were composed of the remaining two indicators: It is likely that public agencies (1) make timely payment to contractors and (2) have a capacity for sustainable financing to contractors.

In other words, the analysis yielded three-factor solutions, each with eigenvalues greater than 1.0. The solution demonstrated strong loadings on all the

products since the cumulative proportion of variance criteria met with 3 components to satisfy the criterion of explaining nearly 70% of the total variance, with the first factor (GMACPTY) having an eigenvalue of 2.629 (29.21% of the variance explained), the second factor (GFECPTY) having an eigenvalue of1.946 (21.62% of the variance explained), and the third factor (GFICPTY) having an eigenvalue of 1.754 (19.49% of the variance explained), respectively.

As Table 5.32 representing the factor matrix displays, for GFECPTY scale, the produced factor loadings ranged between 0.772 and 0.793, all five indicators had positive factor loading of .60 or higher on this component. For GMACPTY scale, the produced factor loadings ranged between 0.612 and 0.786, which means that all four indicators had positive factor loading of .60 or higher on this component. Lastly, for GFICPTY scale, the produced factor loadings ranged between 0.929 and 0.932, which presented a quite higher component power. In terms of a reliability test of these indicators, GFECPTY scale, GMACPTY scale, and GFICPTY scale have the Cronbach's alpha (α) coefficient of .706, .823, and .855, respectively, indicating a moderate level and higher level of internal reliability (consistency). Given this result, the relevant items clearly could be integrated into each variable and thus mean values across survey items was reasonably used to operationalize the variables for the empirical analyses.

Table 5.32 Factor Analysis of Government Capacity Variables

Variables/Scales	Survey Questions	Components (3) / Factor Loadings (Factor 1 vs. 2 vs. 3)			Uniqueness
Government Feasibility	Have managers who have higher level of education	0.114	**0.793**	-0.012	0.358

Capacity (GFECPTY)	Hire a legal team to reach agreement on the actual contract	0.032	**0.798**	0.002	0.362
	Have past experiences in the contracting out process	0.010	**0.772**	0.015	0.404
Government Management Capacity (GMACPTY)	Have personnel with expertise in contract administration	**0.786**	0.091	0.066	0.370
	Have sufficient staff to monitor contractor's performance	**0.885**	-0.039	0.080	0.209
	Have sufficient time to administer contracts effectively	**0.908**	0.051	0.106	0.162
	Have a capacity for effectiveness communication in sharing information with contractors	**0.612**	0.266	0.019	0.555
Government Financial Capacity (GFICPTY)	Make a timely payment to contractors	0.097	-0.018	**0.929**	0.128
	Have a capacity for sustainable financing to contractors	0.069	0.02	**0.932**	0.125

Note: Extraction method: Principal component analysis. Rotation method: Varimax with Kaiser normalization. The values in boldface show that the survey questions measure three different variables.

(9) Contractor Capacity Scales: Feasibility, Management, and Financial Capacity

In addition to government capacity above, contractor (service providers) capacity can be essential to effective contract management that links to satisfactory contracting financial performance. Previous scholars have suggested that the contractor capacity typically may stem from diverse aspects such as staffing capacity, financial capacity, and technical capacity (Amirkhanyan et al., 2012; Girth, 2012; Liu et al., 2007). In particular, a bidder's capacity appears to be critical prior to awarding the contract since they should be responsible for effective service delivery and performance (Amirkhanyan et al., 2007; Fernandez, 2004, 2009).

Moreover, contractors may help government agencies by negotiating performance standards before awarding the contract, implementing self-monitoring, and sharing relevant information regarding control strategies after awarding the contract (Amirkhanyan, 2008; Kettl, 1993). Amid this perspective, this study posited that higher levels of contracting financial performance depend on contractor's sufficient feasibility capacity (previous experiences and negotiation capacity before the contract), adequate administrative/management capacity after the contract awarded based on sufficient staff, expertise, and time, and financial capacity (independent financial resources available to deliver the goods and services) during the entire contracting out process. In this respect, in this study, the survey presented 6 statements regarding the overall contractor capacity in preparing for/implementing government contracts about which respondents were asked to rate their level of agreement, ranging 1 = *strongly disagree* to 5 = *strongly agree*. The six ordinal indicators of contractor capacity were derived from the following statements: It is likely that contractors (1) have a capacity for negotiation in drafting the contract; (2) have skilled managers with technical expertise in contract management; (3) have sufficient time to administer contracts effectively; (4) have sufficient staff to implement performance self-monitoring; (5) have sufficient resources available to provide goods and services; and (6) have previous experience performing the work.

According to Table 5.33, the responses collected from the sample appear to be very similar across survey items in that private contractors' perception regarding their own capacity highly skewed to a positive direction. For instance, focusing on the positive answers including *somewhat agree* and *strongly agree*, it is found that over

60% of the respondents aggressively agreed on the statement concerning skilled managers with technical expertise in contract management, sufficient time to administer contracts effectively, and sufficient staff to implement performance self-monitoring. Next, the statements regarding a capacity for negotiation in drafting the contract sufficient resources and sufficient resources available to provide goods and services were supported by over 55% and approximately 50% of the respondents, respectively. But interestingly, the last statement about previous experience performing the work was only supported by nearly 43%, which seems to be the lowest level of agreement among the items.

Table 5.33 Perception of Individual Items on the Overall Contractor Capacity

Survey Items (Contractor Capacity Variable)	Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
1) Have a capacity for negotiation in drafting the contract	15 (5.60)	38 (14.18)	63 (23.51)	**69 (25.75)**	**83 (30.97)**
2) Have skilled managers with technical expertise in contract management	6 (2.24)	13 (4.85)	37 (13.81)	**107 (39.93)**	**105 (39.18)**
3) Have sufficient time to administer contracts effectively	3 (1.12)	16 (5.97)	44 (16.42)	**104 (38.81)**	**101 (37.69)**
4) Have sufficient staff to implement performance self-monitoring	5 (1.87)	13 (4.85)	37 (13.81)	**101 (37.69)**	**112 (41.79)**
5) Have sufficient resources available to provide goods and services	36 (13.43)	63 (23.51)	39 (14.55)	**50 (18.66)**	**80 (29.85)**
6) Have previous experience performing the work	29 (10.82)	45 (16.79)	78 (29.10)	**62 (23.13)**	**54 (20.15)**

Note: Numbers represent frequency of the responses of each survey item and percentages of the responses in parentheses.

With these six statements, this study conducted an exploratory factor analysis to reduce the items and create scales. As a result, the factor analysis method along with varimax rotation of the aforementioned six items (also shown in Table 5.34) failed to validate a single factor structure and instead extracted three factors: the first comprised two items that relate largely to contractor feasibility capacity (denoted as CFECPTY) including a capacity for negotiation in drafting the contract and previous experience performing the work, the second comprised three items that focus on contractor administrative capacity (denoted as CMACPTY) concerning the existence of skilled managers with technical expertise, sufficient time to administer contracts effectively, and sufficient staff to implement performance self-monitoring, and the third one retained one item of contractor financial capacity (denoted as CFICPTY) regarding sufficient resources available to provide goods and services.

In other words, when operationalizing contractor capacity variable, this study followed three-factor solution (the cumulative proportion of variance criteria met with 3 components to satisfy the criterion of explaining 72.85% of the total variance), with the first factor (CMACPTY) having an eigenvalue of 1.807 (30.13% of the variance explained), the second factor (CFECPTY) having an eigenvalue of 1.539 (25.65% of the variance explained), and the third factor (CFICPTY) having an eigenvalue of 1.024 (17.07% of the variance explained), respectively, all other components had eigenvalues of less than 1.00. For all three scales, all indicators had positive factor loading of .70 or higher on each component (see Table 5.34).

In addition, it was confirmed that among three scales, contractor feasibility capacity scale (Cronbach's alpha (α) = .701), contractor management capacity scale

(Cronbach's alpha (α) = .669) turned out a moderate degree of internal consistency of each aggregate measure by calculating factor scores of relevant survey items, respectively. Given this, the relevant items clearly could be integrated into each variable and thus mean value across the items was reasonably used to operationalize the variable for the empirical analysis. But, in terms of contractor financial capacity scale (here, CFICPTY), only one item was included in the component, in turn, this study failed to construct an index variable. Instead, this study added it (CFICPTY) independently into the empirical model.

Table 5.34 Factor Analysis of Contractor Capacity Variables

Variables/Scales	Survey Questions	Components/ Factor Loadings (Factor 1 vs. 2 vs. 3)			Uniqueness
Contractor Feasibility Capacity (CFECPTY)	Have a capacity for negotiation in drafting the contract	0.003	**0.881**	0.051	0.221
	Have previous experience performing the work	-0.016	**0.873**	-0.107	0.227
Contractor Management Capacity (CMACPTY)	Have skilled managers with technical expertise in contract management	**0.727**	0.005	-0.097	0.462
	Have sufficient time to administer contracts effectively	**0.812**	0.002	0.163	0.315
	Have sufficient staff to implement performance self-monitoring	**0.787**	-0.027	-0.074	0.374
Contractor Financial Capacity (CFICPTY)	Have sufficient resources available to provide goods and services	0.010	-0.03	**0.984**	0.031

Note: Extraction method: Principal component analysis. Rotation method: Varimax with Kaiser normalization. The values in boldface show that the survey questions measure three different variables.

(10) Contract Length In the survey, respondents were simply asked to report the approximate number of years the (respondent's) organization's contract typically has been in operation for the specific service. Thus, this variable (LENGTH) was measured as the number of years that respondent's current organization has engaged in a contractual relationship with a local government agency (numeric, continuous variable). The mean of LENGTH is about 8 years (7.877) and its standard deviation is 8.48 with 268 observations as shown in Table 5.36.

(11) Type of Contractor To measure the type of contractor (contractor ownership), this study created a dummy variable, NPROFIT, indicating whether a contracting organization (here, private contract managers' current organization) is a nonprofit. This variable was coded "1" if the respondent works in the nonprofit sector; or coded "0" if in the respondent works in the for-profit and public sector. Consistent with my earlier expectation, among local private contract managers in the sample, there were no contract managers who are working in the public organization. According to Table 5.36 displaying descriptive statistics, of all 268 respondents, most private contract managers in the sample seem to work in for-profit organization (62.69 percent) and the rest of them work in nonprofit organization (37.31 percent).

Control Variables

In addition to main factors affecting perceived contracting financial performance, the survey questions captured basic information on the respondents' demographic characteristics that may influence respondents' perceptions on the topic of this study. Assuming that they can be potential determinants of the level of

perceived contracting financial performance, this study thus takes account for four control variables in the model as follows.

(1) Age Respondents were asked to report their ages (AGE) with six different ranges from less than 25 through 65 or older (1 = *less than 25*, 2 = *25-34*, 3 = *35-44*, 4 = *45-54*, 5= *55-64*, and 6 = *65 or older*). According to the result, the majority of the respondents were between 45 and 64 in their ages (about 24% in the age group *45-54* and about 38% in the age group *55-64*, respectively). This result confirms the sample characteristics shown in Table 4.2.

(2) Gender The gender variable (GENDER) was recorded as a dummy variable in order to control its effects on perceived dependent variables. Specifically, it was recorded as "1" for female respondents and as "0" for male respondents. Among the entire respondents, about 70% was male, whereas the remaining 30% was female.

(3) Training Experience In the survey, respondents were asked with the following question: "Have you ever received regular training to support your role as a contract administrator?" Based on this question, this study created a dummy variable (binary variable) identifying training experience (TRAIN) (1= *yes*, 0 = *no*). Interestingly, about 64% of the respondents have not been trained and only about 36% of them have trained to support their roles, which is relatively much lower than one of public contract managers (62%) (see Table 4.2).

(4) Year of Contracting Experience In the survey, respondents were asked to report the approximate number of years the respondent has worked with government contracts in his or her current organization (YEAR). The mean of such numeric, continuous variable (YEAR) is 8.172 (nearly 8 years) and its standard deviation is

8.159 with 268 observation as indicated in Table 5.37. This result demonstrates respondent's tenure (years of contracting works) previously presented in Table 4.2.

Table 5.35 Measurement of Variables (Private Contract Managers)

Dependent Variables: Contracting Financial Performance	
Cost-effectiveness (Y1) (Fernandez, 2009; Savas; 2000)	'As a contractor, how would you rate your organization's financial performance in the area of total cost savings?' (1 = *poor*; 2= *below average*; 3= *average*; 4= *above average*; 5 = *excellent*)
Financial Accountability (Y2) Cronbach's Alpha: 0.759 (Cooper, 2003; Kearns, 1995; Mulgan, 1997)	'As a contractor, how would you rate your organization's financial performance in the following areas?': (1) cost control in the proper use of financial resources; (2) managing fraudulent or criminal risks; (3) protection of assets against financial corruption; (4) use of public funds according to public purposes; and (5) transparent financial reporting/billing for goods and service delivery (1 = *poor* through 5 = *excellent*)
Independent Variables	
Intensity of Solicitation Cronbach's Alpha: 0.709 (Amagoh, 2009; Brown et al., 2006; Girth, 2012)	'Based on your experience with your organization's contracts, how frequently does your organization use the following channels to collect information on the bidding process for a typical contract?' : (1) media; (2) public hearing; (3) agency websites; (4) electronic bid database; and (5) others (1 = *not at all* through 5 = *a great deal*)
Level of Competition (Amirkhanyan et al., 2007; Fernandez, 2009; Girth, 2012)	'On average, for a typical contract, how would you rate the bidding process operated by government agencies in the level of competition?' (1 = *poor*; 2= *below average*; 3= *average*; 4= *above average*; 5 = *excellent*)
Public-Private Competition (Fernandez, 2009)	'Public organizations are allowed to bid on contracts with government agencies' (1 = *strongly disagree* through 5 = *strongly agree*)
Intensity of Monitoring Cronbach's Alpha: 0.839 (Fernandez, 2009; Marvel & Marvel, 2007)	'On average, how frequently does your organization experience monitoring of financial performance by a public agency in each of the following areas?': (1) review of bi-weekly, monthly or quarterly self reports; (2) analysis of financial/cost documents; (3) field observations (site visits); (4) citizen satisfaction surveys; (5) monitoring of citizen complaints; (6) independent audits; and (7) others (1 = *not at all* through 5 = *a great deal*)

Fairness of Monitoring Procedures Cronbach's Alpha: 0.879 (Amagoh, 2009; Amirkhanyan, 2011; Brown et al., 2006)	'On average, how fairly is each of the following monitoring efforts by a public agency used?': (1) review of bi-weekly, monthly or quarterly self reports; (2) analysis of financial/cost documents; (3) field observations (site visits); (4) citizen satisfaction surveys; (5) monitoring of citizen complaints; (6) independent audits; and (7) others (1 = *not at all* through 5 = *a great deal*)
Use of Rewards (Fernandez, 2009; Girth, 2012)	'How likely is it that a public agency provides rewards (e.g., contract renewal/extension, and bonus) to your organization when satisfactory financial performance is achieved?' (1 = *very unlikely* through 5 = *very likely*)
Use of Sanctions (Fernandez, 2009; Girth, 2012)	'How likely is it that a public agency uses sanctions when unsatisfactory financial performance (e.g., corruption) is detected?' (1 = *very unlikely* through 5 = *very likely*)
Government Feasibility Capacity Cronbach's Alpha: 0.706 (Liu et al., 2007)	'It is likely that public agencies: (1) have managers who have higher levels of education; (2) hire a legal team to reach agreement on the actual contract; and (3) have past experience in the contracting out process' (1 = *strongly disagree* through 5 = *strongly agree*)
Government Management Capacity Cronbach's Alpha: 0.823 (Brown & Potoski, 2003b; Fernandez, 2009; Girth, 2012)	'It is likely that public agencies: (1) have personnel with expertise in contract administration; (2) have sufficient staff to monitor contractors' performance; (3) have sufficient time to administer contracts effectively; and (4) have a capacity for effective communication in sharing information with contractors' (1 = *strongly disagree* through 5 = *strongly agree*)
Government Financial Capacity Cronbach's Alpha: 0.855 (Liu et al., 2007)	'It is likely that public agencies: (1) make timely payment to contractors; and (2) have a capacity for sustainable financing to contractors' (1 = *strongly disagree* through 5 = *strongly agree*)
Contractor Feasibility Capacity Cronbach's Alpha: 0.701 (Amirkhanyan et al., 2012; Girth, 2012)	'It is likely that contractors: (1) have a capacity for negotiation in drafting the contract; and (2) have previous experience performing the work' (1 = *strongly disagree* through 5 = *strongly agree*)
Contractor Management Capacity Cronbach's Alpha: 0.669 (Brown et al., 2006; Girth, 2012)	'It is likely that contractors: (1) have skilled managers with technical expertise in contract management; (2) have sufficient time to administer contracts effectively; and (3) have sufficient staff to implement performance self-monitoring' (1 = *strongly disagree* through 5 = *strongly agree*)
Contractor Financial Capacity (Liu et al., 2007)	'It is likely that contractors have sufficient resources available to provide goods and services' (1 = *strongly disagree* through 5 = *strongly agree*)

Contract Length (Amirkhanyan et al., 2012; Girth, 2012)	'Approximately, how long has your organization's contract typically been in operation for the specific service you provide? (Continuous variable)
Type of Contractor (Amirkhanyan, 2009; Girth, 2012)	'Which of the following categories best describes your current organization?' (1 = *nonprofit organization*, 0 = *others including for-profit and public organizations*)
Control Variables	
Age	Respondent's age in six categorical ranges (1= *less than 25*, 2 = *25-34*, 3 = *35-44*, 4 = *45-54*, 5 = *55-64*, and 6 = *65 or older*)
Gender	Respondent's gender (1 = *female*, 0 = *male*: Binary variable)
Training Experience	Respondent's training experience as a contract administrator (1 = *yes*, 0 = *no*: Binary variable)
Year of Contracting Works	The number of years the respondent has worked with government contracts in his/her current organization (Continuous variable)

Results

Consistent with prior models dealing with public managers' perceptions, this study repeated two statistical analyses by using ordered logit (OLOGIT) regression and ordinary least squares (OLS) regression analyses for each dependent variable. Before running the OLOGIT and OLS regressions, missing data that stem from non-response for some questions were excluded by the listwise deletion function rather than using weights to deal with nonresponse error and including missing data, in turn, the final survey sample amounted to 268 valid sample numbers. Table 5.36 provides the descriptive statistics of the variables in Model 3 and Model 4. Recognizing the nature of self-reported responses by private contract managers, this study conducted Harman's single-factor test to examine the seriousness of common method (source) bias, as suggested by Podsakoff and Organ (1986) and Cho and Perry (2012). The analysis resulted in 12 different factors with an eigenvalue above 1, and the first factor (the highest eigenvalue) explained only 14% (14.16 percent) of the variance which was less than 50%. Thus, this result indicated that common method (source) bias is not likely to be a serious concern in the empirical analyses.

Descriptive information for all research variables included in the empirical model is summarized in Table 5.36. This descriptive statistics demonstrate that sufficient variance is present across variables. Focusing on the mean scores, it was found that respondents (here, private contract managers) reported the greater likelihood of achieving financial accountability (Y2) rather than cost-effectiveness (Y1) when they performed contracting out works. It is the same result as in the first survey (public managers' responses). Compared to other variables that may affect

contracting financial performance, most respondents indicated relatively higher levels of government feasibility capacity (GFECPTY) and contractor management capacity (CMACPTY) in local government contracting out process.

Table 5.36 Descriptive Statistics of All Variables (Private Contract Managers)

Variables (N=268)	Mean	SD	Min	Max
Cost-effectiveness (Y1)	3.549	1.043	1	5
Financial Accountability (Y2)	3.655	0.783	1.4	5
SOLICT	3.037	0.786	1	5
LCOMP	3.153	1.033	1	5
PCOMP	2.724	1.186	1	5
IMONITOR	2.610	0.879	1	5
FMONITOR	2.678	0.905	1	5
REWARD	2.922	1.157	1	5
SANCTION	3.332	1.012	1	5
GFECPTY	3.762	0.875	1	5
GMACPTY	3.493	1.305	1	5
GFICPTY	3.465	1.038	1	5
CFECPTY	3.437	1.085	1	5
CMACPTY	4.092	0.737	2	5
CFICPTY	3.280	1.443	1	5
LENGTH	7.877	8.480	1	42
NPROFIT	0.373	0.485	0	1
AGE	3.989	1.172	1	6
GENDER	0.302	0.460	0	1
TRAIN	0.358	0.480	0	1
YEAR	8.172	8.159	1	35

(1) Result of Cost-effectiveness (Model 3)

For Model 3, this study used ordered logit (OLOGIT) regression to test the relationships between the independent variables and private contractors' perceived cost-effectiveness (Y1) in the local government contracting out process since cost-effectiveness is an ordinal level dependent variable. Before running OLOGIT regression analysis, this study conducted some diagnostic tests of Model 3 to check for potential methodological problems that may possibly influence the results of the

analysis. As in Long and Freese (2006) and Hamilton (2006), this study tested for correlation, multicollinearity, the parallel regression assumption, and model specification (omitted-variable bias) in an order.

As illustrated in Table 5.37, a correlation matrix was produced but no multicollinearity threat appeared to exist. Unlike earlier expectation, only four independent variables (e.g., level of competition, public-private competition in the bidding process, and the uses of rewards and sanctions) were positively and statistically correlated with cost-effectiveness (Y1). Among them, the level of competition (LCOMP) variable, use of sanctions (SANCTION) and public-private competition (PCOMP) variables seem to be highly correlated with the dependent variable due to their *p*-values ($p < .01$) but they provided moderate correlation coefficients ($r = .252$, $r = .244$, and $r = .241$, respectively).

Moreover, when focusing on the relationships between independent variables, this study found that the correlation coefficients (r) between public-private competition (PCOMP) and level of competition (LCOMP) was the largest correlation ($r = .444$, $p < .01$). Next, the relationship between the fairness of monitoring (FMONITOR) and the intensity of monitoring (IMONITOR) and the relationship between contractor management capacity (CMACPTY) and government feasibility capacity (GFECPTY) were followed ($r = .388$ and $r = .353$, respectively, $p < .01$). Nevertheless, since all correlation coefficients were not above 0.5, this study failed not only to detect multicollinearity problem but also support any interaction effects of two or more of the independent variables.

Table 5.37 Correlation of Variables in Model 3

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(1) Y1	1.000																			
(2) SOLICTT	0.049	1.000																		
(3) LCOMP	0.252***	0.071	1.000																	
(4) FCOMP	0.241***	0.044	0.444***	1.000																
(5) IMONITOR	0.058	0.046	-0.097	-0.083	1.000															
(6) FMONITOR	0.054	0.042	-0.100	-0.051	0.388***	1.000														
(7) REWARD	0.169**	-0.026	0.092	0.052	0.151**	-0.002	1.000													
(8) SANCTION	0.244***	0.072	0.199**	0.089	0.053	0.051	0.021***	1.000												
(9) GFECPTY	-0.087	-0.018	-0.065	-0.050	-0.026	-0.028	-0.043	-0.046	1.000											
(10) GMACPTY	0.015	0.035	-0.007	-0.070	0.063	0.066	0.006	0.023	0.172***	1.000										
(11) GFICPTY	0.037	0.040	0.115*	-0.020	0.144**	0.030	0.114	0.005	0.007	0.171***	1.000									
(12) CFECPTY	-0.004	0.156**	-0.038	-0.018	-0.070	-0.032	-0.022	0.110*	-0.088	-0.062	-0.010	1.000								
(13) CMACPTY	-0.048	0.041	-0.086	-0.038	0.046	-0.022	-0.055	0.007	0.353***	0.126**	0.030	-0.016	1.000							
(14) CFICPTY	0.001	-0.032	0.107*	0.078	-0.034	-0.053	0.042	-0.005	0.051	0.052	-0.011	-0.062	0.010	1.000						
(15) LENGTH	0.021	0.034	0.080	-0.027	0.014	-0.056	-0.071	-0.092	0.044	0.027	-0.021	0.022	-0.068	-0.034	1.000					
(16) NPROFIT	0.023	-0.076	-0.107*	-0.127**	-0.039	-0.018	-0.148*	-0.109*	-0.002	-0.020	-0.061	0.027	0.054	-0.032	0.039	1.000				
(17) AGE	-0.041	-0.070	0.060	0.052	-0.072	-0.151**	0.066	-0.088	0.014	-0.015	0.127**	0.010	0.008	-0.007	0.026	-0.092	1.000			
(18) GENDER	0.012	0.122**	0.068	0.099	0.022	0.093	0.087	0.073	-0.063	0.085	0.116*	0.072	-0.060	-0.032	0.056	0.063	-0.126**	1.000		
(19) TRAIN	-0.095	0.016	0.048	-0.030	-0.033	0.061	-0.145**	-0.092	0.004	0.026	0.046	-0.068	-0.115*	0.033	0.002	-0.126**	-0.026	0.017	1.000	
(20) YEAR	0.032	-0.055	0.045	0.031	-0.158***	-0.119*	-0.053	0.036	0.076	-0.110*	-0.093	-0.045	0.022	-0.031	-0.057	0.007	0.052	0.001	-0.066	1.000

Note: *p<.10, **p<.05, ***p<.01

According to the result of the variance inflation factor (VIF), it was found that the largest VIF value were 1.29 (level of competition variable denoted as LCOMP and intensity of monitoring variable denoted as IMONITOR), and the average VIF value in Model 3 was 1.15, respectively. Such result suggests that multicollinearity does not appear to be a problem in Model 3.

In order to test the parallel coefficient assumption, two tests were employed in this study. First, this study conducted the LR test to check if the coefficients for all variables are simultaneously equal (Long & Freese, 2006). For the LR test (known as an approximate likelihood-ratio test of proportionality of odds across response categories), this study used the command *omodel* to compute an approximate LR test. The result of the test provided Chi^2 (69) = 74.09 and Prob > Chi^2 = 0.3157, which suggest that the parallel assumption is not significantly violated since $P > 0.05$. In other words, the parallel regression assumption cannot be rejected in Model 3. Second, this study ran the Wald test (also known as Brant test) with the command *brant, detail* to test the parallel regression for each variable individually (e.g., for more information, see Brant, 1990; Long, 1997).

As shown in Table 5.38, the chi-square value of 46.14 for the Brant test and the largest violation is intensity of solicitation efforts (SOLCIT) variable ($P > Chi^2 = 0.081$) among all variables but it may not be problematic since it technically shows that $P > 0.05$, indicating no significant violations of the parallel regression assumption.

Lastly, this study check the model specification as to Model 3 has any omitted variables. Specifically, to test for omitted-variable bias, this study used the *linktest*

command. As a result, the *p*-value of _hatsq (0.766) was not significant since it was higher than the usual threshold of .05 (95% significance) then this study failed to reject the null and confirmed that Model 3 was correctly specified.

Table 5.38 Result of Brant Test (Model 3)

Variables	Chi2	P>Chi2	df
All	46.14	0.985	69
SOLICIT	6.74	0.081	3
LCOMP	1.75	0.625	3
PCOMP	5.88	0.117	3
IMONITOR	1.32	0.724	3
FMONITOR	3.44	0.328	3
REWARD	3.46	0.327	3
SANCTION	1.47	0.689	3
GFECPTY	1.18	0.757	3
GMACPTY	3.76	0.289	3
GFICPTY	1.46	0.693	3
CFECPTY	4.40	0.221	3
CMACPTY	0.98	0.806	3
CFICPTY	5.71	0.126	3
LENGTH	2.87	0.413	3
NPROFIT1	6.45	0.092	3
AGE	5.43	0.143	3
GENDER	3.66	0.301	3
TRAIN	6.34	0.098	3
YEAR	2.00	0.572	3
LENGTH * IMONITOR	3.73	0.293	3
LENGTH * SANCTION	5.19	0.158	3
NPROFIT * IMONITOR	4.26	0.234	3
NPROFIT * SANCTION	3.19	0.363	3

Consistent with Model1, this study ran regression for Model 3 in a hierarchical manner since the model technically has interaction terms (moderating effects of contract length and nonprofit contractor). Following a logical (or theoretical) order determined by a main researcher, instead of entering into the regression equation simultaneously, predictors (independent variables of interest) are entered in the first

step and the interaction terms are entered in the next step (Aiken & West, 1991; Choi & Rainey, 2010). Since the effect sizes of independent variables on a dependent variable in a logistic regression model can be more easily interpreted in terms of changes in the odds (Choi, 2011), this study focused on both coefficients and odds ratios of variables to interpret the results.[8] Both Table 5.39 and Table 5.40 show the results of hierarchical ordered logistic regressions for Model 3, reporting coefficient and odds ratio, respectively. They ultimately allow us to examine predicted probabilities across particular levels of interest. When focusing on hierarchical regression results, the fit of the ordered logit model increased (better) following the steps, with an improved McFadden's $R^2$and an improved Count R^2.

In order to more thoroughly demonstrate the finding, this study needed to focus on the full model with all variables. Accordingly, the final ordered logit model on perceptions of cost-effectiveness is estimated in Table 5.42. Given 268 observations in total, the model exhibits a good fit with the data based on the LR Chi^2 (Prob > Chi^2 = 0.000), McFadden's R^2 (also known as Pseudo R^2 of 0.068), and Count R^2 of 0.366, suggesting that Model 3 has small yet moderate explanatory power predicting the relationship between independent variables and the dependent variable.

Contrary to expectations, all explanatory variables were not significant and only six independent variables[9] found to have the relationships with the dependent

[8] As Long and Freese (2006) and Choi (2011) noted, holding all other variables constant, while an odds ratio more than 1 suggests that a unit change in the independent variable relates to an increase in the odds of the dependent variable, an odds ratio less than 1 indicates that a unit change in the independent variable is associated with a decrease in the odds of the dependent variable.

[9] Level of Competition (LCOMP), Public-Private Competition (PCOMP), Use of Rewards (REWARD), Use of Santions (SANCTION), Government Management Capacity (GMACPTY), and type of contractor (NPROFIT) were found to be positively associated with the dependent variable as hypothesized. Yet, contract length (LENGTH) was statistically significant but it effect on the perceived cost-effectiveness turned out to be negative as opposed to the expectation.

variables as hypothesized (see Table 5.41). First of all, with respect to the effects of competition-oriented variables, the individual impacts differ substantially across three items. The effect of intensity of solicitation channels (SOLICIT) for local bids on perceived cost-effectiveness is not statistically significant. However, as hypothesized, level of competition (LCOMP) is found to be significantly and positively associated with the dependent variable, with an odds ratio of 1.423. Also, public-private competition (PCOMP) is found to have a positive association with the likelihood of achieving higher levels of perceived cost-effectiveness, with an odds ratio of 1.306. These results are in line with previous observations indicating injecting competitiveness in the bidding state can reduce a risk of corruption threats, in turn, may help reach successful contracting out (e.g., Boyne, 1998; Donahue,1989; Fernandez, 2007; Greene, 2002; Savas, 2000). Taken together, while hypothesis 1-1 was not supported, hypotheses 1-2 and 1-3 were highly supported.

In terms of monitoring variables (IMONITOR and FMONITOR), the result fails to support hypotheses 2-1 and 2-2, as the coefficient for these variables fails to achieve statistical significance in the OLOGIT regression. From private contract managers' perspectives, monitoring-related factors do not appear to increase the probability of achieving satisfactory cost-effectiveness. On the contrary, each form of monitoring-based incentives (here, the use of rewards and sanctions) is positively related to perceived cost-effectiveness in support of hypotheses 3-1 and 3-2. According to the result, the use of rewards (REWARD) and sanctions (SANCTION) by local public agencies is significantly associated with the likelihood of achieving

higher levels of perceived cost-effectiveness in a positive way (odds ratio of 1.238 and 1.493, respectively).

More specifically, one could explain that one unit increase in the use of rewards increased the odds of perceived cost-effectiveness by a factor of 1.238, and each additional unit of the use of sanctions increased the probability of perceived cost-effectiveness by a factor of 1.493. In other words, such result indicates that the use of sanctions (SANCTION) explains greater variance of perceived cost-effectiveness than the use of rewards (REWARD). In line with previous studies (e.g., Brown & Potoski, 2005; Cooper, 2003; Girth, 2012; Martin, 2004; Savas, 2002; Shetterly, 2000), these results indicate that appropriate incentives and penalties can be effective not only to achieve expected performance goals, but also to hold contractors accountable for their financial performance.

The influences of government capacity related variables on the dependent variable appear to be marginally significant. Among the three types of government capacity variables, only the effect of government management capacity (GMACPTY) on cost-effectiveness was supported (odds ratio of 1.044). Such result confirms hypothesis 4-2 but fails to find support for hypotheses 4-1 and 4-3. As previous research has indicated (Girth, 2012; Liu et al., 2007), the presence of government's capacity to manage their contracting out process with sufficient staff and time, and effective communication in sharing information with contractors seems to play an important role in achieving higher levels of cost-effectiveness. However, unlike government capacity variables, the results about the relationship between contractor capacity and perceived cost-effectiveness were not consistent with the hypotheses 5-1

through 5-3. None of the three coefficients were statistically significant at even the 0.10 level. It may suggest that contractor capacity itself does little to improve cost-effectiveness.

Interestingly, it was found that contract length (LENGTH) is significantly and negatively associated with the dependent variable in the model (odds ratio of 0.893). Thus, hypothesis 6 is not supported. This result suggests that satisfactory, higher levels of perceived cost-effectiveness can be likely to be associated with shorter contracting relationships between the contractor and government agencies. Such interpretation appears to be in accordance with the previous observation that longer contractual relationships may allow contractors to engage in moral hazard during the contract period (e.g., Amirkhanyan, 2010; Brown et al., 2007; Smith & Lipsky, 1993). Another interesting finding is that consistent with hypothesis 7, nonprofit contractors are more likely than their for-profit or public counterparts to be effective in achieving total cost savings given local government contract settings. It supports the hypothesis about the stronger relationship between nonprofit status and perceived cost-effectiveness with a large odds ratio of 3.030 at the 0.01 level. Such result is in line with previous studies that contracting relationships with nonprofits can be more effective for resulting in better performance (e.g., Amirkhanyan et al., 2008, 2012; Rainey & Steinbauer, 1999).

Model 3 includes additional controls (demographic characteristics of the respondents) for other factors that may influence perceived cost-effectiveness, as previously discussed. Unfortunately, all control variables included in the analysis do

not have significant associations with the dependent variable. In short, this study fails to find any support for hypotheses 8, 9, 10, and 11.

Among four moderating effects in the model, only moderating effect of nonprofit contractor on the relationship between use of sanctions and dependent variable appears to be marginally supported (NPROFIT*SANCTION) with an odds ratio of 0.854. In other words, the results support hypothesis 3-4 but fail to support hypotheses 2-3, 2-4, and 3-3. They demonstrate that when contractors are nonprofit organizations, it is less likely for local government agencies to achieve higher levels of perceived cost-effectiveness through the use of sanctions. In other words, it is likely that sector differences across contracted service providers do have a significant impact on the relationship between the use of sanctions and perceived total cost savings. This result confirms Van Slyke's (2007) and Marvel and Marvel's (2009) observation that nonprofit contractors tend to be less sanctioned than others in practice.

Table 5.39 Hierarchical OLOGIT Regression Results of Cost-effectiveness : Focus on Coefficient (Model 3)

Effects	Variables	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9
Control Variables	AGE	-0.038 (0.096)	-0.092 (0.096)	-0.075 (0.097)	-0.053 (0.099)	-0.049 (0.100)	-0.047 (0.101)	-0.035 (0.101)	-0.052 (0.102)	-0.080 (0.103)
	GENDER	0.064 (0.242)	-0.060 (0.244)	-0.084 (0.245)	-0.099 (0.248)	-0.116 (0.251)	-0.117 (0.252)	-0.145 (0.254)	-0.144 (0.255)	-0.160 (0.256)
	TRAIN	-0.295 (0.232)	-0.314 (0.233)	-0.314 (0.233)	-0.185 (0.237)	-0.178 (0.237)	-0.184 (0.240)	-0.130 (0.242)	-0.128 (0.243)	-0.203 (0.247)
	YEAR	0.009 (0.014)	0.006 (0.014)	0.009 (0.014)	0.005 (0.015)	0.007 (0.015)	0.007 (0.015)	0.006 (0.015)	0.006 (0.015)	0.016 (0.015)
Competition	SOLICIT		0.067 (0.145)	0.061 (0.146)	0.084 (0.147)	0.094 (0.147)	0.108 (0.150)	0.128 (0.151)	0.121 (0.152)	0.131 (0.155)
	LCOMP		0.380*** (0.130)	0.404*** (0.131)	0.339** (0.133)	0.324** (0.135)	0.323** (0.136)	0.339** (0.138)	0.315** (0.140)	0.353** (0.141)
	PCOMP		0.246** (0.111)	0.256** (0.112)	0.245** (0.113)	0.248** (0.113)	0.250** (0.113)	0.267** (0.115)	0.290** (0.116)	0.267** (0.116)
Monitoring	IMONITOR			0.153 (0.143)	0.054 (0.146)	0.048 (0.149)	0.042 (0.149)	0.050 (0.150)	-0.148 (0.201)	-0.278 (0.214)
	FMONITOR			0.110 (0.138)	0.138 (0.141)	0.128 (0.141)	0.125 (0.142)	0.130 (0.143)	0.134 (0.144)	0.141 (0.144)
Monitoring-based Incentives	REWARD				0.151* (0.104)	0.150* (0.104)	0.153* (0.104)	0.183* (0.106)	0.199* (0.108)	0.214** (0.108)
	SANCTION				0.357*** (0.119)	0.364*** (0.119)	0.371*** (0.120)	0.378*** (0.120)	0.334** (0.129)	0.401*** (0.131)
Government Capacity	GFECPTY					-0.172 (0.131)	-0.172 (0.139)	-0.172 (0.139)	-0.185 (0.140)	-0.201 (0.142)
	GMACPTY					0.029*** (0.112)	0.026*** (0.113)	0.034*** (0.112)	0.062*** (0.113)	0.135*** (0.117)
	GFICPTY					0.001 (0.092)	-0.001 (0.092)	-0.001 (0.092)	0.010 (0.092)	0.001 (0.093)
Contractor Capacity	CFECPTY						-0.057 (0.108)	-0.063 (0.108)	-0.060 (0.109)	-0.058 (0.110)
	CMACPTY						-0.007 (0.161)	-0.023 (0.162)	-0.004 (0.164)	-0.010 (0.168)
	CFICPTY						-0.037 (0.080)	-0.023 (0.162)	-0.034 (0.080)	-0.025 (0.081)
Other Contextual Variables	LENGTH							-0.005* (0.014)	-0.088* (0.048)	-0.113** (0.049)
	NPROFIT							0.430* (0.247)	0.452* (0.248)	1.109*** (0.375)
Moderating Effects of Length	LENGTH x IMONITOR								0.023 (0.015)	0.025 (0.015)
	LENGTH x SANCTION								0.009 (0.010)	0.015 (0.010)
Moderating Effects of Nonprofit	NPROFIT x IMONITOR									0.184 (0.224)
	NPROFIT x SANCTION									-0.162** (0.178)
Log Likelihood		-270.482	-377.066	-365.078	-363.729	-356.859	-356.004	-355.766	-354.201	-378.382
LR *chi-square*		0.31***	2.42***	26.39***	29.09***	42.83***	44.54***	45.02***	48.15***	51.45***
McFadden's R^2		0.001	0.003	0.035	0.039	0.057	0.059	0.060	0.064	0.068
Count R^2		0.344	0.358	0.362	0.358	0.347	0.351	0.354	0.377	0.366

Note: Observations (N) = 268, Standard errors in parentheses. *significant at .10 level, **significant at .05 level, ***significant at .01 level.

Table 5.40 Hierarchical OLOGIT Regression Results of Cost-effectiveness
: Focus on Odds Ratio (Model 3)

Effects	Variables	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9
Control Variables	AGE	0.963 (0.092)	0.912 (0.088)	0.927 (0.090)	0.948 (0.094)	0.953 (0.096)	0.954 (0.096)	0.966 (0.097)	0.949 (0.097)	0.923 (0.095)
	GENDER	1.067 (0.258)	0.942 (0.230)	0.919 (0.226)	0.906 (0.225)	0.890 (0.223)	0.890 (0.224)	0.865 (0.219)	0.866 (0.221)	0.852 (0.218)
	TRAIN	0.744 (0.172)	0.731 (0.170)	0.730 (0.170)	0.831 (0.197)	0.837 (0.199)	0.832 (0.200)	0.878 (0.213)	0.880 (0.214)	0.816 (0.202)
	YEAR	1.009 (0.014)	1.006 (0.014)	1.009 (0.015)	1.005 (0.015)	1.007 (0.015)	1.001 (0.015)	1.006 (0.015)	1.006 (0.015)	1.016 (0.016)
Competition	SOLICIT		1.069 (0.155)	1.063 (0.155)	1.088 (0.159)	1.098 (0.161)	1.114 (0.167)	1.137 (0.171)	1.129 (0.172)	1.140 (0.177)
	LCOMP		1.462*** (0.190)	1.497*** (0.196)	1.403** (0.186)	1.382** (0.187)	1.381** (0.187)	1.404** (0.194)	1.370** (0.192)	1.423** (0.201)
	PCOMP		1.279** (0.142)	1.292** (0.144)	1.277** (0.144)	1.281** (0.145)	1.283** (0.145)	1.306** (0.150)	1.337** (0.155)	1.306** (0.152)
Monitoring	IMONITOR			1.164 (0.167)	1.056 (0.155)	1.049 (0.156)	1.043 (0.155)	1.051 (0.158)	0.862 (0.174)	0.757 (0.162)
	FMONITOR			1.116 (0.154)	1.148 (0.162)	1.137 (0.161)	1.133 (0.161)	1.138 (0.163)	1.143 (0.164)	1.152 (0.166)
Monitoring-based Incentives	REWARD				1.163* (0.120)	1.162* (0.121)	1.165* (0.122)	1.200* (0.127)	1.221* (0.131)	1.128* (0.134)
	SANCTION				1.429*** (0.170)	1.439*** (0.171)	1.449*** (0.174)	1.459*** (0.176)	1.396** (0.180)	1.493*** (0.196)
Government Capacity	GFECPTY					0.842 (0.111)	0.842 (0.117)	0.842 (0.117)	0.832 (0.116)	0.793 (0.113)
	GMACPTY					1.029*** (0.115)	1.026*** (0.116)	1.034*** (0.116)	1.064*** (0.121)	1.144*** (0.134)
	GFICPTY					1.001 (0.092)	1.000 (0.092)	1.000 (0.092)	1.010 (0.093)	1.101 (0.093)
Contractor Capacity	CFECPTY						0.944 (0.102)	0.939 (0.102)	0.942 (0.102)	0.944 (0.103)
	CMACPTY						0.993 (0.160)	0.977 (0.158)	0.996 (0.164)	0.990 (0.166)
	CFICPTY						0.963 (0.077)	0.968 (0.078)	0.967 (0.778)	0.976 (0.079)
Other Contextual Variables	LENGTH							0.995* (0.014)	0.916* (0.044)	0.893** (0.044)
	NPROFIT							1.538* (0.379)	1.572* (0.390)	3.030*** (1.137)
Moderating Effects of Length	LENGTH x IMONITOR								1.023 (0.016)	1.026 (0.016)
	LENGTH x SANCTION								1.009 (0.010)	1.105 (0.010)
Moderating Effects of Nonprofit	NPROFIT x IMONITOR									1.202 (0.269)
	NPROFIT x SANCTION									0.854** (0.117)
Log Likelihood		-270.482	-377.066	-365.078	-363.729	-356.859	-356.004	-355.766	-354.201	-378.382
LR *chi-square*		0.31***	2.42***	26.39***	29.09***	42.83***	44.54***	45.02***	48.15***	51.45***
McFadden's R^2		0.001	0.003	0.035	0.039	0.057	0.059	0.060	0.064	0.068
Count R^2		0.344	0.358	0.362	0.358	0.347	0.351	0.354	0.377	0.366

Note: Observations (N) = 268, Standard errors in parentheses. *significant at .10 level, **significant at .05 level, ***significant at .01 level.

Table 5.41 Result of Ordered Logit Estimation for Cost-effectiveness (Model 3)

Variables	Coefficient	Standard Error	Odds Ratio
Intensity of Solicitation (SOLICIT)	0.131	0.155	1.140
Level of Competition (LCOMP)	0.353**	0.141	1.423
Public-Private Competition (PCOMP)	0.267**	0.116	1.306
Intensity of Monitoring (IMONITOR)	-0.278	0.214	0.757
Fairness of Monitoring (FMONITOR)	0.141	0.144	1.152
Use of Rewards (REWARD)	0.214**	0.108	1.238
Use of Sanctions (SANCTION)	0.401***	0.131	1.493
Government Feasibility Capacity (GFECPTY)	-0.231	0.142	0.793
Government Management Capacity (GMACPTY)	0.135***	0.117	1.144
Government Financial Capacity (GFICPTY)	0.001	0.093	1.001
Contractor Feasibility Capacity (CFECPTY)	-0.058	0.110	0.944
Contractor Management Capacity (CMACPTY)	-0.010	0.168	0.990
Contractor Financial Capacity (CFICPTY)	-0.025	0.081	0.976
Contract Length (LENGTH)	-0.113**	0.049	0.893
Type of Contractor (NPROFIT)	1.109***	0.375	3.030
AGE	-0.080	0.103	0.923
GENDER	-0.160	0.256	0.852
TRAIN	-0.203	0.247	0.816
YEAR	0.016	0.015	1.016
LENGTH * IMONITOR	0.025	0.015	1.026
LENGTH * SANCTION	0.015	0.010	1.015
NPROFIT * IMONITOR	0.184	0.224	1.202
NPROFIT * SANCTION	-0.162**	0.178	0.854
Cut 1	-0.886	1.411	
Cut 2	0.945	1.383	
Cut 3	2.922	1.394	
Cut 4	4.486	1.409	
Log Likelihood		-378.382	
Observations (*N*)		268	
LR $\chi 2$ (23)		51.45***	
Prob > $\chi 2$		0.000	
McFadden's R^2		0.068	
Count R^2		0.366	

Note: *p<.10, **p<.05, ***p<.01 (two-tailed test).

(2) Result of Financial Accountability (Model 4)

In the case of Model 4, this study utilized ordinary least squares (OLS) regression analysis to estimate the directions and magnitudes of the relationships between the independent variables and financial accountability (here, denoted as Y2) because financial accountability is an index variable. The OLS regression is the most common multivariate statistical technique used by public administration scholars (Fernandez, 2007) and it provides coefficients indicating the average impact and direction of an independent variable on a dependent variable in a hypothetical average case. Before running OLS regression analysis, consistent with Model 2 illustrated earlier, this study also followed steps to detect potential methodological problems regarding Model 4. Specifically, several diagnostic tests for correlation, multicollinearity, homoscedasticity, normality of residuals (the existence of outliers) and model specification (omitted-variable bias) were employed in an order.

Table 5.42 provides correlations among all variables in Model 4. As predicted, most independent variables (e.g., level of competition, public-private competition in the bidding process, intensity of monitoring, fairness of monitoring, the use of reward and sanction, government financial capacity, and contractor feasibility capacity) were positively and significantly correlated with perceived financial accountability (Y2). But, government feasibility capacity (GFECPTY) was significantly yet negatively correlated with financial accountability. Among control variables, age (AGE), gender (GENDER), and years of contracting experiences in current organization (YEAR) were found to be negatively correlated with perceived financial accountability. More specifically, the use of sanction (SANCTION) is more highly correlated with the

dependent variable since its magnitude of the Pearson correlation coefficient has r = .373 (p < .01) in the model, even though its strength presents medium/moderate correlation (0.3 <|r| <0.5) (Cohen, 1988). Next, the correlation coefficients of the fairness of monitoring (FMONITOR) and contractor feasibility capacity (CFECPTY) commonly are r = .263 (p < .01) in the model. In addition, the largest correlation (r = .444, p < .01) between independent variables is found in the correlation matrix, specifically, in the relationship between public-private competition (PCOMP) and level of competition (LCOMP). Overall, however, predictors (between independent variables) were only moderately correlated with each other as the correlation coefficients were below 0.5. As such, the issue of multicollinearity is not a serious concern in this analysis. Additionally, the variance inflation factor (VIF) test for multicollinearity revealed that the largest VIF value and the average were 1.40 (here, the level of competition variable) and 1.15, respectively, much lower than the typical cutoff point of 3.5. This study thus confirmed that there is no existence of multicollinearity problem in the model. But interestingly, as predicted, (consistent with Model 3 above), when adding four interaction terms (IMONITOR*LENGTH, IMONITOR*NPROFIT, SANCTION*LENGTH, and SANCTION*NPROFIT) based on moderating effects of contract duration (LENGTH) and nonprofit (NPROFIT), this study detected that some of VIF values were higher than 6. As a result, for Model 4 involving such interactions, this study also conducted the moderated multiple regression (MMR) analysis with a hierarchical OLS regression procedure as in previous studies (e.g., Aiken & West, 1991; Choi & Rainey, 2010). The result of such hierarchical regression analysis was reported in Table 5.43.

Table 5.42 Correlation of Variables in Model 4

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(1) Y2	1.000																			
(2) SOLICTT	0.072	1.000																		
(3) LCOMP	0.216***	0.071	1.000																	
(4) PCOMP	0.156**	0.044	0.444***	1.000																
(5) IMONITOR	0.158***	0.046	-0.097	-0.083	1.000															
(6) FMONITOR	0.263***	0.042	-0.100	-0.051	0.388***	1.000														
(7) REWARD	0.245**	-0.026	0.092	0.052	0.151**	-0.002	1.000													
(8) SANCTION	0.373***	0.072	0.199**	0.089	0.053	0.051	0.021***	1.000												
(9) GFECPTY	-0.104*	-0.018	-0.065	-0.050	-0.026	-0.028	-0.043	-0.046	1.000											
(10) GMACPTY	0.086	0.035	-0.007	-0.070	0.063	0.066	0.006	0.023	0.172***	1.000										
(11) GFICPTY	0.180***	0.040	0.115*	-0.020	0.144**	0.030	0.114	0.005	0.007	0.171***	1.000									
(12) CFECPTY	0.263***	0.156**	-0.038	-0.018	-0.070	-0.032	-0.022	0.110*	-0.088	-0.062	-0.010	1.000								
(13) CMACPTY	-0.051	0.041	-0.086	-0.038	0.046	-0.022	-0.055	0.007	0.353***	0.126**	0.030	-0.016	1.000							
(14) CFICPTY	0.015	-0.032	0.107*	0.078	-0.034	-0.053	0.042	-0.005	0.051	0.052	-0.011	-0.062	0.010	1.000						
(15) LENGTH	0.080	0.034	0.080	-0.027	0.014	-0.056	-0.071	-0.092	0.044	0.027	-0.021	0.022	-0.068	-0.034	1.000					
(16) NPROFIT	0.056	-0.076	-0.107*	-0.127**	-0.039	-0.018	-0.148*	-0.109*	-0.002	-0.020	-0.061	0.027	0.054	-0.032	0.039	1.000				
(17) AGE	-0.164***	-0.070	0.060	0.052	-0.072	-0.151**	0.066	-0.088	0.014	-0.015	0.127**	0.010	0.008	-0.007	0.026	-0.092	1.000			
(18) GENDER	0.205***	0.122**	0.068	0.099	0.022	0.093	0.087	0.073	-0.063	0.085	0.116*	0.072	-0.060	-0.032	0.056	0.063	0.126**	1.000		
(19) TRAIN	-0.035	0.016	0.048	-0.030	-0.033	0.061	-0.145**	-0.092	0.004	0.026	0.046	-0.068	-0.115*	0.033	0.002	-0.126**	-0.026	0.017	1.000	
(20) YEAR	-0.133**	-0.055	0.045	0.031	-0.158***	-0.119*	-0.053	0.036	0.076	-0.110*	-0.093	-0.045	0.022	-0.031	-0.057	0.007	0.052	0.001	-0.066	1.000

Note: *p<.10, **p<.05, ***p<.01

Next, in order to detect the presence of heteroskedasticity in the model, this study also ran both White's test and Breusch-Pagan test[10]; in turn, it was found that the model has no heteroskedasticity which may cause standard errors to be biased. This study further examined the studentized residual to identify outliers with the *predict* command with the *rstudent* option and a stem-and-leaf plot[11]. As a result, it is found that the model has no residual greater than 3 in absolute value. Yet, when using the *irv2plot* command (leverage-versus-squared-residual plot), this model found each observation representing the largest leverage and the largest normalized residual squared which can be seen as outliers. Dropping the outliers failed to cause any meaningful changes such as regression coefficients, t-scores, F value, and R^2 in the model. Moreover, when this study produced a kernel density plot with the *normal* option, a histogram of the standardized residuals clearly appeared to illustrate a normal distribution (see Figure 5.13). Taken together, it seems that the original model with 268 observations in total is not problematic.

Finally, to test for omitted-variable bias, consistent with Model 2, this study used the *ovtest* and *linktest* commands. In the first command, Prob > F = 0.3675 which presents that there is no evidence of omitted variables. In the second command, the *p*-value of _hatsq (0.505) was not significant since it was higher than the usual threshold of .05 (95% significance), in turn, it revealed no problems with the specification in Model 4 involving all independent variables and interaction terms.

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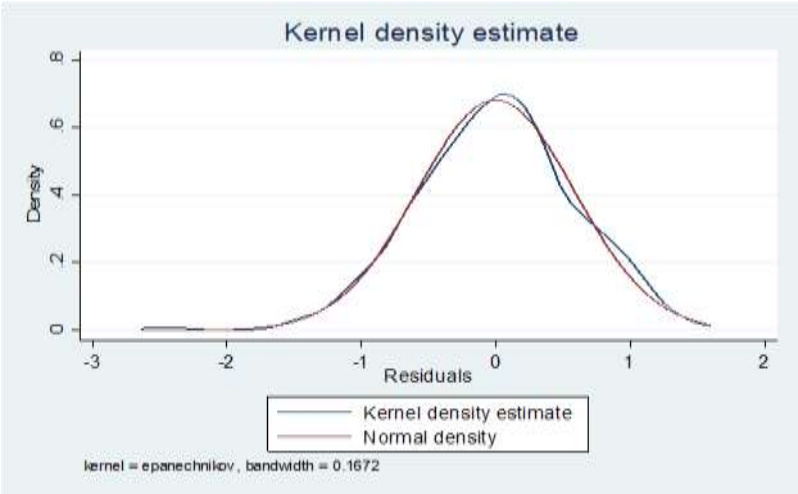
[10] While the p-value of White's test was 0.4713, the p-value of Breusch-Pagan/Cook-Weisberg test was 0.2126 (they were obtained when the model involves all interaction terms in addition to independent variables). Both tests confirmed that this study would not have to reject the null hypothesis that the variance of the residuals is homogenous.

[11] According to the result of a stem-and-leaf plot, the largest *r* was -2.88.

As Table 5.44 below shows, the OLS model (Model 4) is significant at the .001 level regarding the *F* value (Prob > F = 0.000), and its R^2 and adjusted R^2 for the OLS model are about 44.9% and 39.8%, respectively. Such results suggest that this model generally fit the data well and have acceptable explanation power. Focusing on the coefficient of each factor (predictor) in an order, it is found that of all main independent variables, 10 factors appear to support the hypotheses and in terms of control variables and moderating effects, some interesting results were drawn from Model 4.

Figure 5.13 Result of Kernel Density Estimate (Model 4)



According to the result of Model 4 (see Table 5.44), the coefficient of intensity of solicitation (SOLICIT) appears to fail to achieve statistical significance, which suggests collecting bidding information through a wide range of channels has no independent effect on perceived financial accountability (Y2). Thus, the model did not find any support for hypothesis 1-1. However, the level of competition (LCOMP) and public-private competition (PPCOMP) were found to have positive effects on the

contractor's use of public funds in a transparent and accountable manner. Supporting hypotheses 1-2 and 1-3, it is found that perceived level of competition (LCOMP) (coefficient of 0.090, $p < .05$) and perceived public-private competition (PCOMP) (coefficient of 0.071, $p < .05$) are positively related to the dependent variable. Such results are in accordance with previous research indicating that the greater the number of bidders on a contract (in other words, the greater the likelihood that local bidding process is competitive), the greater the likelihood that governments will have better contracting outcome (e.g., Donahue, 1989; Fernandez, 2007; Hefetz & Warner, 2004; Johnston & Girth, 2012; Savas, 2000).

Findings partially supported the hypothesized relationships regarding the effects of monitoring variables on financial accountability. As previously noted, this study developed two measures of monitoring-related variables – intensity of monitoring tools (IMONITOR) and fairness (appropriateness) of monitoring procedures/measurements (FMONITOR) – but the results are mixed. While the fairness of monitoring (FMONITOR) has a positive impact on the dependent variable (coefficient of 0.205, $p < .01$), the effect of intensity of monitoring (IMONITOR) on the dependent variable was insignificant. Therefore, this model only confirm hypothesis 2-2 but fails to find support for hypothesis 2-1. It can be explained that in public agencies where the monitoring methods and their measurements are performed in a fair and appropriate way rather than they are used simply intensively and frequently, it is more likely that contracting financial performance representing financial accountability is enhanced.

As predicted, the effects of monitoring-based incentives (use of rewards and sanctions) on the dependent variable supported hypotheses 3-1 and 3-2. These results are in line with Fernandez's (2007, 2009) and Girth's (2012) observation indicating that such rewards and sanctions work to overcome information asymmetry and contractor's opportunistic behaviors, thereby leading to satisfactory contracting performance. These two variables (REWARD and SANCTION) were positively associated with perceived financial accountability (coefficient of 0.128 and 0.227, respectively, $p < .01$). It should be noted that the effect of use of sanction used by public agencies for unsatisfactory performing contractors seems to be fairly effective at improving contracting financial performance (here, for achieving a higher level of perceived financial accountability) since SANCTION has relatively higher standardized coefficient (0.227) among the main explanatory variables in the model.

Interestingly, hypothesized relationships regarding the effects of government capacity variables were marginally supported. Government feasibility capacity (GFECPTY) appears to have no effect on financial accountability, as the coefficient for this variable fails to achieve statistical significance in the OLS regression. So, hypothesis 4-1 is not supported. Nonetheless, the result shows positive associations between other two remaining government capacity variables and the dependent variable. Specifically, the coefficients for government management capacity (GMACPTY) and for government financial capacity (GFICPTY) are positive (0.089 and 0.081, respectively) and statistically significant at the $p < .05$ level and the $p < .01$ level, respectively. Those findings thus support hypotheses 4-2 and 4-3. This evidence is consistent with the previous proposition that investing in sufficient government in-

house capacity matters for better contracting performance (Amirkhanyan et al., 2007; Brown & Potoski, 2003b; Cohen & Eimicke, 2008; Girth, 2012; Liu et al., 2007).

With respect to the effects of contractor capacity variables, the results also appear to be mixed. Among three different contractor capacity variables, only contractor feasibility capacity (CFECPTY) is found to be significantly and positively associated with perceived financial accountability (coefficient of 0.188, $p < .01$). This finding confirms hypothesis 5-1. However, contractor management capacity (CMACPTY) and contractor financial capacity (CFICPTY) were no longer statistically significant; in turn, the model fails to find support for hypotheses 5-2 and 5-3. This result is likely to suggest that contractor's previous experience and negotiating capacity before delivering specified services is fundamental to successful contracting out as in Amirkhanyan and her colleagues' (2012), Romzek and Johnston's (1999, 2005) and Girth's (2012) studies.

Turning to two contextual variables (contract length and type of contractor), the results were consistent with the earlier expectation. The coefficient for contract duration (LENGTH) is positive (0.008), as hypothesized, and statistically significant at the $p < .10$ level. In other words, hypothesis 6 is fairly supported. It implies that as the contracting relationship matures over time, it is more likely to achieve a higher level of financial accountability. Such result is in line with the previous observation that longer contracting relationships may help prevent opportunistic behaviors and enhance cooperation and trust (e.g., Amirkhanyan, 2011; Amirkhanyan et al., 2010, 2012; Fernandez, 2007, 2009; Mulgan, 1997; Sclar, 2000; Van Slyke, 2007). In addition, supporting hypothesis 7, type of contractor (NPROFIT) has a positive independent

effect on perceived financial accountability. Surprisingly, the effect of NPROFIT seems to have the highest standardized coefficient (0.576, $p < .01$) among all variables in the model. As previous studies indicated, particularly in the nonprofit literature (e.g., Amirkhanyan, 2010; Lamothe & Lamothe, 2009; Smith & Lipsky, 1993; Van Slyke, 2002, 2003), nonprofit contracting organizations tend to behave less opportunistically compared to others. As such, the result of Model 4 offers some evidence that nonprofit contractors are more likely to have a stronger collaborative relationship with local government agencies, thereby resulting in better financial outcome and performance.

Table 5.44 further indicates that most of the control variables included in the model have significant associations with the dependent variable (here, AGE, GENDER, and YEAR), except for training experience variable (TRAIN). Interestingly, it is found that respondents who are relatively older and have more experiences working in contracting works reported that it is less likely to achieve satisfactory, higher levels of perceived financial accountability through a typical local contract. On the other hand, compared to male private contract managers, female managers tended to agree that it is likely to achieve higher levels of perceived financial accountability based on a typical local contract. Thus, even though hypothesis 10 is not supported, hypotheses 8, 9, and 11 are strongly supported.

Lastly, focusing on the empirical results of moderating relationships or interactions, it is observed that most of the hypothesized relationships seem to be barely supported. Among four moderating effects, only one interaction term (NPROFIT * IMONITOR) is found to be statistically significant. Interestingly, it

should be worthwhile noting that even though the direct effect of intensity of monitoring methods (IMONITOR) on the dependent variable is not statistically supported, the moderating effect of nonprofit contractors on the relationship between intensity of monitoring and the dependent variable (NPROFIT * IMONITOR) is found in the predicted direction and slightly significant at the 0.10 level. As such, hypothesis 2-4 is marginally supported. The results show no evidence in supporting of hypotheses 2-3, 3-3, and 3-4.

Table 5.43 Hierarchical OLS Regression Results of Financial Accountability : Focus on Coefficient (Model 4)

Effects	Variables	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9
Control Variables	AGE	-0.090** (0.040)	-0.101** (0.039)	-0.080** (0.038)	-0.071** (0.036)	-0.084** (0.036)	-0.091** (0.035)	-0.086** (0.034)	-0.092*** (0.034)	-0.083** (0.034)
	GENDER	0.322*** (0.101)	0.282*** (0.100)	0.249** (0.097)	0.205** (0.091)	0.164* (0.092)	0.135* (0.088)	0.097* (0.087)	0.101* (0.088)	0.103* (0.086)
	TRAIN	-0.082 (0.097)	-0.095 (0.095)	-0.109 (0.092)	-0.027 (0.087)	-0.037 (0.086)	-0.012 (0.084)	0.026 (0.083)	0.025 (0.084)	0.025 (0.082)
	YEAR	-0.012** (0.006)	-0.013** (0.006)	-0.010* (0.005)	-0.010** (0.005)	-0.008* (0.005)	-0.007* (0.005)	-0.006* (0.005)	-0.006* (0.005)	-0.004* (0.005)
Competition	SOLICIT		0.018 (0.058)	0.010 (0.056)	0.005 (0.053)	0.001 (0.052)	-0.036 (0.051)	-0.028 (0.050)	-0.029 (0.050)	-0.046 (0.050)
	LCOMP		0.146*** (0.049)	0.166*** (0.048)	0.109** (0.046)	0.090** (0.046)	0.103** (0.044)	0.091** (0.044)	0.088** (0.044)	0.090** (0.043)
	PCOMP		0.042** (0.043)	0.045** (0.041)	0.046** (0.039)	0.056** (0.039)	0.060** (0.037)	0.076** (0.037)	0.081** (0.037)	0.071** (0.036)
Monitoring	IMONITOR			0.061 (0.055)	0.025 (0.052)	0.006 (0.052)	0.027 (0.050)	0.022 (0.049)	0.021 (0.065)	0.003 (0.068)
	FMONITOR			0.191*** (0.053)	0.188*** (0.050)	0.187*** (0.050)	0.192*** (0.048)	0.202*** (0.047)	0.202*** (0.047)	0.205*** (0.046)
Monitoring-based Incentives	REWARD				0.104*** (0.037)	0.097*** (0.037)	0.104*** (0.036)	0.123*** (0.036)	0.127*** (0.036)	0.128*** (0.035)
	SANCTION				0.214** (0.043)	0.217** (0.042)	0.194** (0.041)	0.212*** (0.040)	0.189*** (0.055)	0.227*** (0.059)
Government Capacity	GFECPTY					-0.055 (0.047)	-0.036 (0.049)	-0.042 (0.048)	-0.048 (0.048)	-0.056 (0.047)
	GMACPTY					0.039* (0.041)	0.051** (0.039)	0.052** (0.039)	0.058** (0.039)	0.089** (0.039)
	GFICPTY					0.079* (0.033)	0.079** (0.032)	0.085*** (0.031)	0.085*** (0.031)	0.081*** (0.030)
Contractor Capacity	CFECPTY						0.184*** (0.037)	0.180*** (0.036)	0.182*** (0.037)	0.188*** (0.036)
	CMACPTY						-0.013 (0.057)	-0.008 (0.057)	-0.003 (0.057)	-0.027 (0.056)
	CFICPTY						0.008 (0.027)	0.012 (0.027)	0.013 (0.027)	0.018 (0.026)
Other Contextual Variables	LENGTH							0.011** (0.005)	0.009* (0.017)	0.008* (0.017)
	NPROFIT							0.210** (0.083)	0.210** (0.083)	0.576*** (0.128)
Moderating Effects of Length	LENGTH x IMONITOR								0.005 (0.005)	0.007 (0.004)
	LENGTH x SANCTION								0.003 (0.004)	0.001 (0.004)
Moderating Effects of Nonprofit	NPROFIT x IMONITOR									-0.141* (0.073)
	NPROFIT x SANCTION									-0.040 (0.059)
Constant		-270.482	4.048***	3.485***	2.672***	1.903***	1.856***	1.204***	0.834**	0.859**
F-value		0.31***	5.70***	5.65***	6.88***	8.06***	8.67***	9.20***	9.19***	8.66***
R^2		0.001	0.080	0.132	0.194	0.302	0.324	0.385	0.413	0.449
Adjusted R^2		0.344	0.066	0.109	0.165	0.272	0.2870	0.343	0.368	0.398

Note: Observations (N) = 268, Standard errors in parentheses. *significant at .10 level, **significant at .05 level, ***significant at .01 level.

Table 5.44 OLS Regression Analysis of Financial Accountability (Model 4)

Variables	Coefficient	Standard Error	Beta (β)
Intensity of Solicitation (SOLICIT)	-0.046	0.050	-0.056
Level of Competition (LCOMP)	0.090**	0.043	0.118
Public-Private Competition (PCOMP)	0.071**	0.036	0.108
Intensity of Monitoring (IMONITOR)	0.003	0.068	0.003
Fairness of Monitoring (FMONITOR)	0.205***	0.046	0.237
Use of Rewards (REWARD)	0.128***	0.035	0.189
Use of Sanctions (SANCTION)	0.227***	0.059	0.293
Government Feasibility Capacity (GFECPTY)	-0.056	0.047	-0.063
Government Management Capacity (GMACPTY)	0.089**	0.039	0.118
Government Financial Capacity (GFICPTY)	0.081***	0.030	0.134
Contractor Feasibility Capacity (CFECPTY)	0.188***	0.036	0.260
Contractor Management Capacity (CMACPTY)	-0.027	0.056	-0.025
Contractor Financial Capacity (CFICPTY)	0.018	0.026	0.033
Contract Length (LENGTH)	0.008*	0.017	0.083
Type of Contractor (NPROFIT)	0.576***	0.128	0.357
AGE	-0.083**	0.034	-0.124
GENDER	0.103*	0.086	0.060
TRAIN	0.025	0.082	0.015
YEAR	-0.004*	0.005	-0.040
LENGTH * IMONITOR	0.007	0.004	0.221
LENGTH * SANCTION	0.001	0.004	0.008
NPROFIT * IMONITOR	-0.141*	0.073	-0.232
NPROFIT * SANCTION	-0.040	0.059	-0.085
Constant	0.859**	0.473	
Observations (*N*)		268	
F-value		8.66***	
Prob > *F*		0.000	
R^2		0.449	
Adjusted R^2		0.398	

Note: *p<.10, **p<.05, ***p<.01 (two-tailed test).

Third Stage Analysis: Comparison of Overall Perceptions between Public Contract Managers and Private Contract Managers

In order to compare overall perceptions of the topic between public and private contract managers, the integrated results will be addressed across two proxies for perceived contracting financial performance. The ordered logistic (OLOGIT) regression results predicting perceived cost-effectiveness (Y1) by sector (Model 1 and Model 3) were reported in Table 5.45, whereas the ordinary least squares (OLS) regression results predicting perceived financial accountability (Y2) by sector (Model 2 and Model 4) were presented in Table 5.46. To conclude, overall survey findings from each of the four different models and their effects were summarized in Table 5.47. The next section will briefly discuss a summary of the overall findings of each dependent variable, focusing on only statistically significant results, that is, research hypotheses which have been supported by the survey data.

Result of Perceived Cost-effectiveness (Y1)

(1) The Direct Effects of Competition **($H_{1\text{-}1} – H_{1\text{-}3}$)** As indicated in Table 5.50, level of competition (LCOMP) was found to be a significant predictor of perceived cost-effectiveness in only private contract managers' survey. Thus, hypothesis 1-2 turned out to be partially supported. However, both public and private contract managers recognized that public-private competition in a bid (PPCOMP) can play an important role in achieving total cost savings. As expected, hypothesis 1-3 was supported.

***(2) The Direct Effects of Monitoring* ($H_{2\text{-}1} – H_{2\text{-}2}$)** With respect to the monitoring-related variables, only the intensity of monitoring (IMONITOR) variable was found to have a significant and positive impact on perceived cost-effectiveness. Interestingly, the impact was found only in public contract managers' survey but its coefficient was strongly significant at the p <.01 level, with an odds ratio of 1.831. In turn, hypothesis 2-1 was partially supported.

***(3) The Direct Effects of Monitoring-Based Incentives* ($H_{3\text{-}1} – H_{3\text{-}2}$)** As predicted, two variables – uses of rewards (REWARD) and sanctions (SANCTION) by local government agencies – were found to have a positive association with the likelihood of achieving higher levels of perceived cost-effectiveness in support of hypotheses 3-1 and 3-2. Especially, while public contract managers relatively placed greater value on the impact of use of rewards, private ones placed greater value on the impact of use of sanctions toward total cost savings (odds ratio of 1.505 and 1.493, respectively).

***(4) The Direct Effects of Government Capacity Variables* ($H_{4\text{-}1} – H_{4\text{-}3}$)** The effects of government capacity variables were marginally supported since only government feasibility capacity (GFECPTY) was found to have a positive relationship with the cost-effectiveness in public contract managers' surveys (odds ratio of 1.517, coefficient of 0.416 at the p <.10 level), whereas only government management capacity (GMACPTY) was found to have a positive associated with the cost-effectiveness in the private ones' surveys (odds ratio of 1.144, coefficient of 0.135 at the p <.01 level). Accordingly, only hypotheses 4-1 and 4-2 were partially supported.

***(5) The Direct Effects of Contractor Capacity Variables* ($H_{5\text{-}1} – H_{5\text{-}3}$)** In terms of the impact of contractor capacity variables, unfortunately, almost all related

hypotheses were not statistically significant except for one variable. In other words, public contract managers perceived that among other factors, contractor financial capacity (CFICPTY) could be a significant factor affecting satisfactory cost-effectiveness. Thus, only hypothesis 5-3 was partially supported.

***(6) The Direct Effects of Contract Length and Type of Contractor* ($H_6 – H_7$)** The impacts of contextual variables (LENGTH and NPROFIT) indicated interesting results. First, in terms of the influence of contract length (LENGTH) on cost-effectiveness, the findings showed an opposite way of the earlier hypothesized relationship in the conceptual framework. In short, public and private contract managers commonly viewed that the longer government and the contractors work together, the less likelihood of achieving higher levels of cost-effectiveness in local government contracting out process. Thus, the overall finding of LENGTH failed to support hypothesis 6. It may imply that longer contracting relationships may be not necessarily effective to lowering total costs when local governments contract out the production and delivery of their goods and services to private contractors in practice.

Second, concerning the impact of type contractors (NPROFIT), the view of nonprofit contractors was different between public contract managers and private ones. Public contract managers tended to have a somewhat negative view of nonprofit contractors. According to the result of Model 1 (odds ratio of 0.005 and coefficient of -5.296 at the p <.01 level), nonprofit contracting organizations are more likely to behave opportunistically compared to other contractors, in other words, in cases where local government agencies are in the contracting relationships with nonprofit contractors, it is less likely to achieve total cost savings. On the other hand, private

contract managers reported that nonprofit contractors tended to outperform others including for-profit contractors in terms of cost-effectiveness. The result of Model 3 showed the evidence that the impact of nonprofit contractors on cost-effectiveness was significantly positive (odds ratio of 3.030 and coefficient of 1.019 at the p <.01 level). In turn, hypothesis 7 was partially supported.

(7) The Moderating Effects of Contract Length (LENGTH) **($H_{2\text{-}3} – H_{3\text{-}3}$)** As opposed to the earlier expectation, the moderating (indirect) effects of contract length (LENGTH) became insignificant, which, in turn, the hypothesized relationships were not supported.

(8) The Moderating Effects of Type of Contractor (NPROFIT) **($H_{2\text{-}4} – H_{3\text{-}4}$)** The moderating (indirect) effects of type of contractor (NPROFIT) were found to be partially significant. Of two moderating effects of NPROFIT, only one interaction term (NPROFIT *SANCTION) was significant at the 0.05 level, indicating that the type of contractor (NPROFIT) fully moderated the influence of use of sanctions on cost-effectiveness. But interestingly, the directions of the moderating effects were inconsistent across two sectors, and the results were somewhat predictable due to the results of direct effects of NPROFIT revealed above in Model 1 and Model 3. In other words, since public contract managers tended to view that nonprofit contractors do not necessarily outperform other contractors in saving total costs in the contracting out process, they may perceive that the use of sanctions will be increased when local governments contract out their goods and services with nonprofit organizations. By contrast, private contract managers tended to view nonprofit contractors can be more responsible to use public funds in effective ways, in turn, it is less likely that local

government agencies use sanctions to nonprofit contractors compared to other contractors. Overall, the results show that hypothesis 3-4 was partially supported.

(9) Results of Control Variables (Demographic Variables) ($H_8 – H_{11}$)

Interestingly, among all four control variables, only TRAIN was found to have a significant but negative impact on cost-effectiveness in Model 1. It can be interpreted that respondents in the public sector who received more contract training have a more critical view of achieving satisfactory cost-effectiveness in a typical local contract.

Result of Perceived Financial Accountability (Y2)

(1) The Direct Effects of Competition ($H_{1-1} – H_{1-3}$) As shown in Table 5.51, consistent with the results of cost-effectiveness, two variables (LCOMP and PPCOMP) were found to have a significant and positive impact on perceived financial accountability. Specifically, both public and private contract managers perceived that having higher competition in local bids and allowing public organizations to participate in the bidding process can be important factors to achieve higher levels of financial accountability. Thus, this study found strong support for hypotheses 1-2 and 1-3.

(2) The Direct Effects of Monitoring ($H_{2-1} – H_{2-2}$) Unlike prior results of cost-effectiveness, the impact of fairness of monitoring (FMONITOR) turned out to be a positive association with the perceived financial accountability. It suggests that public and private contract managers commonly viewed that procedural fairness (appropriateness of measurement) in the monitoring stage can play a critical role in

leading to an accountable and transparent use of public funds in the local government contracting out. Hence, hypothesis 2-2 was strongly supported.

***(3) The Direct Effects of Monitoring-Based Incentives* ($H_{3\text{-}1} – H_{3\text{-}2}$)** The impacts of use of rewards (REWARD) and use of sanctions (SANCTION) were found to have a positive impact on perceived financial accountability, as were hypothesized. More specifically, the effect of REWARD was partially supported since only private contract managers placed a value on the influence of REWARD. In turn, hypothesis 3-1 was partially supported. On the other hand, the effect of SANCTION was strongly supported (coefficient of 0.356 and 0.227, respectively, in Model 2 and Model 4, at the p <.01 level) in favor of hypothesis 3-2. This result implies that public funds can be spent in more accountable and transparent ways by investing in proper monitoring-based incentives.

***(4) The Direct Effects of Government Capacity Variables* ($H_{4\text{-}1} – H_{4\text{-}3}$)** With respect to the effects of government capacity variables, public contract managers placed greater value on government feasibility capacity (GFECPTY) and government management capacity (GMACPTY) for achieving higher levels of financial accountability, whereas private ones viewed both government management capacity (GMACPTY) and government financial capacity (GFICPTY) as significant predictors of perceived financial accountability in the government contracting out process. Thus, this study found support for hypotheses 4-1, 4-2 and 4-3.

***(5) The Direct Effects of Contractor Capacity Variables* ($H_{5\text{-}1} – H_{5\text{-}3}$)** Unlike effects of government capacity variables described above, the effects of contractor capacity variables were found to be marginally significant. While public contract

managers viewed that contractor management capacity (CMACPTY) had a positive association with perceived financial accountability, private contract managers were more likely to think that contractor feasibility capacity (CFECPTY) had a positive relationship with perceived financial accountability. Accordingly, hypotheses 5-1 and 5-2 were partially supported.

***(6) The Direct Effects of Contract Length and Type of Contractor* ($H_6 – H_7$)** For the effect of contract length (LENGTH), the results of Model 2 and Model 4 were totally different from previous ones of Model 1 and Model 3. In other words, public and private contract managers reported that the longer the contractor and government agencies have worked together, the greater likelihood that local government agencies achieve higher levels of perceived financial accountability. It suggests that longer contracting relationships between government and the contractors matter to an accountable and transparent use of public funds. In this vein, this study found evidence to support for hypothesis 6. On the other hand, the views of type of contractor (here, nonprofit contractors) were in line with the previous results that public contract managers have a negative perspective of nonprofit contractors in achieving satisfactory contracting financial performance (coefficient of -1.396 at the p <.01 level), whereas private contract managers have a positive view of nonprofit contractors (coefficient of 0.576 at the p <.01 level). Specifically, from public contract managers' perceptions, it was observed that nonprofit contractors do not outperform other contractors including for-profit ones in terms of an accountable and transparent use of public funds, but from private contract managers' ones, vice versa. Therefore, hypothesis 7 was partially supported.

(7) The Moderating Effects of Contract Length (LENGTH) **($H_{2\text{-}3} – H_{3\text{-}3}$)**

Consistent with previous results of perceived cost-effectiveness, this study found no significant results of moderating effects of LENGTH. In other words, this study did not find any support for hypotheses 2-3 and 3-3.

(8) The Moderating Effects of Type of Contractor (NPROFIT) **($H_{2\text{-}4} – H_{3\text{-}4}$)** Table 5.51 indicated that type of contractor (NPROFIT) partially moderated the influences of use of sanctions (SANCTION) and intensity of monitoring (IMONITOR) on perceived financial accountability. However, the moderating effects of NPROFIT were found to be significant but their direction were inconclusive across two sectors. Two interaction terms—NPROFIT*SANCTION and NPROFIT*IMONITOR—were statistically significant, with a coefficient of 0.286 at the 0.01 level and -0.141 at the 0.10 level, respectively. More specifically, public contract managers were more likely to think that as governments have contracting relationships with nonprofit contractors, it is more likely to use sanctions for local government agencies to achieve higher levels of financial accountability. It is in line with the direct effect of NPROFIT found in public contract managers' surveys (Model 2), which, in turn, it failed to support for hypothesis 3-4. On the other hand, private contract managers were more likely to view that as governments are in contracting relationships with nonprofit contracting organizations, the intensity of monitoring will be weakened. It shows that hypothesis 2-4 was supported. This result can be related to the previous result of NPROFIT found in Model 4. It implies that private contract managers are more likely to have more positive views of nonprofit contractors, compared to public contract managers.

***(9) Results of Control Variables (Demographic Variables)* ($H_8 – H_{11}$)** In Model 2, this study failed to offer evidence for hypothesized relationships of control variables. By contrast, in Model 4, three variables (AGE, GENDER, and YEAR) were found to have significant impacts on perceived financial accountability. Simply put, younger people compared to the old, female compared to male, and employees who are less likely to work in the government contracting relationship tended to view the possibility of achieving satisfactory financial accountability in the current government contracts.

Table 5.45 OLOGIT Model Predicting Perceived Cost-effectiveness, by Sector

Variables	Model 1 **(Public)**		Model 3 **(Private)**	
	Coefficient (SE)	Odds Ratio	Coefficient (SE)	Odds Ratio
Intensity of Solicitation Effort (SOLICIT)	-0.197 (0.176)	0.821	0.131 (0.155)	1.140
Level of Competition (LCOMP)	-0.051 (0.050)	0.950	**0.353** (0.141)**	1.423
Public-Private Competition (PPCOMP)	**1.627*** (0.220**	5.090	**0.267** (0.116)**	1.306
Intensity of Monitoring (IMONITOR)	**0.755*** (0.282)**	1.831	-0.278 (0.214)	0.757
Fairness of Monitoring (FMONITOR)	0.038 (0.182)	1.063	0.141 (0.144)	1.152
Use of Rewards (REWARD)	**0.409*** (0.156)**	1.505	**0.214** (0.108)**	1.238
Use of Sanctions (SANCTION)	**0.292*** (0.221)**	1.340	**0.401*** (0.131)**	1.493
Government Feasibility Capacity (GFECPTY)	**0.416* (0.220)**	1.517	-0.231 (0.142)	0.793
Government Management Capacity (GMACPTY)	0.055 (0.210)	1.056	**0.135*** (0.117)**	1.144
Government Financial Capacity (GFICPTY)	-0.068 (0.170)	0.935	0.001 (0.093)	1.001
Contractor Feasibility Capacity (CFECPTY)	-0.079 (0.149)	0.924	-0.058 (0.110)	0.944
Contractor Management Capacity (CMACPTY)	0.037 (0.196)	1.037	-0.010 (0.168)	0.990
Contractor Financial Capacity (CFICPTY)	**0.303** (0.125)**	1.354	-0.025 (0.081)	0.976
Contract Length (LENGTH)	**-0.095* (0.067)**	0.909	**-0.113** (0.049)**	0.893
Type of Contractor (NPROFIT)	**-5.296*** (1.663)**	0.005	**1.019*** (0.375)**	3.030
AGE	-0.018 (0.141)	0.983	-0.080 (0.103)	0.923
GENDER	0.019 (0.318)	1.019	-0.160 (0.256)	0.852
TRAIN	**-0.698** (0.326)**	0.498	-0.203 (0.247)	0.816
YEAR	0.001 (0.021)	1.001	0.016 (0.015)	1.016
LENGTH x IMONITOR	0.019 (0.018)	1.019	0.025 (0.015)	1.026
LENGTH x SANCTION	0.006 (0.012)	1.006	0.015 (0.010)	1.015
NPROFIT x IMONITOR	0.569 (0.390)	1.767	0.184 (0.224)	1.202
NPROFIT x SANCTION	**0.928** (0.385)**	2.529	**-0.162** (0.178)**	0.854
Log likelihood	-187.545		-378.382	
LR X^2	166.19***		51.45***	
McFadden's R^2	0.307		0.068	
Count R^2	0.608		0.366	
Observation (*N*)	186		268	

Note: Standard errors in parentheses. *significant at .10 level, **significant at .05 level, ***significant at .01 level.

Table 5.46 OLS Model Predicting Perceived Financial Accountability, by Sector

Variables	Model 2 (**Public**)		Model 4 (**Private**)	
	Coefficient (SE)	Beta	Coefficient (SE)	Beta
Intensity of Solicitation Effort (SOLICIT)	-0.062 (0.056)	-0.058	-0.046 (0.050)	-0.056
Level of Competition (LCOMP)	**0.011* (0.016)**	0.034	**0.090** (0.043)**	0.118
Public-Private Competition (PPCOMP)	**0.119** (0.054)**	0.128	**0.071** (0.036)**	0.108
Intensity of Monitoring (IMONITOR)	0.008 (0.087)	0.008	0.003 (0.068)	0.003
Fairness of Monitoring (FMONITOR)	**0.131** (0.056)**	0.133	**0.205*** (0.046)**	0.237
Use of Rewards (REWARD)	0.071 (0.048)	0.082	**0.128*** (0.035)**	0.189
Use of Sanctions (SANCTION)	**0.356*** (0.062)**	0.379	**0.227*** (0.059)**	0.293
Government Feasibility Capacity (GFECPTY)	**0.289*** (0.065)**	0.287	-0.056 (0.047)	-0.063
Government Management Capacity (GMACPTY)	**0.243*** (0.066)**	0.226	**0.089** (0.030)**	0.118
Government Financial Capacity (GFICPTY)	-0.066 (0.052)	-0.071	**0.081*** (0.030)**	0.134
Contractor Feasibility Capacity (CFECPTY)	-0.049 (0.047)	-0.054	**0.188*** (0.036)**	0.260
Contractor Management Capacity (CMACPTY)	**0.143** (0.060)**	0.126	-0.027 (0.056)	-0.025
Contractor Financial Capacity (CFICPTY)	-0.011 (0.039)	-0.014	0.018 (0.026)	0.033
Contract Length (LENGTH)	**0.026** (0.023)**	0.257	**0.008* (0.017)**	0.083
Type of Contractor (NPROFIT)	**-1.396*** (0.503)**	-0.712	**0.576*** (0.128)**	0.357
AGE	-0.001 (0.045)	-0.001	**-0.083** (0.034)**	-0.124
GENDER	-0.068 (0.098)	-0.036	**0.103* (0.086)**	0.060
TRAIN	-0.071 (0.102)	-0.036	0.025 (0.082)	0.015
YEAR	0.001 (0.007)	0.002	**-0.004* (0.005)**	-0.040
LENGTH x IMONITOR	-0.002 (0.006)	-0.067	0.007 (0.004)	0.221
LENGTH x SANCTION	-0.002 (0.004)	-0.053	0.001 (0.004)	0.008
NPROFIT x IMONITOR	0.137 (0.115)	0.205	**-0.141* (0.073)**	-0.232
NPROFIT x SANCTION	**0.286*** (0.097)**	0.526	-0.040 (0.059)	-0.085
Constant (SE)	0.071*** (0.507)		0.859*** (0.473)	
F-value	11.76***		8.66***	
R^2	0.626		0.449	
Adjusted R^2	0.572		0.398	
Observation (*N*)	186		268	

Note: Standard errors in parentheses. *significant at .10 level, **significant at .05 level, ***significant at .01 level.

Table 5.47 Summary of Overall Survey Findings

Dependent Variable(s)	**Perceived Cost-effectiveness (Y1)**		**Perceived Financial Accountability (Y2)**	
Variables (Factors)	**Model 1 (Public Sector)**	**Model 3 (Private Sector)**	**Model 2 (Public Sector)**	**Model 4 (Private Sector)**
Organizational and Contextual Factors (Direct Effects)				
SOLICIT	Insignificant	Insignificant	Insignificant	Insignificant
LCOMP	Insignificant	**(+)**	**(+)**	**(+)**
PCOMP	**(+)**	**(+)**	**(+)**	**(+)**
IMONITOR	(+)	Insignificant	Insignificant	Insignificant
FMONITOR	Insignificant	Insignificant	**(+)**	**(+)**
REWARD	**(+)**	**(+)**	Insignificant	**(+)**
SANCTION	**(+)**	**(+)**	**(+)**	**(+)**
GFECPTY	**(+)**	Insignificant	**(+)**	Insignificant
GMACPTY	Insignificant	**(+)**	**(+)**	**(+)**
GFICPTY	Insignificant	Insignificant	Insignificant	(+)
CFECPTY	Insignificant	Insignificant	Insignificant	(+)
CMACPTY	Insignificant	Insignificant	(+)	Insignificant
CFICPTY	(+)	Insignificant	Insignificant	Insignificant
LENGTH	**(−)**	**(−)**	**(+)**	**(+)**
NPROFIT	**(−)**	**(+)**	**(−)**	**(+)**
Control Variables				
AGE	Insignificant	Insignificant	Insignificant	(−)
GENDER	Insignificant	Insignificant	Insignificant	(+)
TRAIN	(−)	Insignificant	Insignificant	Insignificant
YEAR	Insignificant	Insignificant	Insignificant	(−)
Interaction Term (Moderating Effects)				
LENGTH * IMONITOR	Insignificant	Insignificant	Insignificant	Insignificant
LENGTH * SANCTION	Insignificant	Insignificant	Insignificant	Insignificant
NPROFIT * IMONITOR	Insignificant	Insignificant	Insignificant	**(−)**
NPROFIT * SANCTION	**(+)**	**(−)**	**(+)**	Insignificant

Discussion and Conclusion

In the previous sections, it was observed that public and private contract managers are more likely to have similar views of major organizational and managerial factors included in the conceptual framework of this study. But interestingly, in terms of contextual factors (contract length and type of contractor), it was found that contract managers tended to have notably different perspectives of the impacts of these factors on contracting financial performance.

First, focusing on the mean (MEAN) and standard deviation (SD) values of descriptive statistic results (see Table 5.14 and Table 5.36),[12] this study found that the perceptions of two measures regarding contracting financial performance varied across the sectors. For cost-effectiveness (Y1), both types of contract managers tended to report the likelihood of achieving total cost savings in the current government contracting process. For financial accountability (Y2), the mean values were higher than those for cost-effectiveness, regardless of sectors. Interestingly, it implies that both types of contract managers are more likely to hold the opinion that in the current government contracting out process, it is easier to handle the production of public goods and the delivery of public services in an accountable manner without financial corruption than it is to handle these activities in a cost-effective manner in favor of total cost savings.

Moreover, it seems worth noting that private contract managers are more likely to report the possibility of achieving higher levels of accountability and transparency in the use of public funds compared to public contract managers. This may indicate that in the

[12] For cost-effectiveness (Y1), the results of the surveys for public contract managers revealed mean of 3.565 and a standard deviation of 1.114, while for private contract managers, a mean of 3.549 and standard deviation of 1.043 were calculated from the survey data. For financial accountability (Y2), the survey data for public contract managers revealed a mean of 3.602 and a standard deviation of 0.950, while for private contract managers, a mean of 3.655 and a standard deviation of 0.783 were calculated.

current local government contracting out system, public contract managers have struggled with detecting and monitoring the proper use of public funds by contractors according to the contract agreement in favor of public interests.

Next, turning to the main organizational and managerial factors, as hypothesized, several factors appear to have a significant positive impact on contracting financial performance. Comparisons between the two groups of contract managers revealed that the level of competition in the bidding process (LCOMP) and public-private competition (PCOMP), and use of rewards (REWARD) and sanctions (SANCTION) were both important predictors of satisfactory contracting financial performance.

In addition, it should be noted that common perceptions of the impact of contract length (LENGTH) were found between public and private contract managers, but the directions were contradictory across two proxies for contracting financial performance. According to the results of cost-effectiveness (Y1), public and private contract managers both reported that longer contracting relationships were seldom effective for achieving total cost savings. One explanation for this is that over time, the contracting relationships between government (agencies) and the contractors entail management costs, including monitoring and agency costs. Somewhat unexpectedly, the total costs of carrying out a typical local contract may overweigh expected costs. Perhaps, in today's uncertain and complex environment, such cost variation is attributable to financial crisis and subsequent changes of prices and wage (costs of labor), weather, or task difficulty, and so forth. For example, in the case of public works and construction, the tasks might take longer than expected and, as a result, more financial and personnel resources may be required to

complete the work, thereby unexpectedly increasing management and monitoring costs in practice.

Conversely, for financial accountability (Y2), consistent with the earlier hypothesis, both public and private contract managers are more likely to report that the longer the contractor and government agencies have worked together, the greater the likelihood that governments achieve higher levels of perceived financial accountability. This is consistent with previous observations (Amirkhanyan et al., 2007, 2010, 2014; Kelman, 2002; Mulgan, 1997; Sclar, 2000; Witesman & Fernandez, 2013) that argue that as the contracting relationship matures over time, the likelihood that two stakeholders will have the opportunity to build mutual trust, understanding, and goal alignment to foster a stronger collaborative relationship increases. In other words, there may be increased opportunities to spend public funds in transparent and accountable ways to resolve conflicts of interest between stakeholders and facilitate communication between them. Yet, due to the mixed impacts of contract length (LENGTH) on contracting financial performance, further research on this issue is worthwhile.

In comparison, the surveyed contract managers also had different perceptions of organizational and managerial factors affecting contracting financial performance. While public contract managers placed greater value on the intensity of monitoring (IMONITOR), which was only partially supported by the findings, and government feasibility capacity (GFECPTY), private contract managers were more likely to value the fairness of monitoring (FMONITOR) and government management capacity (GMACPTY). It is interesting that public contract managers viewed the government's past experience, education, and legal expertise to exercise contracts as critical predictors

of satisfactory financial performance, whereas private contractors considered government's managing ability and their evaluation of performance as significant determinants of better financial outcomes of contracting out.

More importantly, both public and private contract managers were likely to report that fairness of monitoring (FMONITOR) can be more influential for achieving better contracting financial accountability than the intensity of monitoring. This implies that the procedural justice of monitoring may be one of the main structural and managerial factors for ensuring the effective allocation and management of resources in the contracting out process. Notably, since the fairness of monitoring (FMONITOR) is a relatively new concept in the contracting literature, related findings call for a more systematic approach to understanding the link between fairness of monitoring (particularly, a way of measurement contracting performance in monitoring) and financial performance.

The most critical finding may be that perceptions of the impact of nonprofit contractors (NPROFIT) on contracting financial performance vary between contract managers in the public and private sectors. In the view of nonprofit contractors, public contract managers considerably differ from private ones. Public contract managers considered nonprofit contractors as self-interested counterparts or opportunistic agents, instead of mutual, trust-worthy partners, echoing previous studies dealing with principal-agent theory (Brown et al., 2006; Fernandez, 2009; Salamon, 1995). As such, they tended to think that nonprofit contractors do not use public funds in cost-effective nor transparent ways when compared to for-profit contractors. Such a negative perception of nonprofit contractors was extended to the moderating effects of nonprofit contractors on the relationship between the use of sanctions and contracting financial performance. The

findings indicated that local government agencies are more likely to achieve higher levels of perceived cost-effectiveness and financial accountability through the use of sanctions when contractors are nonprofit organizations. Furthermore, the findings implicitly showed that nonprofit service providers may not necessarily be screened or sanctioned any less than their for-profit counterparts in practice. One possible explanation for this is that although nonprofit organizations, as unique tax-exemption organizations, tend to be engaged in social service areas to help more limited community groups (Salamon, 2002; Van Slyke, 2002, 2003), they basically lack profit incentives in favor of cost savings (Amirkhanyan et al., 2012; Hansmann, 1980; Prager, 1994; Smith & Lipsky, 1993).

In addition, as in previous studies (DeHoog, 1984; Kettl, 1993; Lamothe & Lamothe, 2009; Van Slyke, 2003), most nonprofit contractors are more likely to act in pursuit of government grants (public funds) to secure their programs through lobbying and other political activities. In a similar vein, Amirkhanyan (2011, p. 328) argued that nonprofits can be regarded as a lower capacity organization in complying with the monitoring process, and such a negative view of nonprofits may be partly due to their lack of management capacity, their political behavior, and the financial abuses prevalent in the nonprofit sector, as well as the higher degree of complexity and ambiguity that characterizes nonprofit services.

In light of such recognition, it is predictable that public contract managers tend to feel less satisfied with the financial management and performance of nonprofits compared to that of other organizations. Perhaps, alternatively, this result may be explained by employing capture theory indicating that the interests of public managers become aligned with those of contractors over time (Carr & Brower, 2000; Eggleston &

Zeckhauser, 2002; Stigler, 1971; Yang et al., 2010). As such, public contract managers may be captured by for-profit contractors in practice since most day-to-day contracting work occurring in proximity to citizens and communities (e.g., construction, sanitation, snow removal, transportation, and garbage collection) at the local level has been implemented by large business firms rather than nonprofit organizations. It can be reasonably expected that public contract managers working in local government agencies, particularly those known as front-line bureaucrats, are more favorable to for-profit service providers (sometimes, somewhat controlled by for-profit service providers).

Besides, the size and number of for-profits are generally larger than those of nonprofits at the local level. As such, the expertise and visible managerial efforts of for-profit contractors may be more exposed to local entities. The more local public managers interact (collaborate) with for-profit contractors in local governance, the more likely that these local government agencies will have positive evaluations of for-profits. In other words, local public managers have a greater likelihood of developing closer relationships with for-profits, and, in turn, it is less likely that they will hold similar opinions of nonprofits. It may not be true that the interests of public contract managers will become aligned with those of contractors, as per capture theory (e.g., Carr & Brower, 2000; Yang et al., 2010), who have frequent interactions with governments (especially for-profits), but after public goods and services are contracted out, there might be a tendency for contractors to foster close political ties with policymakers and administrators. Given these conditions, the negative view (or lower evaluations) of nonprofit contractors is not surprising.

On the other hand, private contract managers have a more positive view of nonprofit contractors, considering nonprofits to be better partners for government agencies as well as more trustworthy service providers in the contracting out process. This finding appears to be in accordance with previous research supporting principal-steward theory and relational contracting (e.g., Amagoh, 2009; Bryce, 2005; Girth, 2012; Smith & Lipsky, 1993; Smith & Smyth, 1996; Van Slyke, 2007, 2009). Ironically, even though the majority of survey respondents were for-profit contractors, it was observed that providing public goods and delivering services in partnership with nonprofit contractors can be more likely to result in total cost savings (due to reduced transaction/management costs) as well as more transparent use of public funds.

Such a positive perspective of nonprofits was extended to the moderating effects of the type of contractor (NPROFIT), since it was found that nonprofit contractors tended to be less sanctioned or monitored than others, as hypothesized. These results thus confirmed previous observations widely addressed in the contracting literature (e.g., Brown & Potoski, 2003b; Girth, 2012; Marvel & Marvel, 2009; Van Slyke, 2007; Witesman & Fernandez, 2013). However, when comparing the perceptions of public and private contract managers, it was clearly found that the two types of managers valued the NPROFIT factor differently. In turn, future research examining the relationship between nonprofit contractors and contracting financial performance is warranted.

Lastly, with respect to control variables (demographic variables), despite somewhat weak relationships, it was found that perceptions of contracting financial performance can vary by age, training experience, and work experience (tenure) in contracting out at the current organization.

In light of the overall quantitative data findings discussed above, it should be noted that the local government contracting process is more complicated and dynamic than expected, and we should be cautious about interpretations of the data. Considering the several contradictory findings and inconclusive observations from the survey data analyses, more in-depth examination and additional empirical research are necessary in the future.

CHAPTER 6 QUALITATIVE DATA ANALYSIS AND RESULTS

As discussed earlier in Chapter 1, the main research question this dissertation addressed concerns how local government can exercise financially effective contact management, accompanied by satisfactory cost-effectiveness (total cost savings) and financial accountability. To answer this inquiry, this study first conducted surveys and found that, as the previous chapters of this dissertation indicated, several organizational and contextual factors are directly or indirectly associated with perceived financial performance. Specifically, common significant findings from two Web-based surveys suggested that, when allowing public organizations to participate in the bidding process, local governments are more likely to achieve higher levels of cost-effectiveness when rewards and sanctions are used appropriately according to contractor performance and the contracting relationship is relatively short. Furthermore, local governments are more likely to achieve higher levels of financial responsibility when there are higher levels of competitiveness in the bidding process, public organizations are allowed to participate in the bidding process, monitoring is conducted fairly, sanctions are used properly, governments have better management capacity, and the contracting relationship between government agencies and contractors is longer.

However, the key findings of the surveys tended to be reflected in the researcher's selection of survey questions (Wolff, Knodel & Sittitrai, 1993). For this reason, solely relying on the survey is not sufficient to provide contextual details and deeper insights, as doing so could potentially exclude other factors that may influence the financial performance of contracting out. Given the limitation of the survey method, the qualitative

dimension of this study – not only as a follow-up attempt of Web-based surveys but also as another parallel stage of a mixed-methods approach – is expected to yield rich insights on the challenges and barriers embedded in the contracting out process at the local level. Furthermore, at a practical level, qualitative data provides greater understanding of the more possible and strategic ways in which local government agencies enhance the contracting process to achieve higher levels of cost-effectiveness and ensure the financial accountability of contractors in the use of public funds throughout the contracting process.

To date, much scholarly attention on contracting out has been based on mainly quantitative analyses rather than qualitative analyses, except for research on relational contracting in the association of nonprofit organizations (e.g., see Amirkhanyan et al., 2010; Lambright, 2009; Van Slyke, 2007, 2009; Van Slyke & Roch, 2004). Despite progress in both theoretical and empirical research, the causal link between the management process and subsequent financial outcomes of local government contracting out still remain unanswered. Thus, it is reasonable to expect that qualitative analysis will yield more practical suggestions and strategies that have been overlooked in the existing cultural and social context and have not emerged from quantitative analysis. If feasible, they can be incorporated into the management-performance link of local governance for successful contracting out in the long term. Taken together, it is meaningful that the qualitative analysis of this topic could be a starting point for gaining more scrutiny about the likelihood that financial performance of government contracting depends on a variety of different organizational, managerial, and contextual factors.

Recognizing the need for such an exploratory and multi-analytical approach, the qualitative dimension of this dissertation employed semi-structured interviews. This chapter begins with an overview of the process through which interviews were conducted, including sampling and recruitment, and briefly explains the profile (characteristics) of interview participants. Next, based on the interview questions and collected answers, the results of interviews are reported and analyzed in the order of key emerging themes. Lastly, the integrated findings based on similarities and differences between the perceptions of the two groups of stakeholder are discussed along with practical implications.

Overview of Interview Recruitment and Participants

As described in Chapter 4, the sample of this study is not typical of all public or private employees. For the qualitative data collection, a sample of public contract managers in New Jersey local governments and their private (for-profit and nonprofit) contractors was selected from the e-mail list that was used for quantitative analysis of this study (hereafter referred to as the survey sample). In other words, a purposive (non-probability) sampling strategy was used to ensure that only individuals familiar with contracting out by local governments – the subject of this study – were interviewed. Snowball sampling was also conducted due to the lack of accessibility of the researcher to the sample population as well as a lack of active, voluntary participation. In particular, it seemed that private contract managers felt more sensitive about the topic because of the possibility that the results of the study could affect his/her organization's contractual relationship with local government agencies.

From May 2014, letters were sent to contract managers inviting them to participate in the interviews as part of the sample regardless of service fields and contractor ownership. The letter included a brief description of the study's purpose, a statement on the voluntary nature of participation, confidentiality, and the principal investigator (PI)'s contact information. After receiving positive responses via e-mail from those invited to participate, the PI sent a written informed consent form (see Appendix D) to interested potential participants and inquired as to their availability for realizing the interview and a convenient place to meet.

Following an intensive effort to recruit participants via email invitation, a total of 23 semi-structured interviews were arranged and conducted between June 2014 and February 2015. Of these, 12 were conducted with public contract managers from local New Jersey governments and 11 were conducted with private contract managers. Recruitment ended when the PI found that additional interviews no longer produced any new relevant information on the research topic (Pires, 1997). It should be noted that each interviewee participated in one interview and each interview focused on a typical contract. Interviewees were asked to answer the questions in a consistent order but allowed to speak freely with open-ended questions. Of the 23 interviews, 10 were conducted on the Rutgers University campus in Newark, New Jersey, and the remaining 13 interviews were conducted at the participants' place of employment.

At the beginning of each interview, the PI re-iterated the confidential nature of the study to reassure the participants and increase the likelihood that their responses would reflect their true opinions and experiences. The average length of the interviews was about 30 minutes. Interviews were conducted in an open-ended style that encouraged the

free flow of ideas. During the semi-structured interview, with the permission of the interviewees, the interviews were tape-recorded and hand-written notes were taken by the PI. Although interview participants faced opportunity costs, respondent fatigue, and limited availability (time) to participate in the interview, all interview participants put a lot of effort and energy into offering personalized attention on the topic.

In the section on preliminary interview results in Chapter 4, the demographic profile of all interviewees, including gender, tenure (average years of contracting work and experience), and position (job title), was described (see Table 4.4). Interviewees from the government included mostly qualified purchasing agents (QPAs) working in the purchasing departments, but some of them were contract managers (e.g., monitoring officers, business administrators, and/or financial managers) who had experience in local government contracting out and knowledge about elements of the contracting out process, including bidding, purchasing, and monitoring. They worked at different levels of local government in New Jersey (i.e., county, city, and township). Of the 12 local public managers, 8 (67%) were male and 4 (33%) were female. On average, interviewees from government agencies had about 15 years of contracting out experience and most of the participants were executive officers (64%) with the remainder divided between middle-level managers (27%) and department heads (9%).

Interviewees who were private contract managers included employees working for nonprofit and for-profit organizations in a contractual relationship with local government agencies and managed public funds allocated through contractual relationships on a regular basis. These interviewees reported working in a variety of areas and providing services to different populations, including individuals living below the

poverty line, homeless people, the unemployed, children and families, and individuals at risk of contracting HIV. Of the 11 participants representing contracted provider organizations, 6 worked for nonprofit organizations and 5 for for-profit organizations; 56% were female and 44% were male; and all of them were involved with the contracting out process with local public agencies. On average, each had worked for their current organization for about 10 years. Similar to public contract managers, private contract managers in the sample were mostly middle-level managers and executive officers.

Interview Questions and Analysis

Consistent with the survey method, interview questionnaires were developed to tackle all important themes linked to the study's aim, which were also reflected in the conceptual framework and literature review. In terms of local government contracting, all (government) agencies and organizations related to a contract need to comply with the NJ Public Contract Law (N.J.S.A. 40A:11). Such regulations and formal procedures also apply to private contractors. Therefore, all interview participants acknowledged that they were fully aware of the law and related contracting procedures before the interview process proceeded.

The interview protocol included questions about how participating public and private contract managers perceived and viewed the current local government contracting system and internal environment in general. More specifically, the participants were asked about the effectiveness of the local contracting system in the context of financial performance and corruption based on their experiences. During the interview, the PI queried contract managers in both sectors about the challenges (barriers) and advantages

(benefits) embedded in the current contracting process, which are important indicators of satisfactory financial performance. The PI also solicited suggestions and recommendations for government agencies regarding investment requirements and new techniques to help enhance the contracting system and associated financial outcomes.

In the final interview protocol, four large main questions and eight probing questions were included (see also Appendix F), as shown below.

Q. Can you describe your thoughts on effectiveness of government agency's current management systems in the contracting out process?

- Probe: Positive impacts or negative impacts on satisfactory financial performance (e.g., cost savings, protection of assets against financial corruption, managing fraudulent or criminal risks)?
- Probe: Are these procedures including reporting, payment, accounting/recording, and auditing adequate?
- Probe: Do these procedures effectively help carry out fiscal duties and responsibilities of contract administrators (including public managers and contractor)?
- Probe: What is the biggest challenge (barrier) associated with your agency/organization contracts?
- Probe: What is the biggest advantage associated with your agency/organization contracts?

Q. Some researchers found that government agencies primarily depend on information collected/provided by the contractor and sometimes lack integrity for monitoring works (financial oversight) because of limited time and resources and caseload size. As a

result, they usually conduct minimal and infrequent oversight or insignificant penalties for contact violations and unsatisfactory financial performance, thereby resulting in fiscal corruption issues (fraud, waste, and abuse). How do you think of these findings?

- Probe: If you do (not) agree with this argument, why?
- Probe: If so, why do you think such findings have been drawn?
- Probe: Is there anything that you see that researchers might have missed out?

Q. From your perspectives and experiences, which kinds of requirements and methods among current monitoring and financial oversight efforts (e.g., review of monthly or quarterly self-reports, analysis of financial documents of cost, field observation (site visit), citizen survey (complaint/satisfaction), independent audit) have been (or not) effective at achieving potential cost savings and further protecting the integrity of public funds prevented from fraud, waste, and abuse?

Q. What do you suggest/recommend for government agency to achieve fiscal effectiveness and combat corruption (effective financial management) in the entire contracting process?

These questions were intended to capture the effectiveness of a broad range of typical local government contracts and conditions for satisfactory financial performance and accountability to avoid corruption in the use of public funds. It should be noted that probing questions were not asked if interviewees readily reported issues when asked main questions. Participants had the option to decline to answer questions or stop the interview at any time. Each interview was electronically recorded using either videotape or audiotape by the PI. Later, all recorded interview files were transcribed verbatim in a

written form (Word document format) by a third party hired by the PI. As noted in Chapter 4, the transcriptionist was employed to avoid any bias during the analysis of interview data. Once each transcript was completed, the PI reviewed the interview transcript to validate the accuracy of the interview responses and then analyzed and coded them using NVivo 10 software package. For interview participants who wanted to review the recording of their interview and the associated transcript, an opportunity was provided to them to review the electronic copy of their transcript and offer clarifications or modifications.

Description of Coding and Emerging Themes

It should be noted that qualitative analysis of the data collected from the semi-structured interviews followed a thematic analysis approach mainly focused on the first and fourth questions of the interview protocol. The reason for taking this approach was that these questions were tightly linked to the study's main purpose of shedding light on the factors leading to satisfactory financial performance in the local government contracting process in the specific context of cost-effectiveness and financial accountability to avoid corruption. Like the survey analysis undertaken in the quantitative dimension of the this study, the analysis of interviews intentionally relied on the views of public and private contract managers regarding the effectiveness of the current government contracting system in general and any related challenges (barriers) in particular.

In addition, beyond the monitoring and financial oversight efforts (seen in the second and third questions of the interview protocol), interview analysis sought to find

additional requirements and more systematic strategies that public agencies or managers could adopt to better invest their time and resources in achieving financially effective contract management. As the survey findings showed earlier, it can be reasonably expected that the qualitative findings will show how those views vary by sector.

As for the methodological approach of qualitative analysis, conventional content analysis was used not only to account for previous research, which is generally considered insufficient for understanding the topic of interest, but also to provide further description (Hsieh & Shannon, 2005). NVivo 10 was used to analyze interview data specifically for the categories of "effectiveness" and "suggestion/recommendation." By following coding methods as per Braun and Clarke's (2006) thematic analysis, the PI attempted to find the prevalence (predominance) of certain words or sentences in interview data/responses. The "word frequency queries" of NVivo 10 were run to identify words and word groups (e.g., stem words, synonyms) that occurred most often, as well as the relative and absolute frequency of word (word groups) within the data set. As an initial approach to analysis, assigned codes included "negative impact," "procedure," "challenge," "barrier," "requirement," "corruption," "use of public funds," "effective financial management," and "financial performance." The selection of these terms was based on the research question, main purpose, and conceptual framework of this study.

Next, in order to ensure and support this initial coding scheme, "text search queries" were used to look for specific themes and subthemes that emerged inductively from the data, or words with a shared stem. As suggested by Strauss (1987), this procedure to label each theme was conducted by doubling back and forth between the research question along with conceptual framework, the data, and the literature. If it was

found that the framework did not take into account some of the themes that were emerging, the PI went back into the related literature and kept searching for confirmation of these themes. In this step, interviews from public contract managers and private contract managers were analyzed separately at first, and then the findings from each of the separate analyses were compared and concluded by integrating similar perceptions.

As a result, with respect to the effectiveness category, five themes were generated largely from the interviews with public contract managers and three themes were generated from the analysis of the interviews with private contract managers. Moreover, in terms of the category of suggestions and recommendations, while seven themes emerged from the data contained in the transcripts of interviews with public contract managers, five themes emerged from the data contained in the transcripts of interviews with private contract managers. Table 6.1 presents a summary of qualitative findings. The findings are divided into two categories and reported across the sector. Each theme will be discussed in more detail below.

Table 6.1 Summary of Qualitative Findings

Category	Codes	Themes/Key Words	
		Public Contract Managers	Private Contract Managers
Effectiveness	Negative Impact	Presence of Favoritism (Politics)	Poor Communication between Government and the Contractor
	Procedures	Red-tape (too rigid; time-consuming)	Red-tape (payment/reimbursement)
	Challenge /Barrier	Information Asymmetry on Contractors /Subcontractors	Discrimination among Vendors (large vs. small business firms)
		Lack of Intensive Monitoring / Financial Oversight	
		Lack of Personnel and Financial Resources and Time	
Suggestion/ Recommendation	Requirements	Replace Favoritism (Political Ties) with More Fair and Competitive Bids	Qualitative Values in line with Goal (Mission) of Contractors
		Contract Specificity – Clear and Specific Language in Request for Proposal (RFP)	Build Partnership (Trust) based on Extensive Communication and Interaction
	Corruption /Use of Public Funds	Need for Sufficient Staff: “micro-management “or “micro-monitoring”	Need for Intensive/Frequent Monitoring
	Effective Financial Management /Performance	Systematic Training and Education	Government Management Capacity
		Invest in Performance Evaluation Database - Updated Price, Vendor List, and Past Experience	
		Strong Leadership	Feedback (Tracking Wrongdoing)
		Team-based Structure	

Qualitative Study Findings

From the interviews, data from contract managers in both public and private sectors was identified and divided into two main areas: (1) perceptions of contract managers on overall effectiveness of current contracting out system and (2) suggestions and recommendations for successful contracting out. Analysis of the 23 individual semi-structured interviews revealed several primary themes, as detailed in Table 6.1. Within each theme, mostly negative and unintended evidence was identified but some items were found to be already assessed or discussed in the existing research on contracting out. Although no two contract managers' interviews were exactly alike, the patterns expressed in the interview scripts were similar across two sectors in that both types of contract managers provided negative views of the current contracting management system employed various government agencies. However, it is interesting to note that compared to their private counterparts, public contract managers seem to be well aware of the challenges of local contracts that need to be improved. They also have a more critical view of financially effective contract management than local private contractors, and this was clear from the various recommendations and new strategies public contract managers suggested for potentially achieving higher levels of financial performance.

Evidence from Public Contract Manager Interviews

(1) Effectiveness of Current Local Contract Management System

Presence of Favoritism (Politics)

With respect to the effectiveness of the current government contracting out system, public contract managers in the interview sample reported that overall contract process has been fairly well managed according to state law and regulations. However, when asked about challenges (barriers) and advantages associated with their agency/organization contracts, the majority of public contract managers pointed out the caveat of internal politics, particularly in the bidding process.

In the state of New Jersey, the Local Unit Pay-to-Play legislation (pursuant to N.J.S.A. 19:44A-20.4 et seq.), also known as the "Political Contribution Disclosure Compliance Law," has attempted to compensate political supporters who contribute to the campaigns of elected officials in such a way as to award contracts to some contractors without holding a bidding process. When favoritism has mostly played a role in the agreeing of local government contracts, it has mostly been in cases of professional service contracts and these appear to be questionable. This observation is in accordance with Yang et al.'s (2010) assumption and observation, which suggested that local level contracting is more likely to be driven by the political purposes and needs of elected officials and, as a result, may ignore regulations and monitoring standards (p. 84). The following quotes show negative views on political ties (favoritism) in the contracting out process:

> In the case of emergency contracts, government agencies don't go out to bid. That is where you can sometimes get caught up in favoritism [because] there is no bidding process. That is where a person comes and makes the price higher because they know that at the end of the day they know that they are going to get picked anyway. The position of the procurement officer or office is appointed with each administration that comes in. If you are appointing me, then there is some loyalty to you.

> Usually, bids are not open to the public. Or maybe they are there, but they don't advertise it. If it's an emergency matter, all related process could be very

> short. There is no bidding. It depends. They may be like, 'He knows the service, let's just give it to him. [It is an] emergency contract.'
>
> Competitive bidding is necessary for effective contract management but always favoritism is involved in the process. According to the state Law, professional contract services regarding hiring lawyers, doctors, architecture, accountants, and engineers are one exception for bidding. There is no bidding process and lobbying and favoritism exist. Sometimes, political connection is likely to determine a project.
>
> There can be a corrupt aspect to government contracting. Government contracting should be a competitive bidding process, where the contract is given to the lowest bidder. There is a professional service that has to do with attorneys, engineers, and websites. In awarding the contract, it is not purely price driven. With the Pay for Play regulations, that is usually the case. Unfortunately, agencies do skirt those regulations. In the past, private organizations would receive contracts in response to fiscal donations to a certain agency, politician etc. That is not how things were done where I worked, but the option is always prevalent.

Red-tape

Another big challenge (barrier) embedded in the local contract management system turned out to be bureaucratic "red-tape." In the public administration literature, red tape has been defined as excessive, unduly expensive, or burdensome administrative rules, regulations, procedures, or requirements (Bozeman, 2000; Rainey, 2009). As in previous research (Bozeman & Rainey, 1998; Rainey, Pandey, & Bozeman, 1995), the findings of the interviews confirmed that public managers (here, public contract managers) tend to report higher levels of red-tape compared to private contract managers. Among other issues, red-tape seems to be associated with delays in task completion (Bretschneider, 1990; Feeney & Bozeman, 2009). In short, public managers reported that the current contracting process – including the soliciting of bids, the process of bidding and awarding contracts, payment, and the monitoring and

evaluation of financial outcomes – is not conducive to financially effective contract management due to the complexity and length of the process.

Some of respondents mentioned that the problem might be attributable to the lack of a systematic, flexible schedule, organizational culture, or unforeseen changes in the cost of public services. Below are specific examples from the interview data:

> There are multiple levels of rules, procedures, and reviews and so on. Usually once you are involved in contracts, you are stuck with them because it would cost too much to replace the contractor. Most of the time, it seems like we spend more public money on the salaries, time and energy of staff to attempt to comply with these internal rules than we would spend if the contracts were already running. The process takes too long and discourages bidders. In the end, it might result in no acceptable responsive bidders.

> Let's think about the case of public works such as road maintenance and pavement. Timing can be an issue because the entire process seems to be too long. Each deadline is too demanding even in the case of bidding process, after advertisement of one bid, we should wait 10 days to open the bid and then review all vendors' documents followed by the Council meeting. After than resolution writing comes out and then we can decide the final vendor we will award the contract. All the process takes about two months on average.

> The contracting and financial management system is too rigid. Too much time-consuming. I think that contractors should be allowed to submit any documents we need via e-mail. But the thing is that government always wants all original documents including purchase orders and any paper versions to pay for vendors. So, they must have original copy of vouchers in order to get paid. If they lost the voucher and other related documents, delay of the payment process occurs.

> In the city government, every process should be reviewed and approved by the Council meeting, the board of freeholders, but they usually meet every other week. In summer time, they gather for the meeting once a month. If vendors, particularly small business contractors, miss the due/deadline, they should wait to get vouchers for reimbursement until the next meeting begins, about another 30 days… this complex schedule can appear too crucial to get paid in the cycle. In the end, it is more likely that the government agencies are in trouble in keeping good credits from contractors and then lose their good vendors.

Lack of Intensive Monitoring

In the contracting out literature, monitoring has been long acknowledged as an means of early-warning as well as a critical managerial tool in ensuring contractor accountability and enhancing contract performance (Amagoh, 2009; Fernandez, 2007, 2009; Martin, 2004; Savas, 2000; Witesman & Fernandez, 2013). In addition, beyond a mere dichotomous characterization of the presence or absence of monitoring (oversight), or so-called arms-length monitoring methods mostly based on financial documentation of cost provided by contractors, attention has been paid to more intensive and frequent use of monitoring along with diverse methods (Amirkhanyan, 2011; Brown & Potoski, 2003b; Marvel & Marvel, 2007). As such, although monitoring is considered the most popular method (requirement) of overcoming corruption, it seems that there has been a considerable lack of commitment on the part of government agencies to implementing monitoring procedures. Still, local public agencies appear to heavily rely on reviewing financial documents and audits conducted by accountants hired by the contractors without direct site visits or additional audits by the government, as discussed in the following quotes:

> There has been a little of site visits and other monitoring ways. In particular, we were not on site as much. For the contract, we do site visits every year. But some contractors, in the case of bigger ones, have several locations. There might be several program locations and their administrative office might be in a different location. So it is not easy to visit all different locations and to look through personnel, financial, and client files. Instead, we tend to talk to some of staff members in the contractors.

> In the city of Newark, there is very little oversight. Honestly, you know when you get a problem? It's when you get a complaint. So, let's say that a contractor [has been hired] for tree removal. Let's say that he put on his list that he removed the tree, but you call the office and you say that the tree is still here. It is broken and it is still here. But, he put [that he removed it] and already got paid for it. There is nobody out there really looking. So, unless the resident is calling to complain about something specific, then you [won't really

> see] monitoring. That is when they will spot check. But, if there is no complaint, then they usually don't monitor.

Interestingly, public managers tended to perceive that nonprofit contractors are less frequently screened than their for-profit counterparts in government monitoring activities. This observation is in line with previous studies (Brown & Potoski, 2003b; Girth, 2012; Marvel & Marvel, 2009; Van Slyke, 2007; Witesman & Fernandez, 2013). According to two respondents,

> I have two audit contracts going on right now that are looking at two Department of Health Service (DHS) divisions that operate huge programs. They've got millions and millions of grants and government funds, but there is no oversight of non-profits. So, they have deficit funded contracts. Basically, we make up the difference of what they say and what they spend. There is an auditing office department and claim they look at it, but the results of the Federal audits prove that there is no oversight.
>
> I've seen three or four different instances where lack of monitoring led to fraud between a government and a contractor; that's nonprofits. So it happens frequently. It is lacking on the fiscal side. It is lacking on the program side. Some people never come out and take a look at your information. They just accept what you give them and that's it. Years can go by.

Respondents' negative views of monitoring (oversight) efforts by government agencies appeared to be largely attributable to a lack of financial and personnel resources. This is in accordance with the observation of previous studies that government agencies frequently lack the capacity to adequately monitor contracted providers themselves (Kettl, 1993; Lambright, 2008; Milward et al., 1993; Van Slyke, 2003). As three participants stated:

> The biggest challenge is volume, the amount that is tracked and the minimal level of staff. So we don't have adequate staff to monitor as much as we should. There are no funds to hire someone regularly… Certain times of year, there may be a lot of contracts coming out. For example, we operate on a fiscal year. So our budget cycle is July 1st to June 30th. In July and August there are a lot of new contracts given out because they are annual. But, we usually do not have the proper staff to ensure that there is compliance.

> There should always be a monitoring factor to keep the quality control. You want to make sure that someone is observing the contractor's work, even if it's random inspections. There is a lack of resources, so maybe you don't have someone full time, but there should be oversight.

> My biggest challenge is having enough time to properly create contractual terms and administer same. Like most municipalities, our agency lacks sufficient trained personnel to bid or manage contracts effectively. Even for monitoring. This is most likely our number one task which should be concerned with but find the least amount of time available to conduct as is like in most governmental operation not enough staff to do so.

Information Asymmetry on Contractors and Subcontractors

In the contractual relationship, the existence of asymmetric information (limited information or hidden information) has been widely cited in the literature (Brown, Potoski, & Van Slyke, 2006; Dicke, 2002; Kettl, 1993; Prager, 1994; Savas, 2000; Shetterly, 2000; Williamson, 1981; Yang et al., 2009). More specifically, research dealing with transaction-cost theory and principal-agent theory has often argued information asymmetry between government and the self-interested contractor to be the main cause of corruption and financial mismanagement. As such, the hidden, private information of contractors and the subsequent adverse selection by government agencies are both problematic in the contracting out system, regardless of the level of government. In this study, public contract managers also identified this problem and underlined the importance of past experiences (including performance and reputation) of both contractors and subcontractors in managing the contract and achieving satisfactory financial performance. Several respondents explained further:

> We are criticized by individual auditors for working with unreputable vendors who hid past issues. In practice, some of them aren't always honest. They will say they are experienced and they can provide the lowest price of delivering the service but nobody knows if they are the most responsible and capable bidder. I would strongly suggest that all government agencies wanting to

> achieve cost-effectiveness only contract with vendors who can demonstrate past experience in the issue for which you are going to be offering sub-contracts. This way you have much less chance of funding an agency that cannot achieve their proposed level of service because they are unfamiliar with an issue.
>
> I think that past performance matter, contractor's reputation on previous experience. There is a time when a contractor could come in at the lowest bid, but based on previous experience, you could choose not to hire them. The phrase is lowest responsible bidder. So, you have to consider their pricing, past performance and experience. Of course, their criminal risk matters.
>
> Sometimes, even though we do not have any detailed information on potential vendors to provide services, we are forced to do business with contractors and sub-contractors that have prior negative experience with other municipalities, and the prevailing wage law. Despite what is put out by contractor or the union, neither one guarantees acceptable work.

As Amirkhanyan, Kim, and Lambright (2007, p. 712) argued, because subcontractors are directly responsible to the contractor and not the government, it is more likely that their information, especially on the quality and quantity of services they are actually providing, is seldom accurately captured by government agencies or managers. More specifically, if the contracted service delivery arrangements involve multiple subcontractors, it is more difficult for government agencies (contract managers) to maintain control over the service delivery process and measure (or predict) performance (Fernandez, 2009; Romzek & Johnston, 2002). This observation is well illustrated by the following quotes:

> Our agency has checked contractors' financial and management capacity prior to awarding of a contract and even during the contract. If we don't think that they have the financial capacity to run the program, then we don't fund them at all. That comes under contract feasibility. But, our biggest challenge is getting the sub-contractors to collect the data we need so that we can accurately reimburse them based upon their performance during the contract period. Many agencies issue vouchers for reimbursement but have not actually performed the contracted services. Without knowing subcontractors' performance and actual achievement, we cannot achieve satisfactory financial performance.

> I worked in the county office as my first job in New Jersey. I worked at the county and in human services as an administrative chief. One of the changes made was reporting accountability from the subcontracting contract. There is a friction between the social workers and the business people. The thing is that we hardly know how subcontractors are working and how much they're reporting to the contractors. We need both; particularly for accountability, we need the business people.

(2) Suggestions and Recommendations for Government Agencies

Replace Favoritism (Political Ties) with More Fair and Competitive Bids

In addition to the question about the extent to which the local contracting out system is effective, as discussed above, public contract managers were specifically asked to recommend techniques or requirements that need to be in place in order to achieve satisfactory financial performance. Unsurprisingly, the majority of public employees commonly responded that the main cause of unsatisfactory financial performance in local government contracting out was a lack of fairness and transparency in the selection of vendors in the bidding process.

As mentioned earlier, when public contract managers were asked to diagnose and explain the effectiveness of the current contracting out system, they revealed that political connections represented one of the primary challenges embedded in the system. It can thus be assumed that the existence of favoritism and subsequent unfair, collusive bidding on and the awarding of contracts cause government agencies to have weak contracting performance characterized by, for example, fraud, waste, abuse, conflict of interest, and lower quality of contracted goods and services. In the end, such corruption may induce additional monitoring/oversight work, increased management costs, citizen dissatisfaction, and complaints (even hostility) from other contractors (Hefetz & Warner, 2012; Savas, 1987, 2000; Sclar, 2000).

In order to overcome this problem, there should be clearer rules and stronger restrictions on favoritism, not only by amending existing legislation to require competitive bidding process for all contracted services, including emergency and professional services, but also by making the process more visible to the public (e.g., open the process to the public using websites or watch-dog system for appointed employees). The following quotations support this argument:

> Proper enforcement of the pay-for-play regulations is absolutely necessary. Without these regulations, you will see an increase in government corruption. We have observed that many private organizations will donate money to campaign funds and PACs in order to receive government contracts in return. With strict pay-for-play regulations in place, the lowest bidder with the best services will be rewarded the contract, regardless of whom they support politically. No favoritism, no corruption.

> I find it frustrating that professional service contracts are awarded based on political connections and not on true expertise, and I find that frustrating. All procurement for professional services should be qualification-based first, then cost/fee based second. When governments monitor over bidding and operation, there should be a third party, someone who is unbiased and remains unassociated with you, so that I can really just look at the numbers and make an unbiased decision.

> The position to be contract managers or procurement officials (QPAs) should not be appointed by the current administration so that they can always change to ensure that the person is unbiased. The monitor would make sure that they are being financial responsible and that they are doing the work that they are contracting out for. Just making it more transparent. An interested resident is always going to read about stuff. People are interested or not interested. But, it should be out there; on the website or anything. It should be out there so that the people who want to know what is going on can find out what's going on. It shouldn't be so secretive. Right now, it is.

Contract Specificity in the Request for Proposal (RFP) Matters

Consistent with the first recommendation illustrated above, this theme appears to be explicitly associated with the solicitation for bids in the bidding process. In the interviews, the majority of public managers addressed the importance of a clear and

specific Request for Proposal (RFP) in the contracting out process. According to them, ensuring that the contractor will produce what it is being paid for is difficult to predict due to information asymmetry.

In order to overcome this uncertainty embedded in the contractual relationships, to date, scholars in the literature have pointed out that when the government prepares to advertise contract bids, the solicitation package representing the contract's scope of work and its evaluation step/tool should be specified and, if possible, it should include procedures, rules, penalties, and incentives in clear language (Amagoh, 2009; Brown et al., 2003, 2006; DeHoog & Salamon, 2002).[1] Amirkhanyan et al. (2007, p. 711) argued that contract specificity (clarity) can reduce the impact of informational asymmetry on the contractual relationship. Similarly yet more specifically, Fernandez (2009) noted that a high level of contract specificity allows government agencies to deliver their expectations clearly and accurately to the contractor, thereby holding the contractor accountable for performance (p. 81). In this viewpoint, some public contract managers reported that:

> Contract language should be clear and avoid generalities. They need to try to not make it nonexclusively by limiting product by name or brand.
>
> I believe that the bids being put out should be better written and specific. Too many variables that require the bidder to bid out at the worst case scenario which increase bid amounts. Poorly written RFP details and vague guidelines make it difficult to bid efficiently. Too often people and government agencies seem to have no idea what goes into a bid, and the requirements are unclear or undefined.

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[1] Brown, Potoski, and Van Slyke (2006) noted that public managers typically have discretion in contracts to specify several features, including vendor tasks (nature and scope of work), outcome measures, vendor qualification licensing or accreditation issues), vendor compensation, payment schedules, contract duration, incentives and sanctions, renewal provisions, and reporting requirements (p. 327).

> In the actual procurement process, payment, accounting, and auditing are all related. If you don't write a really good RFP, you can't manage the contract. So, pricing becomes an issue. In order to make change in government, you have to take risks. There has to be some kind of venue for taking contracting risks and that does not exist. That is harmful. How the contract operates today versus what was written in the RFP is very different.
>
> Sometimes, vendors tended to try inflate the price because they have to negotiate the price down so that they could extend the service provided. The first thing that you need is to be very clear about what they are supposed to be provided in the RFP and make sure that their response commits to providing those things. No flawed RFP. My biggest battles with vendors are that they try to not do what they say they will in their RFP for that very reason. My last altercation was with a vendor who was not delivering what they were supposed to deliver. The agency staff thought I was too tough. What is happened is that we are getting fewer bids. We are getting proposals that we have to be really careful to understand what they are committing to and you have to know how to do that in order to evaluate them. The issues are huge.

Overall, it can be concluded that effective contract management and financial performance depend on the specificity of the language used to write the contract's anticipated tasks (Fernandez, 2007, 2009) and how tight the conditions for costs, provisions, payment, and evaluation are included in the contract document. Tight contract specification will be helpful to protect risk-averse principals (here, government) from untrustworthy agents (here, contractors) in the time of negotiation prior to awarding the contract (Brown & Potoski, 2005; Brown et al., 2006; Savas, 2000).

Need for Sufficient Staff (Personnel Resources)

Another frequently referenced suggestion from public contract managers was ensuring that public agencies hire sufficient staff to manage contracts effectively. As mentioned earlier, public contract managers reported that a lack of personnel resources in purchasing and contracting agencies can cause decreased, intensive monitoring and

instead more dependence on self-reported documentation by contractors, thereby generating decreased oversight responsibility. In instances where a government agency continues to face a lack of personnel expertise in managing contracts, contracting (public procurement) remains easily vulnerable to financial corruption and ethical mismanagement issues as a result of opportunistic behavior on the part of contractors (Fernandez, 2009; Girth, 2012). Thus, government agencies need to focus on and invest in "micro-management "or "micro-monitoring," meaning that the activities and performance of contractors are sufficiently monitored by an adequate number of appointed staff members. For financially effective contract management, public contract managers must keep track of financial resources entrusted to the contractor on a daily basis. Of the interviewed public contract managers, five gave recommendations for monitoring contractor activities:

> I think that there should be more people who are able to work for contracting, management, and monitoring in the office. In today's day and age with so much streamlining and budgets being very tight, we are losing personnel. It is not easy for only one person to review all papers and manage all vendors. Especially, our purchasing department should hire more and more officers to deal with oversight works. That would probably make the process better; including a monitor.
>
> In my opinion, the most important thing is that government needs more people in the office. In the time of financial crisis, one staff member of the two in our engineer department was unemployed. When we contracted out public works such as road pavement and asphalt work, we could not send our staff in the site field and see how well the vendor is doing. It is technically hard in practice. In this case, the monitoring services do not work effectively.
>
> A few years ago, you may remember that the city of Newark fired many policemen even though the city has been notorious of high criminal events. I don't think that way was effective in the long term. If the contracted works are related to and close to our community, the layoff of officers can be problematic. I would say the shortage of staff, lack of field inspectors and monitoring officers, is a critical issue.

> To check their job like a building construction, monitoring officers are needed. So, if you have an employee, someone that you choose as a project manager, the manager needs to consistently monitor the contractor. Obviously, the more frequently their checking, the better it is. Rather than let something go a long time unchecked, it is more difficult to go back and fix it. It takes a long time. Government agencies focus on and invest for 'micromanagement,' meaning that you need to have someone on staff that stays on the contractor.
>
> Over the last 10 years, whenever someone retired or quit, it would be added to someone else's responsibility. When I started in contracts, I was not responsible for IT at all, which was a huge [component]. We sort of managed it. Then we got the transportation contract. When I saw it, I said that we needed 10 people to manage this contract and we got me handling it with 40 other contracts. But, still we have a few people working who have actual operations experience.

Systematic Training and Education Matter

Notably, it seems that this theme is related to the need for sufficient personnel resources, as discussed above, since the systematic training and education of government agency staff is necessary for effective contract management. Such an observation has received greater attention in the contracting out literature. For example, focusing on the Kansas case of contracting for social services for the elderly, Romzek and Johnston (2002) stated, "[t]he absence of adequate training is likely to reduce the effectiveness of contract management" (p.428). Analyzing semi-structured interviews with 69 state and local contract managers and private contractors in the District of Columbia and near state and local counties, Amirkhanyan (2009, pp. 536-537) found that government's inability to effectively manage the contractor's performance and understand their activities appeared partly due to their lack of training, internal infrastructure, and government's in-house capacity (resources).

In practice, it appears that only Qualified Purchasing Agents (QPAs), who are in charge of purchasing and contracting at the local level, had taken a series of training

seminars and classes regarding contracting out and purchasing-related law. For other public employees, there has been little or no opportunity to take such courses, nor have such courses been mandatory. Some interviewees delved further into the issue of training, explaining that:

> Concerning training and any requirements for training, I was very disappointed. One of the things that got me in trouble was that I requested a schedule for two months and I was told that I couldn't. There is no training. There is a contract manager. I had to take an automated thing that took me about a half-an-hour. First of all, it was a waste of my time. Second of all, it didn't really teach me anything.
>
> We have a lot of lawyers and lawyers don't understand. A lot of people think lawyers and auditors are good for purchasing because it is contracts, but it is not about that. They don't understand the details inside and even the procurement people work with no operational training.

According to Fernandez (2009), "[c]ontracting outcomes should be improved when a public agency is staffed with personnel trained in contract administration and capable of preparing bid documents, evaluating bids, handling questions posed during a prebid conference, monitoring performance, and dealing with complaints and performance problems" (p. 82). In this vein, Fernandez and Moldogaziev (2013) also stated that job-related knowledge and skills gained through training and learning can help employees to diagnose and solve technical problems (p. 160).

Taken together, it is reasonable to expect that public contract managers who have been trained and educated in contract administration are more likely to manage contracts effectively. In such a situation, the likelihood that local governments will achieve higher levels of contracting financial performance increases broadly. In short, it is important for public contract managers to be "smart managers" in knowing "how to manage and monitor," beyond mere "smart buyers" in knowing "what to buy," as per Kettl (1993). Taking this view, interviewed public managers pointed out that

staffing level should be fairly adequate and developed by systematic training and education:

> Public managers in local governments need to be trained. I mean more hands-on training for contract administrators. And they need to be professional. They need to be subject experts themselves. Just because you are contracting out doesn't mean that you don't have to know anything about the field. There's a need to make them aware of the difficulty of the other side. This is a mutually benefiting experience for both parties.
>
> There was a book called *Reinventing Government.* One of their conclusions was…in order to do this you have to change the structure of government. Everyone is worrying about the wrong things. The way to have fiscal effectiveness and combat corruption is to trust your contract managers and add contract managers that are knowledgeable about contracting and budgeting, as well as, populations.

Interestingly, one QPA cited more concrete ways in which public contract managers can play a role in managing the contract more effectively. He stated:

> All government officers, regardless of their level, should take basic classes for effective contract management. One of them might be an 'ethics' class. They should be obligated to continue to take this class as well as the 'basics of local government contract law.' When I talked with my coworkers, most of them do not understand the micro-level policy and management process.

Invest in Performance Evaluation Database

Another major theme that emerged in the coding process was the need to develop a new statewide database available to all local governments, which should be frequently updated on a regular basis and easily searchable for basic contractor information as well as more specific information about contractors and newly added vendors to the list (such as their past and recent performance, criminal record, the updated price they charge, and their financial capacity and independence). The emergence of this theme shows us that it is important for government agencies to

obtain timely and high quality information through compatible and interlinked systems, regardless of contracted service areas or geographical distances.

In practice, in the state of New Jersey, it seems that most contracts have been undertaken in the name of performance-based contracting system and there has been a central contracting out (public procurement) database containing lists of vendors (bidders), contract information, and financial document managed by the Department of Treasury, Division of Purchase and Property. However, despite monitoring by the State Comptroller's office, there was a noticeable absence of specific audit reports of all local contracted services, which should be available to the public. In addition, another idea is that local public agencies and purchasing departments maintain their own database systems of information they compile on their own behalf. Due to the lack of sufficient time, staff, and financial resources, however, it is not easy to maintain and update relevant data on all local contract information or contract termination, nor provide it on request. In explaining the challenges for tracking contract data and measuring contractor performance, public managers stated the following:

> There is a difference between how much service contractors provided and what it actually cost them. Many contractors do not meet the basic tenants of the contract. They tend to add up the price over time during the process. Some of them will put in a price based on an assessment but due to unexpected events, they are able to change the price and it is a value that is somewhat unknown.
>
> I think one thing that would be helpful is a central reporting agency to look at past performance. So if everyone, contractor A,B,C… needs to have a place to go and talk about their experience. If there was a performance evaluation database for contractors and vendors, governments could go and review that data. Also, I think [it would be good] with regards to price. So in addition to performance and price, as I was speaking about the state contractors list, once you are on that list, you are on for a couple of years. It is not always a standard amount of time. But, with regard to office supplies, you are on that list for a year. As a city, we automatically go to Office Max because it is easier. But,

> Staples may have a better price. But, if we want to go through Staples, we have to put together a bid, put it in the newspaper, and wait for a response. So, from the value of time, in addition to have performance measurement, there should be an updating of price.

Facing this challenge, interviewees also pointed out:

> To find pre-qualified responsive vendors and suppliers, a statewide electronic portal for submission of paperwork and billing along with paperwork progress needs to be implemented. Also, government needs to respond to contract issue questions quickly and not get bogged down too much in the bureaucracy. Both parties should be responsive to each other and it may result in transparency, flexibility, and integrity on both sides by creating a positive environment for a successful contractual relationship.
>
> The in-house tracking of data over time of expenses, timings, and general performance allows for quantitative methods to evaluate vendors on an annual basis, or more frequent. I think that similar to the budget tracking, contracts and procurement processes should be heavily date driven and this tracking must be allowed accurate future tracking by leveraging historic data and made available to other agencies. Maybe we can think about using Excel or advanced statistical software or other measurement tools used by outside rating agencies. These tools may allow for more fair and informed decisions when possible.

These suggestions are in line with previous research, which suggested that there is a link between performance measurement and accountability (e.g., Behn, 2003; Hatry, 1999; Heinrich, 1999; Moynihan & Pandey, 2010). Due to hidden information and moral hazard, despite the presence of unexpected contingency factors in the contracting out process, it is generally agreed that the ability of service providers to meet their contractual obligations is difficult to predict (Brown et al., 2006; Van Slyke, 2007). For this reason, well-designed performance standards and management information systems are needed.

As suggested by Behn (2003, p.365), "[u]seful performance management systems will improve programs by assisting managers to identify poor performers, to follow up with corrective actions, and to reward good performers and replicate their approaches." In other words, performance management helps to lessen the effects of

adverse selection by government agencies as well as instances of opportunistic behavior on the part of vendors, which, in turn, enhances the accountability, transparency, integrity, productivity, and effectiveness of contracting out. In view of the increased propensity of government agencies to use data-driven performance information and measurement, as interviewees claimed, it is expected that integrated contract databases, ideally shared by all local purchasing agencies and departments, will become a critical part of the necessary changes for transitioning to financially effective contract management.

Strong Leadership Matters

In interviews, public managers stressed the importance of strong leadership and effective supervision to proceed toward financially effective contract management. As suggested by Holzer and Lee (2004, p. 7), "[w]ithout top management support and leadership, no productivity and performance improvements are possible." In addition, as Amirkhanyan et al. (2007) found in their study, it is reasonable to expect that agency leadership can positively affect the performance of government agencies in contracting out. They argued that contract management can be more effective in situations in which senior management places a high priority on subordinate staff conducting contract monitoring activities and provides necessary guidance (Amirkhanyan et al., 2007, p. 709). Amid this perspective, public managers stated:

> A strong stable leadership can play a crucial role in manage vendors and monitor their works. In my experience, our agencies experiences turnover in government every 3 or 4 years but the senior management oversight was the only ways contract, project, and other related processes could stay effective.

> Perhaps, leadership in managing contracts can have set an example. One of the things that is pushing him/her is federal audits of other agencies using Medicaid dollars. There is a full concept of holding everyone accountable, holding the managers accountable, holding the contractors accountable. But, you know, it is really based on the luck of the draw and the commitment.

Another supported this thought when she said,

> The organization itself has to have a policy of operating with financial integrity. It has to have its own checks and balances because without those it is easier for people to steal or mismanage money. People just don't know what they are doing and they do it wrong. Sometimes it's intentional. So you have to have really good checks and balances in your organization, conduct independent audits, conduct internal audits frequently. For this, first of all, a strong leadership is necessary. The leaders should guide the direction in his or her authority and command.

Moreover, it is interesting to note that one interviewee pointed out that there is some evidence suggesting a link between leadership and the use of sanctions to hold contractors accountable for their performance. This participant stated that,

> The use of sanctions is important if somebody messes up. Sometimes you need that carrot and stick to have goals to reach and incentivize all employees across the department to do more work. You do have to make an example. You do have to penalize them, otherwise people will continue to make that mistake because they will know that there is no big penalty or sanction coming. For this, department leader, even QPAs, should show their leadership to manager poor vendors. When there were sanctions with those other organizations when I was in Jersey City, most vendors seemed to behave a little more strictly. Then time went by and they forgot and got lax again. But, when that happened we had to be on our toes, crossing our T's and dotting our I's. It should be continued.

These insights from public managers reflect that a leader's role in the contracting out process matters for contractor accountability and achieving satisfactory financial performance. As discussed above, administrative leaders can play a significant role in directing and streamlining a more effective statewide performance database system.

Team-based Organizational Structure

Finally, it was observed that team-based management can help government agencies to reduce the monitoring and management burden caused by the lack of financial and personnel resources in their respective organizations. Although this opinion was not expressed by the majority of interviewees, it is noteworthy since it allows us to ponder the link between organizational culture, structure, and performance in the public sector. Further, it seems that the theme of team-based management can be extended to the context of cooperation and collaboration through functional structures at large. In the public administration area, structural changes in public organizations have been widely acknowledged as a typical strategy used not only to cope with environmental uncertainty and changes but also to help achieve the organization's goals and purposes. For example, according to Guy (2004, p. 450), "team building" can be defined as a working style to bring people together to develop the linkages necessary for them to work interdependently toward the accomplishment of a shared goal. In other words, the basic idea underlying this theme appears to be that cooperating and working together by bringing all areas of expertise to one table is an effective strategy for achieving the overall goals of the agency. This concept can also be applied to contract management, particularly financially effective contract management.

As suggested by Gooden (1998), successful contract managers should utilize the expertise of other staff members and embrace a large number of outside participants in reviewing and rating proposals (p. 503). In his interview analysis of human service contracts, he found that all six participants on the contract review team

in question had to review every proposal and turn in an evaluation sheet and then the manager finally reviewed the six different sheets focusing on all the positive and negative comments. It seems that such a team-based (feedback-oriented) structure can hold all participants accountable for their decisions and further lead to more objective and fair decision making or creative problem solving for each contract (project) in the government contracting process. This is well illustrated in the following quotes:

> My suggestion would be to have a committee of individuals to review bids and make recommendations as opposed to one individual. So, if it is a public work project, maybe the public works director, the purchasing agent and the engineer are on the team. If it is for recreation, we can count the recreation director and superintendent of recreation. Instead of having a purchasing agent make decisions, because they are only basing it on number, as opposed to a project monitor who is actually going to work with the job. When they as a team share their experiences and opinions, the contract work including management and evaluation could be effective.

> We don't have that much personnel who can do monitor the service delivery every time and of course, we don't have enough money. The significant problem is that there is no proper measurement for their performance. So, we need to get support from other employees in our agency as a team or ask their opinions and then share what they've looked at, heard, and felt each other.

Evidence from Private Contract Manager Interviews

(1) Effectiveness of Current Local Contract Management System

Poor Communication between Government and the Contractor

Consistent with the semi-structured interviews with public contract managers, private contract managers were asked to report their perceptions regarding the current government contract process in the interviews. The majority of respondents pointed out that there is no effective communication between government (public managers) and the contractors and, furthermore, there is an absence of a positive attitude for

fostering understanding and sharing concerns in the contractual relationship. Contractors thus viewed public contract managers as not taking responsibility for their roles in the contractual relationship, as they tended to resolve problems by relying on third-parties outside of the contractual relationship rather than by confronting issues themselves. Highlighting these sentiments concerning the government's passive approach in direct interactions with service providers, interviewees reported:

> Many contracts are put out with incomplete knowledge of the product or service. Whenever facing difficulties in closing out projects on which additional work has been required, we tried to discuss with the government. But, often the municipal bodies involved do not have the interest in making the decisions necessary and look for third parties like judges, mediators, and arbiters to make the decisions form them. This allows them to appear to bear no responsibility (to the voting public) for the outcome of the contract disputes. This wastes considerable time and contractor resources, while seemingly to provide a way for municipalities to share the wealth with their favorite attorneys.
>
> Based on my experience, there is already a shared basis of what they are looking for. There is nothing more frustrating than when a monitor comes out and they have all their questions, but they don't understand the work. They aren't asking the right questions, or they are missing stuff. Or, contractors are doing something really important but they don't even ask about it because they are not familiar with the field.
>
> It is clear from my end that the purchasing hierarchy has no interest in really understanding what they are buying in this arena... No purchasing agent ever checks the labor hours [how could they] which are arbitrary anyway and they are routinely doubled and tripled to make the final result profitable. It is useless for the buyer and encourages 'games' by the contractors.

Two nonprofit contractors also commented along the same lines:

> When it comes to working with government agencies, a lot of the frustration is communication between me and my counterpart or the people monitoring our program. A lot of the time I feel like, 'Ah, they don't get it. They don't really understand what we are doing.' So there is miscommunication and there probably needs to be some training on the subject. There is a mentality about treating everybody as if they work for the government. Every organization has its own culture. When you are talking with someone from these government agencies who have been there for a long time, they have a certain culture. It is very difficult for them to see how your organization's culture may be different.

> I feel like the government agencies really need to understand the work that is being done. They are bidding out various jobs or services. So they have to understand what those services really entail, what it really means to provide residential care to medically fragile children. Even though they are bidding out the work of it, within the department, they really have to know the field. Let's think about the residential field of working with pediatric situations. That makes [monitoring] more comprehensive.

As can be seen from these quotes, the communication gap between government and contractors is a huge barrier to effective contract management and satisfactory financial performance. According to private contract managers, government employees seem to be less familiar with the tasks of contractors and even the demands of the community. As illustrated by the findings of Fernandez's (2007) research, frequent and open communication between two stakeholders in a contractual relationship can lead to high contracting performance. Because open communication helps reduce information asymmetry and offers more opportunity to share each concerns and understand each other, parties in a contract characterized by open communication are more likely to familiarize themselves and predict each other's behavior in the future (Fernandez, 2009, p. 75). This observation is reminiscent of Van Slyke's (2009, p.140) statement that "[c]ollaboration and contracting are no antithetical to one another. Indeed, successful contract relationships often involve some degree of collaboration between the buyer and seller." This statement appears to reflect the viewpoints offered by public managers interviewed. Consequently, in order to identify and solve problems embedded in contracting out and achieve satisfactory contracting financial performance, government agencies need to make efforts to communicate with their counterparts (contractors) more visible and to more explicitly express to their staff their concern for contract success.

Red-tape

This theme was highlighted earlier in the findings from interviews with public contract managers. About half of the private contract managers (employees of the contracted service provider) cited “red-tape” as one of the main challenges embedded in the current local contracting process. Conceptually, red-tape includes not only the presence of rules and procedures but also the delays and subsequent irritation caused by formalization and stagnation (Bozeman, Reed, & Scott, 1992; Goodsell, 2003). As discussed by Baldwin (1990), red-tape tends to cause governments to proceed in a rigid and inflexible way due to excessive rules and regulations. In this sense, private contractors perceived that such cumbersome procedures and constraints imposed by government agencies made them frustrated, especially when they are seldom paid in a timely fashion. Given that this task delay of payment or reimbursement continues, it is possible that government agencies are more likely to lose potentially high-performing, responsible vendors in the short term and further struggle with a dearth of sufficient competition in the bidding process in the long term, as illustrated by the comments of one senior public contract manager (QPA) above. The following quotes from for-profit and nonprofit contractors show how they are susceptible to widespread red-tape in their work with local government agencies serve as illustrations:

> Paperwork and compliance demands are burdensome and involve more paperwork than the actual purpose of the contract.
>
> Red tape. They have their regulations and are not reasonable. They are a little thick. They are difficult to reach, not flexible, and sometime punitive.
>
> You can get a contract, for instance a community services block grant, six months after your program starts. They will send you a letter, tell you that you have the money, but you won’t get the contract until six months later. So, you can’t bill; you can’t collect your money back until you get a contract document. So, say I get a contract from the city of Newark because you get

> $100,000 to do HIV treatment. Your contract starts January 1. You send them all of the money that you need to send them. Then you get your contract between April and June. So, you spend 4-6 months operating without a dime of money coming from your contract because the process takes so long.
>
> Red tape; because it has to go through all of these different steps. It has to be approved by city council, signed off by the business administrator and sometimes, because if they don't get it on the agenda, it has to wait until the next month. It can be 3 or 4 months before you see a dime of your money and, in the meantime, the agency itself has to put that money out. So, contractors set you up for failure and limit the ability for smaller agencies to get into the process. They cannot afford to put out money and float the government debt, which is what you are doing.

Similar observations were made, as seen in the following quotations:

> Actually, some programs that come from a federal source that comes through the state or through the state through the county… If the origin of the money is federal, there are more regulations about how fast you have to pay. If the origin of the money is local, regulations may not be as stiff. Many of the cities and counties are still manual; they are not even systemized yet. The cities and the counties have a tendency to be late all of the time, while the federal government is done more timely with their contracts.
>
> There is usually a lot of paperwork and reporting. The bidding process can take anywhere from 2 weeks to 30 days. Once you put in your bid and get your response back that you were accepted, the contracting part starts and that's where the delays usually happen. It takes a long time to get from paper to some sort of data system, the management of contracts.

Discrimination among Vendors (large vs. small contractors)

The last theme, the issue of small-sized contractors, emerged in the data from interviews with private contractors. Even though relatively few interviewees mentioned this topic, it is noteworthy in that it appears to be sensitive and in need of political support and legal action for contract success in the long term.

According to Local Public Contracts Law (N.J.S.A. 40A: 11-1 et seq.), "set-aside contracts" function as a contract for goods, equipment, construction, or services and is further designated as a contract for which bids are invited and accepted only

from qualified *small* business enterprises, in addition to qualified veteran, minority, or women's business enterprises. In addition, the only condition under which a public director may not grant approval for proposed regulations is if the director finds that these regulations unnecessarily restrict the participation of small businesses in the public bidding process. As such, although state law and related rules contain some policies to support qualified small business firms, private contractors expressed that a significant gap between policies and practice exists.

Many local government agencies tend to award their contracts to large business firms and little to no room exists for small business contractors in a typical contracting process. As DeHoog (1984, 1990) noted, in a particular service area, small and new organizations often lack expertise and limited administrative resources, so that they may have difficulty entering the contracting market as potential service suppliers. This is perhaps best demonstrated by contractors engaged in public works, such as electrical services, plumbing, mechanical services, and general construction, as illustrated in the following quotes:

> The bidding process is in favor of only large 'Daddy Warbucks.' It seems to be more corrupt, as large company's getting the contracts, and provide lower quality service to the municipalities and our citizens. For public work projects, governments will issue deposits before contracted is completed. Small construction/renovation firms cannot bid on jobs that will not issue deposits. In the private sector, there should be a variance for dollar contracts amounts of $250,000 or less with payments issued in quarters, half or thirds as each phase is completed. This would give small firms the experience and opportunities with working on government contracts.

> We have been listed as a vendor for many years and have been contracted a handful of times but never utilized for services. I am not sure what the expectation is to provide services but it doesn't appear to be a fair process. I do understand the best pricing gets the job but there's plenty to spread around and the small (truly small) businesses really don't stand a chance.

> Small contractors are frozen out. Not because of ability. Contracts seem to be pre-chosen. In terms of timely payment of invoices, smaller more innovative firms cannot afford to carry accounts receivable (AR) for 60 or 120 days. They eventually opt out of government work and you are left with the larger firms that are willing to carry these costs because they have deeper pockets. This is unfair. There is absolutely no reason that payment for any contract should go beyond 30 or 45 days. This process will reduce change for new small companies to get business from the government contract and also does not promote any new innovation or outside box thinking.

Acknowledging the existence of such discrimination and unfair treatment regarding local bidding process and payment, small service providers also insisted that,

> Contracts should be broken out so smaller firms can compete. I am speaking of contraction services. Separate prime contracts on buildings, electrical, plumbing, mechanical, and general construction.
>
> The main problem with government and public work projects is that they will issue deposit payments before the contract is completed. Small construction, renovation firms cannot bid on jobs that will not issue deposits. In the private sector, my customers understand the down payment/deposit is necessary for small firms to start the job… There should be a variance for dollar contracts amount of $250,000 or less with payments issued in quarters, half or thirds as each phase is completed. This would give small firms the experience with working on government contracts.

(2) Suggestions and Recommendations for Government Agencies

Qualitative Values in line with Goal (Mission) of Contractors

The most frequently referenced theme in the interviews with the private contract managers was "qualitative value." It was found that, in addition to quantitative indicators, qualitative indicators should be considered when government agency set the performance goals and measure them (contracted goods and services). When public officials do monitoring work, there is a tendency for them to focus more on formal, quantitative, and financial bottom lines, such as timeline, quality, and quantity (e.g., price, cost, or number) of the delivered services named in the contract

agreement than the "real" quality behind the numbers. As interviewees pointed out, particularly those working for nonprofit contracting organizations, this management style is problematic because it fails to fully capture the qualitative dimension of contractor performance. Below are specific examples from the data:

> The mission of my organization is to help bring people off of public assistance and give them independence. This agency is more on quality rather than quantity and it is not performance-based. We still have goals, but the contract does not rely on numbers. It is more quality based, so now I can spend more time with an individual and really try to find them a good job. I would not only find them a good job, but also help with training so they could move to another good job, trying to make them more successful… We were rated on how long people would last on the job, 30, 90 or 180 days. People would have milestones. We might hit the numbers that the contract required, but that doesn't mean that we were fulfilling the mission… Sometimes it is a problem when the goals, the numbers, don't match up with the mission, which is to find good jobs for people. With that agency, which is a for-profit company, they were too concerned with getting as many people in and out. The more people you are getting into your chair, the more people will get hired. It doesn't mean that they would be hired for good jobs or last a long time.
>
> Public agency will have for-profit organizations, which are going to be bidding on the contracts. Financially, they look great because maybe they are a larger business, so their bottom line looks really great. They are only going to charge you $100 per child per night or something, whereas a nonprofit organization may not be as large and will charge more. But, you really have to look at what you are getting for that amount, the qualitative value. And, that is very difficult to measure. You can't always measure that. But, in order to be fair, you need to take some of that into consideration and not just about who can do it for less. I think that it goes back to understanding the field.
>
> In order to participate in the Medicaid/Medicare program, you have to meet the standards. You have to get a good survey. People see. There is a lot of controversy about it. What they are looking at does not mean anything. It is just a lot of numbers. But, the direction that the government is going in with hospitals and our business is quality measure. How do you measure it? That's my forte, quality management… I think you have to pick out the proper measurements. Pick something that matters.

Similar observations were made by other interviewees, as seen in the following quotations:

> Rather than just accepting this paper that says I did 25 clients and spent this much money, they really have to go beyond the numbers. I think that their focus is quantitative, when it should be qualitative and quantitative. Right now, they just want numbers but they don't really know what's happening, what the real outcomes are for those clients. Unless they can find a way to check for duplicated and unduplicated clients. You could serve the same guy over and over.
>
> If you keep having to feed a family every month, you are not really dealing with the poverty issue; you are just temporarily fixing something, rather than dealing with the family's problems, which is what you got the money for. They have to get behind the numbers, look at the documentation and how the agency is recording the numbers. That would help them to form their decisions much better.
>
> I think that when government agencies establish their policies and contracting plans, they should consider more goal-oriented deliverables to enable potential vendors to provide industry innovation as a response.
>
> I believe what is the most needed for government agencies is really looking at what is the goal when they are monitoring. What are contractors trying to achieve? Of course, the government agency has a goal. But, you have to make sure that the milestones you set for these companies make sense… It would better to look deeper. It is like there is a problem with the car and we are assuming that it sounds like it's the engine. But, without opening up the hood and looking inside, we don't really understand what is going on.

Furthermore, in cases that involve money, especially for performance-based contracts, organization put more pressure on their employees to achieve the initial goal (mostly numbers). This may pertain to the timeline of service delivery. The failure to achieve the goal may increase opportunistic behavior and undermine accountability, integrity, and transparency, as the following quote illustrates:

> If you don't hit those numbers to make it appear that you have. So, I think that there is more room for fraudulent activity. Towards the end of the month, that is when you have to get all the numbers and billing in… When that is the goal, people in the private sector will do whatever they can to earn money. That might mean falsifying documents, corruption, fraudulent activity or whatever it is.

Overall, this leads to the argument that performance measures should be differentiated across the sector. In short, there should be a different measurement of performance between for-profit and nonprofit contractors. Scholars have argued that nonprofit organizations are uniquely mission-driven and socially conscious in nature (Amirkhanyan, 2010; Hansmann, 1987) and their tasks are too complex to define (Behn & Kant, 1999; Jang, 2006). For this reason, their performance is not easily observed and measured compared to their for-profit counterparts (Fernandez, 2009; Van Slyke, 2007, 2009; Witesman & Fernandez, 2013). For example, in terms of human and social services to help socially vulnerable groups, related programs may have multiple goals or long time frames for verifying the outcomes.

Acknowledging this challenge, as reported in Amirkhanyan's (2010) research, governments tend to design and use different measurement systems across sectors in the contractual relationship. More specifically, as Amirkhanyan pointed out, compared to for-profit contractors, "[n]onprofit ones are more likely to operate in service fields in which outputs and outcomes are difficult and expensive to observe… serving vulnerable clients is central to what many nonprofit organizations do, and hence monitoring adequate access for these groups is necessary" (p. 751). As such, in her findings, it was suggested that public managers need to tailor their performance measurement of nonprofit contractors, using diverse "qualitative" data such as contractor's reputation, access to services, and client satisfaction. The above findings thus indicate that public agencies and public contract managers need to pay more attention to qualitative performance data.

Build partnership (trust) based on extensive communication and interaction

This theme appears to be associated with one main management challenge discussed before: poor communication between two main stakeholders in the contracting relationship. As predicted, the majority of participating private contract managers agreed on the need to build trust in contractual relationships. For-profit and nonprofit contractors pointed out that government agencies should use more channels of communication and accept feedback from the workforce in order to cultivate a true partnership between the two parties. They believed that such a collaborative relationship would be mutually beneficial for all. For example:

> We need more communication between the government and the contractors. Value engineering can bring the cost down for the owner and the profit margin up for the contract, a win-win situation. Contract partnering has to be pushed more between the government and the contractor. I believe that is the way everyone wins from a long, strong relationship.
>
> They should trust each other. The communication between customer and vendor needs to be improved especially along the lines of payment. No one is responsible to anyone in the payables department. Rules are often changed and policies and procedures are not always followed. Requests for payment or status of payment are often ignored or are always someone else's responsibility, who is never available. Some of them often responded by saying 'we don't want that vendor.' I think there's no partnership in the government system.
>
> As a contractor, we have a business plan actually. This is how much it would cost to start that. If we could have that type of conversation, rather than the government saying, 'Ok if you don't expand to 12 kids by next year then we won't be able to [x]'… because that is not helpful. What is helpful if you can really have a conversation and develop a partnership. Ultimately, you want the same result.

Government agencies need to listen to the observations highlighted in the quotes above. In the literature, there is a growing understanding among scholars that the move toward "collaborative contracting" and "relational contracting" is helpful not only to hold stakeholders accountable for their decisions and subsequent outcomes,

but also to yield better results in performance (Agranoff, 2006; Amirkhanyan et al., 2007, 2014; Bennett & Ferlie, 1996; Brown et al., 2006; Van Slyke, 2003, 2007, 2009; Witesman & Fernandez, 2013). For example, Amirkhanyan et al. (2007, pp, 710-711) noted that in situations where there are cooperative norms or shared beliefs that two parties have to work together for contract success, miscommunication problems between the two are more likely to be reduced. As such, reducing the gap between two parties by working more closely with each other is necessary and it should be based on frequent interaction and conversation, mutual understanding, and joint efforts by the parties (Amirkhanyan, 2011; DeHoog, 1990; Fernandez, 2007, 2009; Sclar, 2000).

As suggested by Witesman and Fernandez (2013), the atmosphere of shared interests and mutual trust enables government to reduce transaction costs because of less rigorous screening and less frequent monitoring works (p. 690). As in Fernandez's (2007) study, such communication and collaboration help to balance the needs of the government agency with the needs of the service providers and in turn contribute to enhancing contracting performance.

Need for intensive and frequent monitoring

Another frequently stated suggestion from private contractors is that government agencies need to more intensively monitor. Consistent with the views of public contract managers, private contract managers perceived the importance of extensive behavior-based oversight and frequent monitoring – beyond just arms-length regular monitoring – to identify poor-performing contractors, eliminate their shirking and unethical behaviors, and advance towards the goal of satisfactory contracting financial management and performance. This is in line with previous research

(Amagoh, 2009; Amirkhanyan, 2011; Brown et al., 2006, Fernandez, 2007, 2009; Kettl, 1993; Savas, 2000) suggesting that well-monitored vendors are more likely to perform according to contract specification and provide more credible management of public money and higher service quality. The following accounts illustrate this point:

> I think that a contractor has to be monitored often. Government agencies always have to have the ability to pull a contract from a company if they are not achieving what they have set out to do. The years don't matter as long as you are monitoring and have the ability to pull the contract from somebody if they are not performing, doing something fraudulent or not doing what they are supposed to be doing.
>
> Based on my experience, the intensity of monitoring is important. For example, if you know that you have an auditor coming once or twice a year and you know when, people prepare for it. So, you can tell your company let's get everything in order, let's get these files ready. But, if you do it at random, such as do it one week and come back three weeks later, you are preparing people to be on top of their paperwork. Otherwise, I think that you are just preparing people. If you give a pop quiz, you are really testing people. When you can prepare a lot, you can slack for a long time and you know when you have to turn it on. If you don't know when you are going to be audited and monitored, you always have to be ready. I think you want people to always be ready and be acting in a fair and moral manner.
>
> The people who are managing the program or spending the money have a monthly report every single month, so they know what they spent. A lot of organizations don't do that, or they do it every six months, or once a year, or quarterly. It has to be done every single month, so you know exactly where you stand all the time. And, it is easier to catch something before it gets out of hand.
>
> Even if you do have a private company and performance-based contract, really monitoring the individuals and holding everyone more accountable is important. More accountability and more transparency are important… Of course its success seems to depend on the leadership in the organization.

Given that monitoring activities by government agencies or managers are infrequent or insignificant, the contracting government agency might be easily vulnerable to financial corruption and mismanagement. Geographical distance was resoundingly cited as one of the reasons why government agencies do not engage in

frequent, intensive monitoring. As suggested by Amirkhanyan et al. (2007, p. 712), due to the issue of geographical proximity, the less the likelihood of the government managers having the opportunity for face-to-face communication and monitoring of contractor activities (site visits), the greater likelihood that they struggle with the contract failure. In this sense, one nonprofit manager cited an example from her experience:

> I'll give you a perfect example. I was working in Charlotte, and the federal government had given this agency half a million dollars to do medical treatment for HIV patients. An entire two years went by where the local public agency was billing the federal government, they hired staff and they never saw a single patient. Because, they sent the data, the data was accepted and they never came to check. It wasn't until they actually came for a site visit and realized that there were no patients in the clinic, no medical files, no records, that they realized that basically the agency had taken half a million dollars of their money and done nothing with it. That took two years to discover. And, it was so bad that it affected all of the rest of the federal money that the agency had and they wound up closing. [The fraud] destroyed an agency that had been around for 25 years. It hurt them so much that they couldn't raise money. The government wanted to take away all their money so the whole agency closed.

Furthermore, it seems that this issue may be significantly related to a lack of government management capacity. Consistent with insights from public contract managers, private contract managers also pointed out that government agencies tend to lack personnel and financial resources that should be devoted to monitoring. Previous studies have observed similar concerns regarding physical and financial burdens (e.g., monitoring costs) in substantial performance monitoring (Hefetz &Warner, 2004; Johnston & Girth, 2012; Pack, 1989; Prager, 1992; Rho, 2013; Savas, 2000; Whitaker et al., 2004). This challenge was specifically cited by two managers in non-profit contracting organizations:

> Sometimes, for financial corruption of contractor sides, government agencies tend to blame it on staffing issues. They blame it on the volume of work that

> they have. It is too expensive. No resources or they don't have enough personnel, due to personnel turnover, vacancies, all that stuff.
>
> The government doesn't look often enough. They don't check often enough. They just accept what contractors give them. They have staffing problems. There are not enough people going around. They can't possibly visit [everyone]. There are travel restrictions, so they can't travel, especially if you are dealing with federal money but it's regional. I may be based in Atlanta, but my grantee is in New York. They don't want to pay your travel expenses in New York so you don't visit them. You don't monitor the grantee. You just leave them alone. So, two or three years go by, and it isn't until something glaring jumps off of the page at them, they never go check. They just don't."

As per on the interview data, public agencies need to invest in monitoring by hiring more staff that are able to systematically monitor contractor performance, including traveling more often for site visits. In addition, this might also include support for a more flexible schedule and resource allocation in the oversight, as illustrated in the following quote:

> Government agencies need the subject experts on the government side as well as those that they would expect on the contractor side. If there was more investment in capacity building in organizations, the government could really get the right monitors and public managers who actually monitor are more likely to care about the service providers.

Feedback

A final theme that emerged from the interviews with private contract managers concerned the importance of feedback. As private contractors suggested, local government agencies have a responsibility to manage their contracts effectively based on the sharing of feedback between stakeholders for contract success. Executing incentives with rewards and sanctions according to contractor performance in an appropriate way is critical but so is developing a feedback mechanism in the

contracting out process that can contribute to effective financial management. This is well illustrated in the following quotes:

> From the contractor side, I would expect to get feedback from the organization that I'm working for. Without feedback, how could I know how to improve my services? How can I ensure that I'm going to continue building a relationship with your organization?
>
> Share any issues with the contractor. There is a contractor, for example, that I used for a project whose performance was not acceptable. He had to finish the job, but he is no longer on my bidding list. I don't call him and procurement doesn't call him. We were unsatisfied with the work he gave us, so he is no longer bidding for our work. There needs to be accountability and if management does not say that, then who is to say that it won't happen again.
>
> Feedback is important from not just the company, the management, but the worker bees, the people on the frontlines with the individuals. They really know the struggles and they know the problems best. That is not always going to be reported. The management is going to write something up and they are going to report how they want to report because they are concerned about getting the next contract and growing.

Given these perspectives, it can be reasonably expected that tracking contracting errors and wrongdoing using monitoring systems and feedback mechanisms in *ex post* evaluation process benefits both parties in on-going contractual relationships in terms of organizational learning.

Discussion and Conclusion

Throughout the data analysis process, the interview transcripts were reviewed, focusing on the similarities and differences between the perceptions of public and private contract managers. As mentioned earlier, in order to increase confidence in the interpretation, the predominance of themes in each interview transcript (public versus private contract managers) was identified using a narrative style, thematic analysis, and cross-checked with the relative and absolute frequency word counts. Moreover, given that respondents were asked to answer open-ended questions in the interviews, a low frequency of comments on a particular theme was reasonably taken into consideration since it does not necessarily mean that it is less important to two main stakeholders in the contract relationship. It is possible that such minor opinions can be extended to apply for future research. Hence, it is expected that many of the ideas for contract management and improvement gleaned from the interviews are clearly linked to the strategic purchasing management and professional procurement standards being put forth at other levels of government.

Notably, public contract managers did not differ from private contract managers in terms of their perceptions on current contracting out procedures. In other words, when it comes to the effectiveness of the current contracting out system, it was found that both public and private contract managers commonly exhibited negative and unfavorable views on the topic. Interestingly, the findings show a high level of agreement between public and private contract managers in terms of the relative emphasis given to organizational and environmental factors – political environment, structure, and culture –embedded in the contracting out process. In comparing each

theme between the two groups of contract managers that made up the sample, this study found sharp similarities and differences in the way the two groups responded to the question about challenges and barriers they have experienced. Among the observations, several factors appear to be associated with the themes regarding suggestions and recommendations that need to be in place to achieve financially effective contract management and combat corruption.

By synthesizing findings from two main questions regarding the effectiveness (particularly, challenges/barriers) of current contracting out system and suggestions/recommendations, this study attempted to address how well (how effectively) New Jersey local government agencies in charge of purchasing, procurement, and monitoring contracts have been operating to enhance financial performance and combat corruption. Furthermore, this study sought to identify which policies and relevant procedures (rules) need to be revamped and which management activities need to be improved. As per the data collected from the interviews, the findings regarding these aims of the study are described below.

First, both public and private contract managers felt more constrained by burdensome purchasing rules and long procedures from the bidding, reporting, payment (or reimbursement), and accounting/recording processes to that of auditing. Such formal, bureaucratic red-tape may result in the delays within government agencies and discourage contractors. Furthermore, it can discourage potentially high-performing, responsible vendors in the short term and induce a dearth of competition in the bidding process in the long term. Accordingly, this finding implies that managerial inefficiency based on significant *red-tape* in the contracting out process

has a negative effect on contracting financial performance. It suggests that public agencies need to change the formalized, centralized rules and requirements to be more flexible and feasible in decentralizing authority and responsibility to lower levels in organizations.

Second, in terms of selecting vendors from the bids, contract managers from both sectors reported that the process is somewhat unfair due to political ties and personnel connections. It implies that there is a tendency of distributive and procedural injustice in awarding a certain type of service delivery. Specifically, public contract managers perceived favoritism, inherently based on political ties or personnel connections, as one of the main challenges in the bidding process. In practice, particular services areas (e.g., professional services and emergency services) are allowed to be in contractual relationships with local government agencies without holding a bidding process under the law. Nevertheless, public contract managers were more likely to think that such political influence has a negative impact on financial accountability and performance. With this challenge in mind, public contract managers further suggested that all contracted services should be undertaken by competitive and fair bidding process prior to awarding. In other words, government agencies need to be open, transparent, and accurate in awarding contracts and avoid awarding contracts to political and personal connections.

On the other hand, private contract managers in public works (e.g., construction, plumbing, and electrical services) viewed discrimination by public agencies and their favorable attitudes towards large business firm as the main sources of their discouragement. In particular, small size vendors reported that public agencies

may be reluctant to award contracts to relatively small or new business firms and are critical of their management capacity, echoing findings of DeHoog (1984, 1990). Indeed, the narratives from private contractors cited above captured how harsh and unfair existing policies are for small vendors in practice. They imply that public agencies need to give small vendors more opportunities to participate in competitive contract bids and help them with flexible payment schedules and financial support, depending on their current performance and management. Such changes might be institutionalized by top-management support and a new legal foundation.

Third, consistent with the observation made by Halbfinger (2012, 2013), interview respondents from both sectors stated that current local governments tended to heavily rely on self-reported financial data and documents from contractors and oversight was sometimes infrequent and minimal without direct site visits or additional independent audits to control opportunistic contractors. Interestingly, public contract managers reported that compared to for-profit contractors, nonprofit ones have been less screened and monitored, echoing the findings of previous studies (Marvel & Marvel, 2009; Van Slyke, 2007; Witesman & Fernandez, 2013). On the other hand, private contractors argued that to hold two parties accountable to their performance, monitoring activities should be transparent yet conducted unexpectedly. Drawing on this perspective by broadening the analysis to structural problems in public organizations, both public and private contract managers noted that this challenge could be attributable to a lack of sufficient staff, financial resources, and time within the local government agency (Fernandez, 2009; Kettl, 1993; Lambright, 2008; Milward et al., 1993). This is in line with Fernandez's (2007, 2009) and Girth's

(2012) observations that sufficient staffing, expertise, experience, and enough time to administer and monitor contracts are fundamental aspects of successful government contracting process and outcomes. Thus, for effective intensive monitoring in the field of contract management beyond that of arms-length, public agencies need to pay greater attention to government management capacity to ensure that financial and personnel resources are efficiently distributed. Appropriate investments in the capacity of local governments should be required in order to provide effective micro-management, including on-going financial oversight.

Fourth, both public and private contract managers tended to perceive the challenges of asymmetric information and conflict of interest as embedded in the contracting relationship. In cases of information sharing between government and the contractors, in particular, public contract managers have struggled to collect sufficient information (e.g., past experience, reputation, financial/management capacity, and performance) on contractors and subcontractors before a typical contract begins, and they lack sufficient information on how well and how much subcontractors report their performance to contractors.

According to public contract managers, such hidden information may be overcome by ensuring clear language, regulatory requirements, and tight contract specification in writing request for proposal (RFP) and developing a state-wide contract database which is designed to track vendors' performance and information (e.g., cost/price of goods and services they are currently able to provide and past contract experience and performance) that is accessible to all local entities and agencies. In contrast, private contract managers have had difficulty interacting and

communicating with public employees during the contract or after the contracted services were provided. More specifically, the findings from the interviews with private contract managers indicate that when monitoring contractors, government agencies and managers are more likely to focus on quantitative values including visible target (money, number, or timeline) rather than actual program outcomes. This is not sufficient because qualitative values stem in large part from the pursuit of specific goals and missions of contracting organizations in practice. This implies that when monitoring and measuring contractor performance, other multiple measures should be considered. That is, qualitative and quantitative accounts of organizational activities, nature of the service delivered by the contractors, and perceptual and objective outcomes can complement each other to draw a more comprehensive picture of the true contracting performance, as discussed by Amirkhanyan (2011). Perhaps the most feasible way in practice is to use the input of citizens who receive goods and services (client satisfaction and complaint surveys), as well as that of other stakeholders involved in the contract implementation process.

Lastly, the majority of public and private contract managers reported a strong sense of dissatisfaction from their experiences in the local contracting out process. The interview findings suggest that the current local contracting out system needs to be revamped and primary concerns can be mitigated by new strategies and strong managerial efforts. In order to place clear accountability on contracting financial performance, public agencies need to change their management systems to have a more flexible structure, decentralized decision-making, and mutual understanding and adjustment in the collaborative relationship between the two main parties.

When it comes to suggestions and recommendations drawn from the interview data, public contract managers tended to place greater value on visible organizational factors and managerial strategies that would able to be garnered in the organization, whereas private contract managers were more likely to value invisible, relational factors that may cost more in the long run.

As shown in Table 6.1 above, public contract managers have argued that contract specificity, trained agency personnel with expertise in contract administration (training and education), IT (shared contracting out database for local governments), strong leadership, and a team-based organizational structure can play a key role in leading to satisfactory contracting financial performance. These viewpoints appear to be consistent with conventional wisdom perspective widely cited in the contracting literature, including principal-agent theory and transaction cost theory (Brown & Potoski, 2003a, 2003b; Fernandez, 2007, 2009).

On the other hand, private contract managers have highlighted the importance of trust-building based on communication and collaborative relationships between government agencies and the contractors and feedback (information sharing) from government agencies to correct wrongdoing and reflect public expectations well. It seems to be in line with previous studies dealing with relational contracting, stewardship theory, mutual planning, goal congruence, trust, and collaborative management (Lambright, 2009; Marvel & Marvel, 2009; Van Slyke, 2007, 2009; Van Slyke & Roch, 2004).

Taken as a whole, the overall findings of the semi-structured interviews confirmed a link between contract management and financial performance in a more

practical context. In recognition of the reality that contract relationships implicitly entail making a commitment between two parties in favor of public interests, this study found evidence that changing organizational structure and culture in local government agencies, investing more in professional personnel with expertise, institutionalizing new policies and rules to ensure a fair bidding process, implementing a comprehensive monitoring system, evaluating contractor performance based on both qualitative and quantitative values, supporting small business vendors, and building trust between public contract managers and private contractors are fundamental components for successful, financial- effective contract performance.

CHAPTER 7

CONCLUSION, LIMITATIONS, AND FUTURE RESEARCH

This final chapter first begins with a summary of the major findings of this study and revisits the overall conceptual framework, drawing on quantitative and qualitative results. The chapter then proceeds by exploring how these findings contribute to public administration theory and practice, discussing major theoretical, methodological, and managerial (practical) implications for policy making and management. The limitations of the study are detailed before concluding the chapter with a discussion of directions for future research.

Summary of the Findings

This dissertation emphasized the need for a clearer understanding of determinants of financially effective contract management in a local government contracting setting. As such, the initial inquiry of this research was derived from the central question: "How can local governments achieve satisfactory financial performance in their contracting out process?" In order to explore the complex issue of contract management and performance, this study first differentiated cost-effectiveness (total cost savings) and financial accountability in incorporating contracting financial performance for the empirical analyses, and then focused on the realistic perspectives of two main groups of stakeholders (public and private contract managers) concerning the current local government contracting out system. Employing two Web-based surveys, this study empirically tested the link between a

set of organizational and contextual factors and perceived financial performance in the local contracting out process. In addition, through 23 semi-structured interviews with public and private contract managers in New Jersey, the study attempted to produce more detailed findings on additional factors and conditions that were not included in the surveys but are required for financially effective contract management.

In this research study, surveys and interviews appeared to successfully complement each other not only to galvanize support for existing contracting out research, but also to add new knowledge to the topic. Admittedly, some interview results validated the finding of surveys and galvanized evidence of additional detailed insights, thus giving a fuller picture of contract success. They also reaffirmed observations made in the existing contracting out literature dealing with principal-agent theory, transaction cost theory, and stewardship theory (e.g., Amirkhanyan et al., 2007, 2012; Brown & Potoski, 2003b, 2005; Fernandez, 2007, 2009; Girth, 2012; Van Slyke, 2007).

Based on the observations and evidence from the quantitative and qualitative data analyses, this study was able to examine sector-based differences on the topic. As a result, by triangulating the study, some remarkable similarities and differences in the perspectives of contract managers from the two different sectors were found.

First, in the quantitative data analysis, even though the results only partially supported the hypotheses, they reaffirmed previous findings reported in the existing contracting out literature by examining the relationships between level of competition, public-private competition in the biding process, use of rewards and sanctions, monitoring, government capacity, contractor capacity, contract length, type of

contractor, and contracting performance (e.g., Amirkhanyan et al., 2007, 2014, Fernandez, 2007, 2009; Girth, 2012; Hefetz & Warner, 2004; Liu et al., 2007, Van Slyke, 2007). Specifically, from the perspectives of public and private contract managers, it was commonly found that higher levels of cost-effectiveness are more likely to be achieved when public organizations are allowed to participate in the bidding process, when government agencies use rewards and sanctions properly, and when contracting relationships are shorter. It was also observed that public and private contract managers care about other factors that can be positively associated with total cost savings differently. As main determinants of cost-effectiveness, while public contract managers placed greater value on the intensity of monitoring, government feasibility capacity (i.e., level of education of managers, legal team, and past experiences), and the financial capacity of contractors, private contract managers valued level of competition and government in-house management capacity (i.e., expertise, sufficient staff and time, and effective communication).

Additionally, from the two surveys, it was commonly found that higher levels of financial accountability are more likely to be achieved when the following conditions were present: many bidders participated in a typical contract, public organizations were allowed to participate in the bidding process, government agencies monitored contracts fairly, government agencies used rewards and sanctions properly, government agencies had sufficient capacity to manage contracts, and contracting relationships were longer. In addition to these conditions, while public contract managers valued government feasibility capacity and contract management capacity, private contract managers placed greater values on government financial capacity (i.e.,

timely payment and sustainable financing capacity) and contractor feasibility capacity (i.e., negotiation in drafting the contract and previous experience).

Interestingly, public and private contract managers shared similar views of the impact of longer contracting relationships. It is worth noting that while contract length was found to have a negative effect on the perceived total cost savings (cost-effectiveness), it turned out to have a positive impact on the perceived transparent use of public funds (financial accountability) in the contracting out process. This may imply that the longer the contractor and government work together, the greater likelihood that contractors maximize opportunistic behaviors (known as moral hazard) in the use of public funds (Brown et al., 2007; Smith & Lipsky, 1993). In turn, financial burdens of local government agencies, including *ex post* monitoring costs, can be more influential than expected. In contrast, it seems that on-going long-term contractual relationships may help overcome opportunistic behaviors of contractors and lessen the possibility of mismanagement and financial corruption (Amirkhanyan et al., 2007, 2010, 2014; Kelman, 2002; Mulgan, 1997).

Another intriguing finding is that public and private contract managers perceived the impact of the type of contractor (ownership) on contracting financial performance differently. From the two surveys, the direct and indirect (moderating) effects of nonprofit contractors appeared in this way. For the accountability and performance of nonprofit contractors, public contract managers had a negative view of nonprofits, which echoed previous studies (DeHoog, 1984; Kettl, 1993; Hansmann, 1980; Johnston & Romzek, 1999; Prager, 1994; Smith & Lipsky, 1993). As explained earlier, in the literature, some scholars tended to view nonprofit contractors as self-

interested opportunistic agents partly due to grant-seeking behavior (e.g., lobbying). Besides, in line with capture theory (e.g., Carr & Brower, 2000; Eggleston & Zeckhauser, 2002; Stigler, 1971), it is likely that public contract managers frequently face interactions with for-profit vendors (large business firms) as working partners in practice, which in turn can influence their negative viewpoints of nonprofit contractors. In this environment, local public contract managers are more likely to have lower opinions of nonprofit contractors than their for-profit counterparts. In line with this perspective, according to the surveys of public contract managers, it was also found that local government agencies tended to use more sanctions to enhance levels of financial performance with nonprofit contractors.

On the other hand, private contract managers had a rather positive view of nonprofits in that nonprofit contractors outperform for-profits in the context of total cost savings and transparent use of public funds. Such results are in line with the nonprofit literature dealing with relational contracting based on stewardship theory (e.g., Van Slyke, 2007, 2009; Witesman & Fernandez, 2013), suggesting that nonprofit organizations can provide significant benefit to contracting governments as trustworthy service providers. Amid this perspective, this study also found some evidence that local government agencies tended to monitor nonprofits less frequently (intensively) than for-profits and impose less sanctions on nonprofits compared to for-profits, even in cases where unsatisfactory financial performance was detected. With respect to the influence of nonprofit contractors, due to contradictory results across two sectors, more empirical evidence is necessary to draw conclusions.

Taken together, the major survey findings demonstrated that in addition to maintaining higher levels of competition in the bidding process, institutional support for procedural (measurement) fairness while monitoring local contracts and appropriate incentives along with rewards and sanctions depending on contractor's performance are needed to improve financial outcomes in local government contracts. It should also be noted that, as the empirical results discussed above show, higher contract performance leading to contract success can result from strong and effective government management capacity (Brown & Potoski, 2003b). Thus, government agencies need to pay greater attention to their management capacity to ensure financial and personnel resources are efficiently distributed. Furthermore, the results suggested that in the contracting out process, while it is more likely that local government agencies will achieve satisfactory cost-savings in the short run, local government agencies are more likely to achieve satisfactory transparent use of public funds in the long run.

Second, in the qualitative data analyses, this study queried public and private contract managers about the current contracting out process at the local level, focusing on challenges (barriers) and advantages. It was found that both public and private contract managers were mostly inclined to respond to questions in ways that cast themselves in a negative light. Furthermore, public and private contract managers were largely dissatisfied with the current contracting out system and had strong realistic views of improvements that could positively impact contracting financial performance. Notably, there seemed to be visible similarities and differences in how public and private contract managers responded to the effectiveness of local agency

contracts and how they reported valuable suggestions and recommendations for effective financial management and performance.

The majority of both public and private contract managers were significantly more likely to report the challenge of red tape embedded in the contracting out process. For example, public contract managers tended to feel more constrained by formal burdensome organizational rules and procedures, from bidding through auditing. Meanwhile, private contract managers were more likely to encounter fiscal stringency due to late reimbursement and unreasonable demands (e.g., financial documents). Due to such rigid, time-consuming internal procedures and subsequent task delays, albeit in part, contractors may become discouraged and struggle with the delayed schedule of current programs and service delivery. In turn, public agencies are less likely to monitor (manage) contractors effectively. As such, red tape may have a negative impact on contracting financial performance (Bozeman, 2000; Bozeman et al., 1992; Feeney & Bozeman, 2009).

In addition, in terms of the local bidding system, while public contract managers addressed the presence of political ties (favoritism) as one of the main barriers, private contract managers criticized discrimination – namely in favor of large firms at the expense of small businesses – in the awarding of local agency contracts. In practice, New Jersey has a unique law named the New Jersey Local Public Contracts Law (N.J.S.A. 40A:11-1 *et seq.)* that applies to local contracts and includes "Pay-to-Play legislation" (pursuant to N.J.S.A. 19:44A-20.4 et seq.). According to this legislation, some portions of services areas have no competitive bidding process. This observation is in line with previous research (Yang et al., 2010) that local government

contracting out is more likely to be connected with the political interests of elected officials rather than those of the public interest. There is also no bidding process in the awarding of local emergency services and professional service (e.g., accountants, architects, lawyers, or IT managers) contracts. This further means that there is no strong financial oversight (monitoring) and regulation for certain contractors. This situation may be problematic given that the lack of an open, competitive, and fair bidding process creates increased risks for fraud, waste, and abuse in local government contracting (Hefetz & Warner, 2012). Thus, as predicted, most public contract managers highlighted the importance of a fair and competitive bidding process to counter favoritism (i.e., political or personal ties) in awarding local contracts.

By contrast, private contract managers were dissatisfied with the bidding process because of discrimination in favor of large vendors. Even though there is a law to protect small business vendors in New Jersey, private contractors still feel that government efforts are not sufficient. In this regard, public agencies need to support small contractors with more feasible strategies. Consistent with the perceptions of public contract managers, this barrier may be solved by ensuring a more fair and competitive bidding process.

Most public contract managers also reported the difficulty of information asymmetry in their interviews. Particularly in cases where contractors have subcontractors carrying out the day-to-day work, local government agencies sometimes lack related information and struggle to accurately capture the quality and quantity of services that subcontractors are providing (delivering) (Amirkhanyan et al., 2007). In practice, public managers tend not to be fully knowledgeable of the previous

experiences and performance, reputation (e.g., criminal records), and financial/management capacity of subcontractors. To overcome such hidden information and subsequent opportunistic behaviors of contractors and subcontractors, some public contract managers argued that local government agencies need to invest in developing a statewide contract database (a so-called electronic portal of local contracts) that, in addition to basic information, includes the past performance, updated prices (costs of provision and delivery), and monitoring progress of all registered contractors. In other words, the systematic database should include information on contractors who have lost the bidding process in the past and contractors whose services were contracted in the past but had weak performance records. Given that the contract performance database may be updated regularly, easily accessible, and available to all local entities, it would undeniably be useful for those public officials who work on local contracts and who also face difficulties in externally overseeing contractor performance. In the long-term, local governments could manage their contractors in more cost-effective and transparent ways.

The most striking finding is that both public and private contract managers were likely to have lower appraisals of government (in-house) capacity. According to the interview participants, this challenge may be attributable to a lack of intensive monitoring (financial oversight) and the subsequent lack of personnel and financial resources, as well as insufficient time for additional work in local public agencies. Such critical views were explicitly included in the suggestions and recommendations of interviewees regarding financially effective contract management. Public and private contract managers both valued the significance of frequent and intensive

monitoring and government management capacity, including sufficient staff and expertise. In particular, for “micro-management” or “micro-monitoring,” local government agencies need to visit the contractors more often and implement independent audits. Of course, it is also important to establish clear monitoring standards for financial and operational compliance of contractors.

Regarding this more active and transparent approach to monitoring contractor performance, private contract managers valued some factors more than public managers. The most cited observation in the interviews with private contract managers was that government officials need to focus on “real” qualitative values behind the numbers in measuring and evaluating contractor performance. Interestingly, such narratives were mostly drawn from the interviews with nonprofit contractors. Historically, nonprofits have been regarded as mission-driven organizations, and most of them are actively engaged in social and human services to help socially vulnerable people in practice. As such, it is likely that their programs have multiple goals and their outcome and performance are not easily measured in one aspect or observed in the short run (even in monitoring progress). This logic is in line with the nonprofit literature (Amirkhanyan, 2010; Van Slyke, 2007, 2009; Witesman & Fernandez, 2013), indicating a higher degree of complexity and ambiguity in the nature of nonprofit services. Therefore, in their contracting relationships with nonprofit organizations, more than those with for-profit organizations, local government agencies need to pay especially greater attention to qualitative values (e.g., invisible progress of a certain program or service, client satisfaction, and complaint) in addition to quantitative values (e.g., amount of money spent, targeted numbers, or timeline).

Furthermore, this finding can be intertwined with the fairness of monitoring as hypothesized in the conceptual framework for surveys. As previously noted, the fairness of monitoring is about the extent to which local government agencies use monitoring methods fairly and measure performance appropriately when monitoring. From the survey responses of public and private contract managers, it was found that the fairness of monitoring is positively related to higher levels of financial accountability. The interviewees revisited this topic of fair evaluation processes based on qualitative values in addition to quantitative values for better financial outcomes of contracting out.

More importantly, such negative perspectives of government management capacity are also associated with a lack of adequate communication between the two main parties in contracting out scenarios (government and contractors). The majority of private contract managers reported that current government agencies and public managers seldom construct an effective communication culture that would help them to enhance their understanding of contractor tasks in line with missions and goals and concerns embedded in the contracting relationships. As in previous research (Brown & Potoski, 2003b; Fernandez, 2009; Girth, 2012), the capacity for effective communication in sharing information with contractors can be considered one important dimension of government management capacity.

Notably, frequent and open communication between two stakeholders may result in improved contracting performance in that it offers more opportunity for each to become familiar with each other, share their concerns, and promote mutual understanding (Fernandez, 2009, p. 75). Thus, as private contract managers suggested,

local government agencies and their employees should develop partnerships based on extensive two-way communication and frequent interaction with contractors. Also, during this process, feedback (after tracking wrongdoing of contractors) may be helpful to motivate contractors to make better decisions in the short term and achieve desirable performance in the long term. Consequently, in an effort to understand each other through frequent and open communication, government and contractors can build trust-based relationships for collaborative, relational contracting as prior studies insisted (e.g., Mulgan, 1997; Van Slyke, 2007, 2009). This implies that even though it is important for government agencies and their employees to reshape the current contracting out system by making changes to formal, internal procedures and organizational structures, beyond transactional contracts, more relational, flexible, and cooperative management approaches should be explored and applied to the existing system.

In addition to the main observations discussed above, a few ideas and opinions appear to be meaningful. Some public contract managers argued that training and education for contract managers, including purchasing law and ethics classes, strong leadership (support from managerial leader), and team-based organizational structures (e.g., project teams or committee) can play an important role not only in lessening the burden of local government agencies that lack sufficient personnel and financial resources in managing their contracts, but also in enhancing effective contract management accompanied with satisfactory financial outcomes.

By comparing and integrating the perceptions of public and private contract managers, the quantitative data analyses of this research suggests that higher

competition in bids, public-private competition, intensive and fair monitoring, use of rewards and sanctions, and government management capacity are significantly associated with satisfactory contracting financial performance (both cost-effectiveness and financial accountability). Both public and private contract managers perceived longer contracting relationships to lead to improved financial accountability but not to cost-effectiveness. But interestingly, they were more likely to attribute satisfactory, higher levels of perceived cost-effectiveness to shorter contracting relationships between the contractor and government agencies. Furthermore, the survey results indicate that public contract managers have a negative view of nonprofit contractors, whereas private contract managers have a positive perspective of nonprofits in achieving satisfactory contracting financial performance.

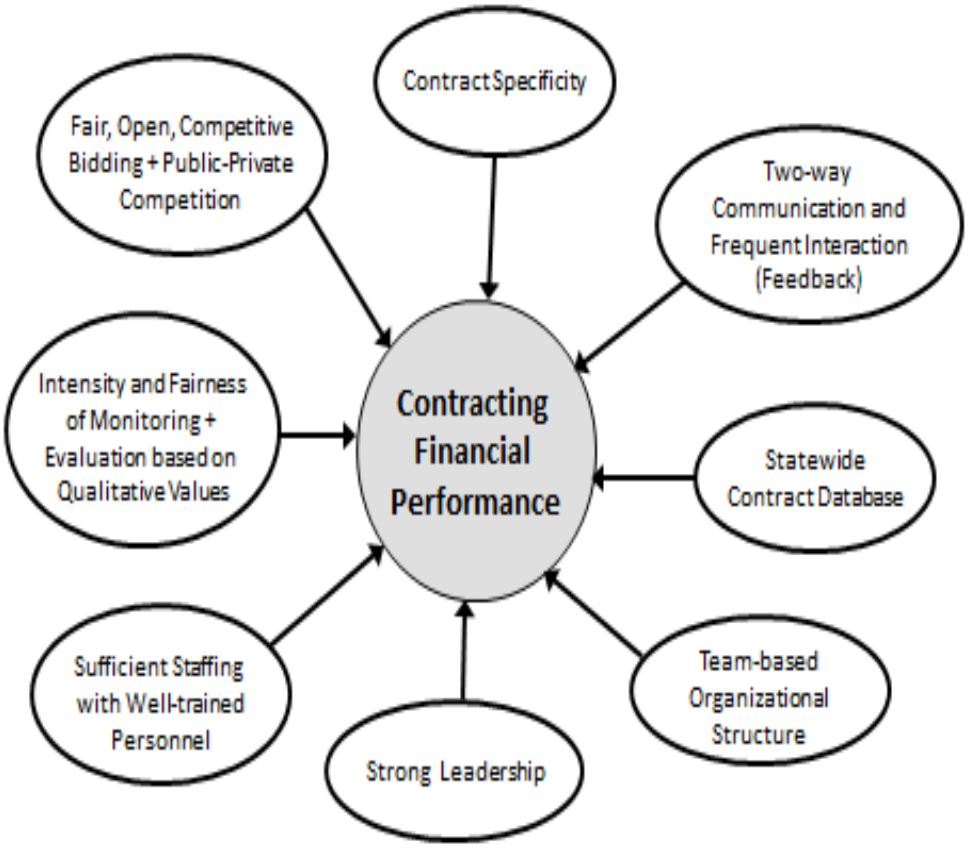
Moreover, this research indicates that, based on qualitative data analyses, open, fair, and competitive bids without favoritism, contract specificity, trained staff, strong leadership, systematic state-wide database, sufficient personnel and financial resources, two-way communication, and evaluation based on qualitative values beyond just numbers can all play a crucial role in enhancing micro-management, countering corruption, and further achieving better financial outcomes of contracting out. Overall, in terms of the conditions and factors leading to financially effective contract management, while public contract managers tend to place greater value on visible organizational and managerial factors, private ones are more likely to value invisible and relational factors that may cost more in the long run.

When considering the results presented in the quantitative and qualitative data analyses together, financially effective contract management can be reasonably

described as a multifaceted construct that interacts with various organizational, managerial, and contextual factors. The empirical evidence presented in this study is reminiscent of Brown and Potoski's (2003b) argument that "[t]he success or failure of any alternative service delivery arrangement likely depends on how well governments can manage the entire contracting process" (p. 153). In a situation in which governments lack or fail to maintain their capacity, one would expect that the governments would easily become dependent on contractors (Kettl, 1993). Thus, it might be challenging for them to hold contractors accountable for expected contracting outcomes. Government agencies need to pay greater attention to their management capacity to ensure financial and personnel resources are efficiently distributed. In the context of strategic planning and management, top-management support, strategic investments in the capacity of local agencies, and institutionalization (e.g., state law or ordinance) to provide effective on-going financial oversight should be required.

Based on the overall significant findings of this study, a new comprehensive framework can be developed (see Figure 7.1). It shows a combination of diverse significant factors and conditions that may positively impact contracting financial performance and helps deepen our understanding of financially effective contract management.

Figure 7.1 Framework for Financially Effective Contract Management



Theoretical and Practical Implications

This research makes several contributions to both build knowledge and improve practice in local government contracting, especially for financially effective contract management. The value of this study is laid out as follows.

First, this research contributes to the current literature on government contracting by casting new light on a central but largely undocumented issue in recent scholarship. Extant literature has tended to examine whether or not contracting out improves service delivery with regard to cost savings and, if so, how much more public money can be saved than expected through contracting out. What existing scholarship has failed to address is the significance of the accountable and transparent use of public funds in the contracting process. In other words, little was previously known about the important question of under what conditions public money can be spent properly when local governments contract out their goods and services.

With these challenges in mind, this study brings a variety of conceptual and analytical insights to bear on this timeless inquiry and adds empirical leverage to research on government contracting. By operationalizing the rationale of financial accountability in contracting scenarios and regarding it as one of the existing contracting financial performance measures, the study helps fill a void in the public administration literature. In other words, unlike prior research, this study goes a step beyond widely cited efficiency-grounds by focusing on financial accountability-via-transparency. Focusing on financial accountability turned the attention to fundamental public values, such as transparency, honesty, morality, openness, legal compliance, and integrity.

Second, this research enriches the literature from another angle by comparing how contract managers in each sector view the current government contracting out process and its financial performance. As mentioned earlier, little research has conducted with a mixed-methods approach for the related topics being examined in the current scholarship. Unlike prior studies, by employing a mixed-methods design based on two Web-based surveys and semi-structured interviews with public and private contract managers, this study provides an integrated multi-respondent, multi-organizational perspective in which the respondents have at least some shared experiences and are aware of the operating contract process and related institutional arrangements. Emerging from this analysis are more feasible strategies and practical requirements to hold main actors accountable and combat fiscal corruption in contracting out.

As previously noted, scholars have long recognized that government contracting implicitly carries substantial risk of opportunistic behavior on the part of contractors and the possibility of financial corruption (e.g., fraud, waste, and abuse) in the use of public funds (e.g., Auger, 1999; Brown & Potoski, 2005; Donahue, 1989; Savas, 2000; Stein, 1990). Recognizing this dilemma, scholars have attempted to explore the factors that help minimize opportunistic behaviors on the part of contractors, manage contracts effectively and provide diverse theoretical frameworks and guidance about what strategies and/or capacities are needed to effectively manage contracts. Most prior studies have tended to rely more heavily on one perspective based on the self-reported data of public managers (Yang et al., 2010). It is interesting to note, however, that some contracts are very complex and reflect a variety of future

contingencies (Amirkhanyan, Kim, & Lambright, 2010). In turn, public managers have not always been deliberate and systematic in managing the contracting out process, as previous research argued (e.g., Kettl, 1993; Milward et al., 1993; Sclar, 2000).

Admittedly, the perceptions of public contract managers are not necessarily an inaccurate source of information and, as this study reveals, their viewpoints may be different from those of contractors. In support of DeHoog's (1990) viewpoint that the government and the contractor are not mutually exclusive and are instead relatively equal partners in the contracting out process, this study sought to obtain data directly from two different contract managers in each sector (public versus private sector), which may certainly complicate the overall perception of contracting financial performance. As such, this study sought to fill gaps in the existing scholarship on contracting out with comparative analysis and recount the normative assumption that better management matters for better performance in the context of local government contracting.

Third, as mentioned in previous chapters, this research takes a new theoretical and methodological approach to explore the relatively new topics of contracting performance and associated financial consequences. The study drew upon a broadly informed theoretical perspective to carry out analysis, including public choice theory (e.g., principal-agent theory, transaction-cost theory, and market theory), incentive theory, and stewardship theory, as well as contributions from scholarship on collaborative management (collaboration), to explain on-going contractual relationships between local governments and private contractors and effective

contracting management and performance. Moreover, in addition to generally adopted conservative perspectives that view public managers as rational decision-makers as well as administrative guardians to protect their organizations, this study applied capture theory to frame the analysis and explain the findings (particularly for the impacts of nonprofit contractors) when comparing the perceptions of contracting financial performance held by public managers and private contractors. By synthesizing the conceptual contexts, as the previous literature indicated, and adding new theoretical leverage, this study calls for continued inquiry into the financial consequences and performance of government contracting.

Next, this study provides some practical implications for government agencies and policy makers. This study not only aimed to explain conditions or determinants of financially effective contract management, but to also provide insights into the ways accountability mechanisms can be established beyond efficiency grounds in the contracting out process. Therefore, linking recommendations from the overall findings of surveys and semi-structured interviews to this issue, this study highlighted some key ideas to ensure local government contracting agencies have (1) more specific and clearly written contract documents (Request for Proposal); (2) open and competitive bidding processes in which public organizations are allowed to participate (no personal/political ties or favoritism when awarding contracts); (3) substantial fairness (procedural justice in performance measurement) in addition to the intense monitoring of contracts; (4) proper carrot and stick approaches based on rewards and sanctions according to clear criteria; (5) higher levels of government management (in-house) capacity in retaining valuable human and financial resources; (6) more hands-on

training and education for contract administrators; (7) more flexible and decentralized organizational culture (e.g., project or team-based approach); (8) a state-wide systematic performance reporting/evaluation database including real-time, updated information on price, costs, and contractor performance; and (9) efforts for collaborative problem-solving with all stakeholders and effective two-way communication between the government and contractors to build trust and heighten mutual understanding.

Needless to say, it is also important to acknowledge that such recommendations for better financial performance should not undercut service quality in the contracting out process. In thinking about these recommendations, one caveat is that top management support and strong leadership to institutionalize new guidelines (perhaps, in the form of additional clause, paragraph, or section in the current law, or enforcement ordinance) or invest in the mechanism are required. Nevertheless, such comprehensive propositions help stimulate our thinking about the roles and responsibilities of public contract managers and agencies toward more financially effective and transparent contracts.

Overall, this research reinforces the possibility of the connection between theory and practice and provides more visible evidence and explanation to answer the research question posed in this study. The findings of this study can help contract managers and policy makers to begin to think about ways that local government agencies can use the lessons drawn from the findings of quantitative and qualitative data analysis. For many financially and ethically low performing governments, despite the growth of contingent contracting out efforts, the findings of this research are

expected to gauge the right direction for successful contracting out along with satisfactory financial performance.

More specifically, in a scholarly attempt to build a comprehensive model of financially effective contract management, these findings can provide practical recommendations for public agencies in terms of helping them to manage contracts effectively and achieve desired financial performance, especially those that lack sufficient staff and time to manage contracts, struggle to award new services to unknown contractors, or those managing (monitoring) contractors whose services have been contracted in the past but had weak performance records. In this sense, it is expected that scholars as well as practitioners whose research interests center on contract management and policy, strategic public management, and financial performance will benefit from the findings and suggestions of this research.

Limitations of the Research

Several limitations of this research are recognized and worth mentioning for further consideration. Most notably, as data was collected from a single state setting, the generalizability of this study is unknown. Specifically, due to researcher's limited time and accessible convenience, the data was collected by two Web-based surveys and semi-structured interviews in a New Jersey local government setting. The results thus might have been affected by cultural and structural factors (or political) that are unique to the state of New Jersey. As such, readers should bear in mind when generalizing the results since, nationwide, local governments have very different demographic, cultural, and political environments as well as varying fiscal capacity

and institutions. In other words, although this collection process enabled to proceed in a relatively fast and inexpensive way, the findings may not apply universally to all local governments in other states or other levels of government. Therefore, the results of this study need to be further validated in other settings.

In addition to unobservable heterogeneity and generalizability problems, another major concern is about the nature of self-reported data. The sampling frames for both surveys and interviews are basically drawn from purposive (non-random) sampling method instead of using random selection, which may in turn lessen sample credibility and increase selection bias. Specifically, nonresponse bias and common method bias may occur and the potential effects of social desirability cannot be ignored. As Fernandez (2004, p. 143) stated, "[r]esponses are biased to reflect mainstream norms and expectations in the field." In this vein, such possibility of biased responses can naturally increase the likelihood of finding positive correlation among variables and generating spurious relationships. Particularly, given the case that interview participants generally cast themselves in a negative light in their responses to the interview question, it is difficult to exclude the possibility that the perceptions of both public contract managers and private counterparts are inflated by an implicit motivation to make themselves look good or bad, depending on selective, retrospective memory and recollections of particular past events. For this reason, the resulting interpretation of surveys and interviews must be treated with great caution.

Next, this study does consistently indicate that the main focus and measures in the empirical analyses are public and private contract managers' "perceptions." Even though perceptual data has been long acknowledged to be helpful to explain how

administrators view the world and guide their actions, it might lead to monosource bias or social desirability bias (Choi, 2009). In other words, the use of single-source perceptual data (here, survey items) does not allow us to claim "actual" causal relationships between variables representing reality. In this vein, future studies may use more sophisticated designs and objective data to validate the nature of the relationships of variables. Particularly, several survey items (i.e., government capacity and contractor capacity variables) need to be revised more clearly. In terms of five dimensions representing perceived financial accountability (Y2) – cost control in the proper use of financial resources, managing fraudulent or criminal risks, protection of assets against financial corruption, use of public funds according to public purposes, and transparent financial reporting/billing for goods and service delivery, additional regression model should be run to test whether or not each specific dimension is successfully related to the dependent variable.

Lastly, admittedly, it is possible that there are some other factors that were left untested in this study that could affect the extent to which public and private contract managers perceive the successful fulfillment of the contracting out process and financial performance thereof. Specifically, the results of this study may change depending on the capacity of local public agencies, the nature of a contract itself, service areas, and other environmental changes, including politics and economic status. In addition, because this study did not fully distinguish between county-level and city-level (municipalities) government (agencies) in the empirical analysis, the perceptions of public and private contract managers are expected to vary by the characteristics of local governments (e.g., numbers of residents and population

characteristics). For example, as Hefetz and Warner (2004, p. 186) noted, large municipalities are more likely to use their internal economies of scale, but they may also face more rigid bureaucratic structures. Furthermore, the more heterogeneous populations (clients) in larger cities may make service delivery more complex, thus making it harder to monitor and manage the use of public funds. Given such conditions, future studies need to focus on expanding this study to investigate the influence of other factors on contracting financial performance at the local level.

Directions for Future Research

This study begins to develop a way of better understanding how local government can exercise financially effective contract management, accompanied with satisfactory or higher cost-effectiveness and financial accountability. A mixed-methods approach designed to identify more predictive relationships between factors and contracting financial performance adds to the study's generalizability and the validity of the analysis. This study offers evidence to conceptualize new systematic local contracting out system from both the perspectives of public contract managers and their private counterparts rather than the unitary organizational perspective. The findings of this study, though limited, call for continued inquiry into contracting financial performance, particularly, in the context of financial accountability. Notwithstanding these contributions, the analyses and results presented in this study are still very preliminary and remain cautionary until more systematic research is undertaken. As for directions for future research, the following points merit further discussion.

First, as briefly mentioned earlier, many other important factors still remained untested. It is important to ensure that all relevant explanatory variables that were not considered in this dissertation are explored in future studies. Perhaps a new set of organizational, managerial, and relational factors that were not included in the quantitative data analysis but found in the qualitative data analysis of this study (e.g., contract specificity, use of contract database, subcontractors, top-management support/leadership, communication, feedback, and trust between the main parties) can be taken into account to explore the effect of these factors on contracting financial performance. In short, these potential factors drawn from interview data analysis can be used as independent variables (predictors) for new quantitative analyses. For example, an exploratory sequential design (qualitative data collection and analysis are conducted at first and then based on the findings, quantitative data collection (i.e., survey instruments) is constructed and its analysis is followed) may be more helpful to conduct a theory-building research and improve generalizability and reliability of the data. Indeed, future studies need to consider the more complex dynamics of contracting relationships between government and the contractors and their impact on financial performance by including new multiple variables. It might be helpful not only to reaffirm the management-performance link but also to recalibrate the conceptual framework illustrated in this study.

Second, some observations found in the quantitative data analyses turned out to be somewhat inconclusive and contradictory across the sector. More specifically, public contract managers did differ from private contract managers in their responses to the survey question regarding the influence of the type of contractor (nonprofit

contractors versus others). While public contract managers viewed that for-profit contractors outperform nonprofit ones, private contract managers reported in an opposite way. As such, the pattern of the relationships between type of contractor and contracting financial performance was found to be complex and requires deeper consideration. Moreover, the findings of another contextual factor, contract length, varied across each proxy measure of contracting financial performance (cost-effectiveness versus financial accountability). The study found that the longer government and contractors work together, the less the likelihood that local government agencies would achieve a higher level of cost-effectiveness and the higher the likelihood that they would achieve increased levels of financial accountability. Of course, the perceptions of each sector may not remain the same, and clearly it is important to acknowledge that these can change over time in response to other internal and external environment and their changes (Amirkhanyan, 2010, p. 752). Recognizing this challenge and in order to draw more meaning and confirm causal relationships in the results, it is necessary to bring a more developed theoretical approach as well as to empirically test the framework repetitively with a large dataset that includes multiple stakeholders.

Third, it is worth studying comparative analyses in different local setting or other levels of governments and employing more extensive and varied interpretive approaches, including focus group interviews across service areas, content analysis of written documentation provided by local agencies, and surveys and in-person interviews with clients who received contracted goods and services to ask their perceptions (e.g., satisfaction, complaint, and suggestions). In addition, future studies

may utilize more sophisticated designs and multivariate analysis in order to uncover the causal relationships behind the differences between the perceptions of contract managers and their practical consequences. As such, methodologically, it would be interesting to reexamine the conceptual framework and research hypotheses outlined in this dissertation using other statistical techniques, such as hierarchical multiple regression, path analysis, and structural equation modeling (SEM).

Lastly, despite various findings addressed in this study, this dissertation does not sufficiently unveil the complexities and dynamics of factors surrounding local government contracting out. Alternative interpretations of the findings may exist, as the perceptions of public and private contract managers can relate to other factors besides the dichotomy between public and private sectors (Feeney & Bozeman, 2009; Feeney & Rainey, 2010). For example, it seems that this study fails to address explanations as to why public and private contract managers hold different (and at times similar) opinions of the current contracting out process and related performance. Thus, more thought and scholarly attention needs to be turned to related topics to provide more exploratory and empirical study of successful government contracting out. Several questions that warrant exploration in such future studies of the contracting out process and the financial performance thereof include:

- What strategies work best at achieving total cost savings and enhancing financial accountability in the use of public funds throughout the entire government contracting process?
- Why do the perceptions of the topic vary between public and private contract managers?

- Why are for-profit contract managers' perceptions of the topic different from those of nonprofit contract managers?
- What can real clients (citizens) suggest to enhance contracting financial performance?

Of these questions, the last one might be the most useful in the search for additional explanations for and critical ways of enhancing the local contracting out process and achieving better financial performance, as it suggested comparing the perceptions of internal stakeholders (public contract managers and private contractors) with those of external stakeholders (citizens) on the topic. This basically echoes the argument that contracting itself represents an on-going relationship between contractors and governments, the ultimate responsibility for which lies with citizens (Mulgan, 2000; Shick & Weikart, 2009). As such, there is a clear need to pay greater attention to external viewpoints of citizens (i.e., clients, consumers, or service beneficiary) regarding conditions (strategies) and factors that lead to improved financial outcome of contracting out and decreased corruption (i.e., fraud, waste, and abuse). One possible method of involving citizens might be to invite them to participate in the survey used in this study or to employ client satisfaction and complaint surveys in certain service areas to compare perceptions of performance (Brown et al., 2006; Swindell & Kelly, 2000).

This dissertation explicitly recounted the widely cited previous observation that contracting performance may depend upon a variety of conditions and factors embedded in the government contracting out process (Amirkhanyan et al., 2007, 2012, 2014; Brown & Potoski, 2003b; Fernandez, 2007, 2009; Girth, 2012; Stein, 1990). As

such, contracting financial performance is indeed difficult to measure and quantify accurately from a single setting. This study is one of only a few scholarly attempts to explore how public money can be spent in cost-effective and transparent ways given the current local contracting out process. Specifically, it allows for deeper probing of the issue and more reliable and valid evidence of the topic being examined by refining main rationales and dimensions on contracting financial performance in the specific context of cost-effectiveness and financial accountability; enhancing our understanding of the successful contract management that links a set of structural, managerial, and environmental factors with financial performance of private service providers; and building a comprehensive model for financially effective contract management.

Taking into account all conceptual and empirical contexts described above, this dissertation posits that sufficient and consistent managerial efforts of contracting governments are fundamental to the successful provision and delivery of public goods and services without the incidence of financial mismanagement and corruption. In today's complex and changing times, further investigation is needed to test the perceptions of financially effective contract management perceptions held by multiple actors in different interacting organizations. Future research should aim to continue to discover the conditions in which public funds are most likely to be spent in cost-effective, accountable, and transparent ways.

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Appendix A

Advertisement or Recruitment Notice

Web Survey Invitation

[*Initial Email Invitation*]

To: [*Email*]
From: sjinkim@pegasus.rutgers.edu

Subject: Rutgers University "Survey on Financially Effective Contract Management"
Body:

Dear [*Name*],

Introduction

We are writing to invite your participation in a survey about financially effective contract management in state and local government. This is for academic research that aims to better understand how public managers and contractors differently or similarly view conditions in which effective contract management accompanied with satisfactory financial performance—potential cost savings and transparent use of public funds—can be operated during the entire contracting out process. In addition, through such internal and external stakeholders' viewpoints, this research seeks to guide current state and local contract management systems of government agencies and to find more feasible and critical strategies for achieving cost effectiveness and maintaining transparent use of public money against fraud, waste, and abuse when public service/good delivery are contracted out.

This survey is sponsored by the School of Public Affairs and Administration (SPAA) at Rutgers, The State University of New Jersey, Newark Campus and directed by Professor Marc Holzer and Doctoral Student Soojin Kim. It has been reviewed and approved by the Rutgers University Institutional Review Board (IRB), and if you have any questions about your rights as a participant in this study, you may contact them by telephone at (732) 932-0150 or humansubjects@orsp.rutgers.edu

Participation

You are one of a small group of agency/organization representatives engaged in the contracting out process, who have been selected, so your participation is very important to the study. We would truly appreciate your taking only about 15 minutes to complete the survey.

Confidentiality

During this web survey, the recording(s) will be used for analysis by the research team. The data gathered in this study are confidential with respect to your personal identity unless you specify otherwise. The recording(s) will be stored in a secure location accessible only to the researcher. Upon completion of the study, all information that matches up individual respondents with their answers will be destroyed.

Please be assured that your answers will be completely confidential, and all results and information gathered in this survey will be reported only in aggregate form. The reported results will not identify you or your organization individually. Please note that data will be stored securely in a locked cabinet and/or restricted-access computer with a password protected database and will be made available only to persons conducting the study unless you specifically give permission in writing to do otherwise.

The investigator does not perceive more than minimal risks from your involvement in this study (that is, no risks beyond the risks associated with everyday life). The investigator perceives the following are possible risks arising from your involvement with this study: potential discomfort if you cannot accurately recall information requested. This risk is minimized because you can choose not to answer any questions with which you are not comfortable.

We would gladly provide you with a copy of the survey results when they are released.

Questions about the Research

If you have questions regarding this study, you may contact Ms. Soojin Kim at (551) 574-0344 or sjinkim@pegasus.rutgers.edu

Questions about your Rights as Research Participants

If you have questions you do not feel comfortable asking the researcher, you may contact my Faculty Advisor, Dr. Marc Holzer, School of Public Affairs and Administration (SPAA), Rutgers University-Newark at mholzer@rutgers.edu Or contact the Institutional Review Board at Rutgers (which is a committee that reviews research studies in order to protect research participants) at (848)-932-0150, or humansubjects@orsp.rutgers.edu

Please click on the link below to begin the survey:

Survey link: [*URL*]

Thank you for your help and time by completing the survey.

Sincerely,

Marc Holzer
Dean and Board of Governors Professor
School of Public Affairs and Administration
Rutgers, the State University of New Jersey,
Newark Campus

Soojin Kim
Doctoral Candidate
School of Public Affairs and Administration
Rutgers, the State University of New Jersey,
Newark Campus

[*Follow-up Email*]

To: [*Email*]
From: sjinkim@pegasus.rutgers.edu

Subject: Rutgers University "Survey on Financially Effective Contract Management"
Body:

Dear [*Name*],

Two weeks ago, we sent you an email asking you to respond to a survey about how financially effective contract management can be established and maintained in the contracting out process for satisfactory financial performance.

If you have already completed the survey, we really appreciate your participation and feedback and please disregard this notice. If you have not yet responded, we would greatly appreciate your time in taking about 15 minutes and completing the survey.

As a reminder, we are gathering the perspectives of state and local contract administrators who have direct responsibility for one or more contracts in their agencies as well as ones of contracting organizations (vendors) who have experience with operating and managing the contracts. This is for academic research that aims to compare the basic perceptions between public managers and contractors for financially effective contract management.

Please click on the link below to begin the survey:

Survey link: [*URL*]

You are one of a small group of agency/organization representatives engaged in the contracting out process, so your participation and response are very important to the study. We need your help.

Please be assured that your answers will be completely confidential, and all results and information gathered in this survey will be reported only in aggregate form. The reported results will not identify you or your organization individually.

We would be happy to answer any questions you might have about this study; please feel free to contact Ms. Soojin Kim at (551) 574-0344 or sjinkim@pegasus.rutgers.edu

If you have any questions about your rights as a research participant, you can contact the Institutional Review Board at Rutgers (which is a committee that reviews research studies in order to protect research participants).

Rutgers University, the State University of New Jersey
Institutional Review Board for the Protection of Human Subjects
Office of Research and Sponsored Programs
3 Rutgers Plaza, New Brunswick, NJ 08901-8559
Tel: 848-932-0150
Email: humansubjects@orsp.rutgers.edu

Thank you for your time and participation in this effort again.

Sincerely,

Marc Holzer
Dean and Board of Governors Professor
School of Public Affairs and Administration
Rutgers, the State University of New Jersey, Newark Campus

Soojin Kim
Doctoral Candidate
School of Public Affairs and Administration
Rutgers, the State University of New Jersey, Newark Campus

Appendix B

INFORMED CONSENT FORM

Introduction

We are writing to invite your participation in a survey about financially effective contract management in state and local government. This is for academic research that aims to better understand how public managers and contractors differently or similarly view conditions in which effective contract management accompanied with satisfactory financial performance—potential cost savings and transparent use of public funds—can be operated during the entire contracting out process. In addition, through such internal and external stakeholders' viewpoints, this research seeks to guide current state and local contract management systems of government agencies and to find more feasible and critical strategies for achieving cost effectiveness and maintaining transparent use of public money against fraud, waste, and abuse when public service/good delivery are contracted out.

This survey is sponsored by the School of Public Affairs and Administration (SPAA) at Rutgers, The State University of New Jersey, Newark Campus and directed by Professor Marc Holzer and Doctoral Student Soojin Kim. It has been reviewed and approved by the Rutgers University Institutional Review Board (IRB), and if you have any questions about your rights as a participant in this study, you may contact them by telephone at (732) 932-0150 or humansubjects@orsp.rutgers.edu

Participation

You are one of a small group of agency/organization representatives engaged in the contracting out process, who have been selected, so your participation is very important to the study. We would truly appreciate your taking only about 15 minutes to complete the survey.

Confidentiality

Please be assured that your answers will be completely confidential, and all results and information gathered in this survey will be reported only in aggregate form. The reported results will not identify you or your organization individually. We would gladly provide you with a copy of the survey results when they are released.

Questions about the Research

If you have questions regarding this study, you may contact Ms. Soojin Kim at (551) 574-0344 or sjinkim@pegasus.rutgers.edu

Questions about your Rights as Research Participants

If you have questions you do not feel comfortable asking the researcher, you may contact my Faculty Advisor, Dr. Marc Holzer, School of Public Affairs and Administration (SPAA), Rutgers University-Newark at mholzer@rutgers.edu Or contact the Institutional Review Board at Rutgers (which is a committee that reviews research studies in order to protect research participants) at (848)-932-0150, or humansubjects@orsp.rutgers.edu

You will be given a copy of this consent form for your records. I attest that the aforementioned written consent has been orally presented to the human subject and the human subject provided me with an oral assurance of their willingness to participate in the research.

Principal Investigator Name (Printed) _____

Principal Investigator Signature _____ Date _____

Appendix C

Survey Questionnaires

- For State and Local Contract Managers –

Dear Respondent,

Welcome to the "Survey on Financially Effective Contract Management" sponsored by the School of Public Affairs and Administration (SPAA) at Rutgers, the State University of New Jersey. We are interested in your perspective on effective contract management linked to satisfactory financial performance because you have been designated as a person responsible for management and performance of one or more contracts. The following statements pertain to your day-to-day work. Please choose the response that best represents your views. The survey takes about 15 minutes to complete. We would very much appreciate your response.

Please note: Your identity, and that of your organization will be completely confidential; all results and information gathered in this survey will be reported only in aggregate form.

Thinking about contracting out in your agency, please choose the answers below that best represent your views:

Q1. Through a typical contract, how would you rate financial performance you agency achieve in each of the following six areas:

	Poor	Below Average	Average	Above Average	Excellent
Total cost savings	❍	❍	❍	❍	❍
Cost control in the proper use of financial resources	❍	❍	❍	❍	❍
Managing fraudulent or criminal risks	❍	❍	❍	❍	❍
Protection of assets against financial corruption	❍	❍	❍	❍	❍
Use of public funds according to public purposes	❍	❍	❍	❍	❍
Transparent financial reporting/billing for goods and service delivery	❍	❍	❍	❍	❍

Q2. On average, how frequently does your agency use the following channels to release information on the bidding process for a typical contract?

	Not At All	A Little	A Moderate Amount	A Lot	A Great Deal
Media (e.g., News Paper, TV)	❍	❍	❍	❍	❍
Public Hearing	❍	❍	❍	❍	❍
Agency Websites	❍	❍	❍	❍	❍
Electronic Bid Database (e.g., eBID)	❍	❍	❍	❍	❍
Others (e.g., Union, Professional Associations)	❍	❍	❍	❍	❍

Q3. Overall, how much effort does your agency spend finding vendors for a typical contract you work on?

○ Not At All ○ A Little ○ A Moderate Amount ○ A Lot ○ A Great Deal

Q4. For a typical contract, how many vendors participate in the bidding process of your agency on average? Specify the number of vendors.

Q5. Please tell us to what extent you agree or disagree with the following statements.

	Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
Public organizations are allowed to bid on contracts with government agencies.	❍	❍	❍	❍	❍

Q6. For a typical contract, how many vendors do you think are desirable to submit bid(s) in the bidding process of your agency? Specify the number of vendors.

Thinking about the current monitoring system and procedures by government agencies for financially effective contract management and satisfactory financial performance, please choose the response that best represents your views:

Q7. Overall, for a typical contract, how frequently does your agency conduct monitoring of financial performance?

○ Never ○ Only a few times a year ○ About once a year ○ About once a week ○ About every day

Q8. On average, for a typical contract, how much effort does your agency typically make in each of the following monitoring procedures?

	Not At All	A Little	A Moderate Amount	A Lot	A Great Deal
Review of bi-weekly, monthly or quarterly self reports	❍	❍	❍	❍	❍
Analysis of financial/cost documents	❍	❍	❍	❍	❍
Field observations (site visits)	❍	❍	❍	❍	❍
Citizen satisfaction surveys	❍	❍	❍	❍	❍
Monitoring of citizen complaints	❍	❍	❍	❍	❍
Independent audits (e.g., Comptroller's audit)	❍	❍	❍	❍	❍
Others (e.g., Third-party monitoring, Ombudsman)	❍	❍	❍	❍	❍

Q9. On average, in most of your agency's contract, how appropriate is each measurement of the following monitoring procedures?

	Not Appropriate At All	Somewhat Inappropriate	Undecided	Somewhat Appropriate	Extremely Appropriate
Review of bi-weekly, monthly or quarterly self reports	❍	❍	❍	❍	❍
Analysis of financial/cost documents	❍	❍	❍	❍	❍
Field observations (site	❍	❍	❍	❍	❍

visits)					
Citizen satisfaction surveys	❍	❍	❍	❍	❍
Monitoring of citizen complaints	❍	❍	❍	❍	❍
Independent audits (e.g., Comptroller's audit)	❍	❍	❍	❍	❍
Others (e.g., Third-party monitoring, Ombudsman)	❍	❍	❍	❍	❍

Q10. How likely is it that your agency provides rewards (e.g., contract renewal/extension, and bonus) to contractors when satisfactory financial performance is achieved?

○ Very Unlikely ○ Somewhat Unlikely ○ Undecided ○ Somewhat Likely ○ Very Likely

Q11. How likely is it that your agency uses sanctions (e.g., financial penalties, threat of contract termination, and litigation) to contractors when unsatisfactory financial performance (e.g., corruption) is detected?

○ Very Unlikely ○ Somewhat Unlikely ○ Undecided ○ Somewhat Likely ○ Very Likely

Q12. Overall, how appropriate are the monitoring-based incentives (e.g., rewards and sanctions) used by your agency?

○ Not Appropriate At All ○ Somewhat Appropriate ○ Undecided ○ Somewhat Appropriate ○ Extremely Appropriate

Please choose the answer that best represents your views on a typical contract:

Q13. What type of a contractor works best at reducing management costs?

○ Non-profit organization ○ For-profit organization (Firm) ○ Public organization (Government)

Q14. What type of a contractor works best at providing transparent financial report/information in the use of public funds?

- ○ Non-profit organization
- ○ For-profit organization (Firm)
- ○ Public organization (Government)

Please indicate your level of agreement or disagreement with how accurately each statement portrays how you view your contracts in order to ensure financially effective contract management:

Q15. It is likely that public agencies:

	Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
Have managers who have higher levels of education	❍	❍	❍	❍	❍
Hire a legal team to reach agreement on the actual contract	❍	❍	❍	❍	❍
Have personnel with expertise in contract administration	❍	❍	❍	❍	❍
Have sufficient staff to monitor contractors' performance	❍	❍	❍	❍	❍
Have sufficient time to administer contracts effectively	❍	❍	❍	❍	❍
Have a capacity for effective communication in sharing information with contractors	❍	❍	❍	❍	❍
Make timely payment to contractors	❍	❍	❍	❍	❍
Have a capacity for sustainable financing to contractors	❍	❍	❍	❍	❍
Have past experience in the contracting out process	❍	❍	❍	❍	❍

Q16. It is likely that contractors:

	Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
Have a capacity for negotiation in drafting the contract	❍	❍	❍	❍	❍

Have skilled managers with technical expertise in contract management	❍	❍	❍	❍	❍
Have sufficient time to administer contracts effectively	❍	❍	❍	❍	❍
Have sufficient staff to Implement performance self-monitoring	❍	❍	❍	❍	❍
Have sufficient resources available to provide goods and services	❍	❍	❍	❍	❍
Have previous experience performing the work	❍	❍	❍	❍	❍

Q17. Please indicate your degree of agreement with the following statements:

	Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
For a typical contract, we prefer a long-term relationship with a contractor.	❍	❍	❍	❍	❍
Spending public funds according to the contracts becomes easier over time.	❍	❍	❍	❍	❍

Please provide some basic background about yourself:

Q18. What is your position? (Choose one)

○ Front-line (Street-level) Worker ○ Administrative Personnel ○ Middle-level Manager ○ Executive Officer (e.g., Chief Financial Officer, Budget Analysts) ○ Top-level Administrator/Department Head/CEO

19. Which of the following categories best describes the main program activity your current agency works on? (Choose one)

- ❍ Public Safety and Legal Affairs
- ❍ Health and Human Services
- ❍ Education
- ❍ Environmental Protection
- ❍ Agriculture
- ❍ Administrative Services (Banking & Insurance, Treasury, Labor and Workforce Development, Corrections)
- ❍ Social Services (Children and Families, Community Affairs, Military & Veterans Affairs)
- ❍ Transportation
- ❍ Housing and Economic Development
- ❍ Others

Q20. Approximately how long has your agency's contracts typically been in operation for the specific services you purchase? Specify the number of years.

Q21. Approximately how many years have you worked for contracting out in your current agency? Specify the number of years.

Q22. Have you ever received regular training to support your role as a contract administrator?

No Yes

Q23. If yes, approximately how many hours have you spent receiving the training in the last year? Specify the number of hours.

Q24. What is your gender?

Male Female

Q25. What is your age?

- ❍ Less than 25
- ❍ 25-34
- ❍ 35-44
- ❍ 45-54
- ❍ 55-64
- ❍ 65 or older

Thank you for completing this survey and helping us to better understand day-to-day contract administration in the context of financial management and performance in state and local government. We truly appreciate your time and participation in this effort.

- For Contractors –

Dear Respondent,

Welcome to the "Survey on Financially Effective Contract Management" sponsored by the School of Public Affairs and Administration (SPAA) at Rutgers, the State University of New Jersey.

We are interested in your perspective on effective contract management linked to satisfactory financial performance because you have been designated as a person responsible for management and performance of one or more contracts. The following statements pertain to your day-to-day work. Please choose the response that best represents your views. The survey takes about 15 minutes to complete. We would very much appreciate your response.

Please note: Your identity, and that of your organization will be completely confidential; all results and information gathered in this survey will be reported only in aggregate form.

Continuing to think about your organization's contracting opportunities with a government agency, please choose the answers below that best represent your views:

Q1. As a contractor, how would you rate your organization's financial performance in each of the following six areas?

	Poor	Below Average	Average	Above Average	Excellent
Total cost savings	❍	❍	❍	❍	❍
Cost control in the proper use of financial resources	❍	❍	❍	❍	❍
Managing fraudulent or criminal risks	❍	❍	❍	❍	❍
Protection of assets against financial corruption	❍	❍	❍	❍	❍
Use of public funds according to public purposes	❍	❍	❍	❍	❍
Transparent financial reporting/billing for goods and service delivery	❍	❍	❍	❍	❍

Q2. Based on your experience with your organization's contracts, how frequently does your organization use the following channels to collect information on the bidding process for a typical contract?

	Not At All	A Little	A Moderate Amount	A Lot	A Great Deal
Media (e.g., News Paper, TV)	❍	❍	❍	❍	❍
Public Hearing	❍	❍	❍	❍	❍
Agency Websites	❍	❍	❍	❍	❍
Electronic Bid Database (e.g., eBID)	❍	❍	❍	❍	❍
Others (e.g., Union, Professional Associations)	❍	❍	❍	❍	❍

Q3. On average, for a typical contract, how would you rate the bidding process operated by government agencies in each of the following areas?

	Poor	Below Average	Average	Above Average	Excellent
Level of Competition	❍	❍	❍	❍	❍
Solicitation (Advertisement) Period	❍	❍	❍	❍	❍
Fairness of Contract Awarding	❍	❍	❍	❍	❍

Q4. Please tell us to what extent you agree or disagree with the following statements.

	Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
Public organizations are allowed to bid on contracts with government agencies.	❍	❍	❍	❍	❍

Thinking about the current monitoring system and procedures by government agencies for financially effective contract management and satisfactory financial performance, please choose the response that best represents your views:

Q5. On average, how frequently does your organization experience monitoring of financial performance by a public agency in each of the following areas?

	Not At All	A Little	A Moderate Amount	A Lot	A Great Deal
Review of bi-weekly, monthly or quarterly self reports	❍	❍	❍	❍	❍
Analysis of financial/cost documents	❍	❍	❍	❍	❍
Field observations (site visits)	❍	❍	❍	❍	❍
Citizen satisfaction surveys	❍	❍	❍	❍	❍
Monitoring of citizen complaints	❍	❍	❍	❍	❍
Independent audits (e.g., Comptroller's audit)	❍	❍	❍	❍	❍
Others (e.g., Third-party monitoring, Ombudsman)	❍	❍	❍	❍	❍

Q6. On average, how fairly is each of the following monitoring efforts by a public agency used?

	Not At All	A Little	A Moderate Amount	A Lot	A Great Deal
Review of bi-weekly, monthly or quarterly self reports	❍	❍	❍	❍	❍
Analysis of financial/cost documents	❍	❍	❍	❍	❍
Field observations (site visits)	❍	❍	❍	❍	❍
Citizen satisfaction surveys	❍	❍	❍	❍	❍
Monitoring of citizen complaints	❍	❍	❍	❍	❍
Independent audits (e.g., Comptroller's audit)	❍	❍	❍	❍	❍
Others (e.g., Third-party monitoring, Ombudsman)	❍	❍	❍	❍	❍

Q7. How likely is it that a public agency provides rewards (e.g., contract renewal/extension, and bonus) to your organization when satisfactory financial performance is achieved?

○ Very Unlikely ○ Somewhat Unlikely ○ Undecided ○ Somewhat Likely ○ Very Likely

Q8. How likely is it that a public agency uses sanctions when unsatisfactory financial performance is detected?

○ Very Unlikely ○ Somewhat Unlikely ○ Undecided ○ Somewhat Likely ○ Very Likely

Q9. Overall, how fairly are monitoring-based incentives (e.g., rewards and sanctions) used by a public agency?

○ Poor ○ Below Average ○ Average ○ Above Average ○ Excellent

Please indicate your level of agreement or disagreement with how accurately each statement portrays how you view your contracts in order to ensure financially effective contract management:

Q10. It is likely that public agencies:

	Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
Have managers who have higher levels of education	❍	❍	❍	❍	❍
Hire a legal team to reach agreement on the actual contract	❍	❍	❍	❍	❍
Have personnel with expertise in contract administration	❍	❍	❍	❍	❍
Have sufficient staff to monitor contractors' performance	❍	❍	❍	❍	❍
Have sufficient time to administer contracts effectively	❍	❍	❍	❍	❍
Have a capacity for effective communication in sharing information with contractors	❍	❍	❍	❍	❍
Make timely payment to	❍	❍	❍	❍	❍

contractors					
Have a capacity for sustainable financing to contractors	❍	❍	❍	❍	❍
Have past experience in the contracting out process	❍	❍	❍	❍	❍

Q11. It is likely that contractors:

	Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
Have a capacity for negotiation in drafting the contract	❍	❍	❍	❍	❍
Have skilled managers with technical expertise in contract management	❍	❍	❍	❍	❍
Have sufficient time to administer contracts effectively	❍	❍	❍	❍	❍
Have sufficient staff to Implement performance self-monitoring	❍	❍	❍	❍	❍
Have sufficient resources available to provide goods and services	❍	❍	❍	❍	❍
Have previous experience performing the work	❍	❍	❍	❍	❍

Q12. Please indicate your degree of agreement with the following statements:

	Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
For a typical contract, we prefer a long-term relationship with a contractor.	❍	❍	❍	❍	❍
Spending public funds according to the contracts becomes easier over time.	❍	❍	❍	❍	❍

Please provide basic background about yourself:

Q13. What is your position? (Choose one)

- ○ Front-line (Street-level) Worker
- ○ Administrative Personnel
- ○ Middle-level Manager
- ○ Executive Officer (e.g., Chief Financial Officer, Budget Analysts)
- ○ Top-level Administrator/Department Head/CEO

Q14. Which of the following categories best describes the main program activity your current organization provides? (Choose one)

- ❍ Public Safety and Legal Affairs
- ❍ Health and Human Services
- ❍ Education
- ❍ Environmental Protection
- ❍ Agriculture
- ❍ Administrative Services (Banking & Insurance, Treasury, Labor and Workforce Development, Corrections)
- ❍ Social Services (Children and Families, Community Affairs, Military & Veterans Affairs)
- ❍ Transportation
- ❍ Housing and Economic Development
- ❍ Others

Q15. Which of the following categories best describes your current organization?

- ○ Non-profit organization
- ○ For-profit organization (Firm)
- ○ Public organization (Government)

Q16. Approximately how long has your organization's contract typically been in operation for the specific service you provide? Specify the number of years.

Q17. Approximately how many years have you worked with government contracts in your current organization? Specify the number of years.

Q18. Have you ever received regular training to support your role as a contract administrator?

No Yes

Q19. If yes, approximately how many hours have you spent receiving the training in the last year? Specify the number of hours.

Q20. What is your gender?

Male Female

Q21. What is your age?

- Less than 25
- 25-34
- 35-44
- 45-54
- 55-64
- 65 or older

Thank you for completing this survey and helping us to better understand day-to-day contract administration in the context of financial management and performance in state and local government. We truly appreciate your time and participation in this effort.

Appendix D

(Focus Group) Interview Invitation

[*Email Invitation*]

To: [*Email*]
From: sjinkim@pegasus.rutgers.edu

Subject: Rutgers University "Interview for Study on Financially Effective Contract Management"
Body:

Dear [*Name*],

Introduction

We are writing to invite your participation in focus group interviews about financially effective contract management in state and local government. This is for academic research that aims to better understand how public managers and contractors differently or similarly view conditions in which effective contract management accompanied with satisfactory financial performance—potential cost savings and transparent use of public funds—can be operated during the entire contracting out process. In addition, through such internal and external stakeholders' viewpoints, this research seeks to guide current state and local contract management systems of government agencies and to find more feasible and critical strategies for achieving cost effectiveness and maintaining transparent use of public money against fraud, waste, and abuse when public service/good delivery are contracted out.

This research is sponsored by the School of Public Affairs and Administration (SPAA) at Rutgers, The State University of New Jersey, Newark Campus and directed by Professor Marc Holzer and Doctoral Student Soojin Kim. It has been reviewed and approved by the Rutgers University Institutional Review Board (IRB), and if you have any questions about your rights as a participant in this study, you may contact them by telephone at (732) 932-0150 or humansubjects@orsp.rutgers.edu

Participation

You are one of a small group of agency/organization representatives engaged in the contracting out process, who have been selected, so your participation is very important to the study. You are aware that your participation in this interview is voluntary. You understand the intent and purpose of this research. If, for any reason, at any time, you wish to stop the interview, you may do so without having to give an explanation. This project will not be longer than one hour and a half.

Confidentiality

There are no direct benefits to you for participating in this study; however, the study will potentially benefit government agencies engaged in the contracting out process and contracting organizations.

During this focus group interview, the recording(s) will be used for analysis by the research team. The data gathered in this study are confidential with respect to your personal identity unless you specify otherwise. The recording(s) will be stored in a secure location accessible only to the researcher. Upon completion of the study, all information that matches up individual respondents with their answers including audio tapes will be destroyed.

Please be assured that your answers will be completely confidential, and all results and information gathered in this focus group interview will be reported only in aggregate form. Please note that data will be stored securely in a locked cabinet and/or restricted-access computer with a password protected database and will be made available only to persons conducting the study unless you specifically give permission in writing to do otherwise. No reference will be made in oral or written reports which could link you to the study.

The investigator does not perceive more than minimal risks from your involvement in this study (that is, no risks beyond the risks associated with everyday life). The investigator perceives the following are possible risks arising from your involvement with this study: potential discomfort if you cannot accurately recall information requested. This risk is minimized because you can choose not to answer any questions with which you are not comfortable.

We will share the transcripts with you a few days after this project and you will have an opportunity to clarify or ask to delete any part of it.

Questions about the Research

If you have questions regarding this study, you may contact Ms. Soojin Kim at (551) 574-0344 or sjinkim@pegasus.rutgers.edu

Questions about your Rights as Research Participants

If you have questions you do not feel comfortable asking the researcher, you may contact my Faculty Advisor, Dr. Marc Holzer, School of Public Affairs and Administration (SPAA), Rutgers University-Newark at mholzer@rutgers.edu Or contact the Institutional Review Board at Rutgers (which is a committee that reviews research studies in order to protect research participants) at (848)-932-0150, or humansubjects@orsp.rutgers.edu

Please let us know your decision to participate in this focus group interview. We would very much appreciate your response.

We look forward to your voluntary participation in this research study.

Thank you.

Sincerely,

Marc Holzer
Dean and Board of Governors Professor
School of Public Affairs and Administration
Rutgers, the State University of New Jersey, Newark Campus

Soojin Kim
Doctoral Candidate
School of Public Affairs and Administration
Rutgers, the State University of New Jersey, Newark Campus

[*Email Script prior to Focus Group Interview*]

To: [*Email*]
From: sjinkim@pegasus.rutgers.edu

Subject: Rutgers University "Interview for Study on Financially Effective Contract Management"
Body:

Dear [*Name*],

Thank you so much for agreeing to participate in the study about financially effective contract management in state and local government.

This is academic research that aims to guide the current contract management systems of government agencies for satisfactory financial performance. From public managers' and contractors' perspectives, this research seeks to find new and more feasible and critical strategies for achieving cost savings and maintaining transparent use of public money against fraud, waste, and abuse when public service/good delivery are contracted out.

During this focus group interview, you will be asked to answer a series of questions regarding government agency's current contract management systems and to recommend techniques or requirements for effective contract management linked to satisfactory financial performance. This interview was designed to be approximately one hour and a half. However, please feel free to expand on the topic or talk about related ideas. Also, if there are any questions you would rather not answer or that you do not feel comfortable answering, please say so and we will stop the interview or move on to the next question, whichever you prefer.

The information in the study records will be kept strictly confidential. Please note that data will be stored securely in a locked cabinet and/or restricted-access computer with a password protected database and will be made available only to persons conducting the study unless you specifically give permission in writing to do otherwise. No reference will be made in oral or written reports which could link you to the study.

To be specific, there exists a documented linkage between a subject's identity and his/her response in the research, and the investigator provides assurance in the protocol and in the informed consent form that the identity of any individual subject will not be revealed in any report of the study. Some of the information collected would be related to what the participant knows about current contract management systems operated by state and local governments. The results of this project will be coded in such a way that the respondent's identity will not be attached to the final form of this study. The researcher retains the right to use and publish non-identifiable data. While individual responses are confidential, only aggregate data will be presented representing averages or generalizations about the responses as a whole. The

results of this research will be presented at one or more academic conferences and one or more academic journals and/or practitioner publications.

The research team and the Institutional Review Board at Rutgers University are the only parties that will be allowed to see the data, except as may be required by law. All data will be stored in a secure location accessible only to the researcher. Upon completion of the study, all information that matches up individual respondents with their answers including audio tapes will be destroyed.

Again, you are aware that your participation in this interview is voluntary. You understand the intent and purpose of this research. If, for any reason, at any time, you wish to stop the interview, you may do so without having to give an explanation. The investigator does not perceive more than minimal risks from your involvement in this study (that is, no risks beyond the risks associated with everyday life). The investigator perceives the following are possible risks arising from your involvement with this study: potential discomfort if you cannot accurately recall information requested. This risk is minimized because you can choose not to answer any questions with which you are not comfortable.

You understand if you say anything that you believe at a later point may be hurtful to you or damage your reputation, then you can ask the interviewer to rewind the tape and record over such information or ask that certain text be removed from the transcripts. The interviewer will then ask you if you would like to continue the interview.

If you have any questions about this study or study procedures, you may contact myself at:

Soojin Kim
Doctoral Candidate
School of Public Affairs and Administration (SPAA)
Rutgers University-Newark
111 Washington Street
Newark, NJ 07102-1801
Tel: 551-574-0344
Email: sjinkim@pegasus.rutgers.edu

If you have any questions about the study or study procedures, you may also contact my Faculty Advisor

Dr. Marc Holzer
School of Public Affairs and Administration (SPAA)
Rutgers University-Newark
111 Washington Street
Newark, NJ 07102-1801
Email: mholzer@rutgers.edu

If you have any questions about your rights as a research participant, you can contact the Institutional Review Board at Rutgers (which is a committee that reviews research studies in order to protect research participants).

The IRB Administrator at Rutgers can be reached at:
Rutgers University, the State University of New Jersey
Institutional Review Board for the Protection of Human Subjects
Office of Research and Sponsored Programs
3 Rutgers Plaza
New Brunswick, NJ 08901-8559
Tel: 848-932-0150
Email: humansubjects@orsp.rutgers.edu

We would very much appreciate your time and participation in this effort again.

AUDIO/VIDEOTAPE ADDENDM TO CONSENT FORM

You have already agreed to participate in a research study entitled: Toward Financially Effective Contract Management: Comparing Perceptions of Contract Managers in the Public and Private Sectors conducted by Soojin Kim. We are asking for your permission to allow us to audiotape (sound) as part of that research study. You do not have to agree to be recorded in order to participate in the main part of the study.

The recording(s) will be used for analysis by the research team. The recording(s) will include no information about the respondent's identity. The recording(s) will be stored in a secure location accessible only to the researcher. Upon completion of the study procedures (probably August, 2014), all information that matches up individual respondents with their answers including audio tapes will be destroyed.

Your signature on this form grants the investigator named above permission to record you as described above during participation in the above-referenced study. The investigator will not use the recording(s) for any other reason than that/those stated in the consent form without your written permission.

Once you have read the above form and, with the understanding that you can withdraw at any time and for whatever reason, you need to let me know your final decision to participate in this interview. If you have any questions, please feel free to let me know.

You will be given a copy of this consent form for your records.

Sign below if you agree to participate in this research study:

Subject (Print) _____

Subject Signature _____ Date _____

Principal Investigator Name (Printed) _____

Principal Investigator Signature _____ Date _____

Appendix E

Assent or Script for Oral Consent

Please note: Principal Investigator will provide each potential participant with an email copy of the consent form prior to the interview.

Introduction

We are writing to invite your participation in (focus group) interviews about financially effective contract management in state and local government. This is for academic research that aims to better understand how public managers and contractors differently or similarly view conditions in which effective contract management accompanied with satisfactory financial performance—potential cost savings and transparent use of public funds—can be operated during the entire contracting out process. In addition, through such internal and external stakeholders' viewpoints, this research seeks to guide current state and local contract management systems of government agencies and to find more feasible and critical strategies for achieving cost effectiveness and maintaining transparent use of public money against fraud, waste, and abuse when public service/good delivery are contracted out.

This research is sponsored by the School of Public Affairs and Administration (SPAA) at Rutgers, The State University of New Jersey, Newark Campus and directed by Professor Marc Holzer and Doctoral Student Soojin Kim. It has been reviewed and approved by the Rutgers University Institutional Review Board (IRB), and if you have any questions about your rights as a participant in this study, you may contact them by telephone at (732) 932-0150 or humansubjects@orsp.rutgers.edu

Participation

You are one of a small group of agency/organization representatives engaged in the contracting out process, who have been selected, so your participation is very important to the study. You are aware that your participation in this interview is voluntary. You understand the intent and purpose of this research. If, for any reason, at any time, you wish to stop the interview, you may do so without having to give an explanation. This project will not be longer than one hour and a half.

Confidentiality

There are no direct benefits to you for participating in this study; however, the study will potentially benefit government agencies engaged in the contracting out process and contracting organizations.

During this focus group interview, the recording(s) will be used for analysis by the research team. The data gathered in this study are confidential with respect to your personal identity unless you specify otherwise. The recording(s) will be stored in a

secure location accessible only to the researcher. Upon completion of the study, all information that matches up individual respondents with their answers including audio tapes will be destroyed.

Please be assured that your answers will be completely confidential, and all results and information gathered in this focus group interview will be reported only in aggregate form. Please note that data will be stored securely in a locked cabinet and/or restricted-access computer with a password protected database and will be made available only to persons conducting the study unless you specifically give permission in writing to do otherwise. No reference will be made in oral or written reports which could link you to the study.

The investigator does not perceive more than minimal risks from your involvement in this study (that is, no risks beyond the risks associated with everyday life). The investigator perceives the following are possible risks arising from your involvement with this study: potential discomfort if you cannot accurately recall information requested. This risk is minimized because you can choose not to answer any questions with which you are not comfortable.

We will share the transcripts with you a few days after this project and you will have an opportunity to clarify or ask to delete any part of it.

Questions about the Research

If you have questions regarding this study, you may contact Ms. Soojin Kim at (551) 574-0344 or sjinkim@pegasus.rutgers.edu

Questions about your Rights as Research Participants

If you have questions you do not feel comfortable asking the researcher, you may contact my Faculty Advisor, Dr. Marc Holzer, School of Public Affairs and Administration (SPAA), Rutgers University-Newark at mholzer@rutgers.edu Or contact the Institutional Review Board at Rutgers (which is a committee that reviews research studies in order to protect research participants) at (848)-932-0150, or humansubjects@orsp.rutgers.edu

Verbal Consent Document for Participation

SUBJECT: Toward Financially Effective Contract Management: Comparing Perceptions of Contract Managers in the Public and Private Sectors

Oral consent serves as an assurance that the required elements of informed consent have been presented orally to the participant or the participant's legally authorized representative.

Verbal consent to participate in this focus group interview has been obtained by the participant's willingness to continue with the interview by providing answers to a series of questions related to what the participant knows about contract management and financial performance.

You will be given a copy of this oral consent form for your records.

I attest that the aforementioned written consent has been orally presented to the human subject and the human subject provided me with an oral assurance of their willingness to participate in the research.

Principal Investigator Name (Printed) _____

Principal Investigator Signature _____ Date _____

Appendix F

(Focus Group) Interview Questions

Protocols

Please note: Probing questions will not be asked if participant readily addresses certain issues when asked main questions.

1. Can you describe your thoughts on effectiveness of government agency's current financial management systems in the contracting out process?

- Probe: Positive impacts or negative impacts on satisfactory financial performance (cost savings and transparent use of public funds)?
- Probe: Are these procedures including reporting, payment, accounting/recording, and auditing adequate?
- Probe: Do these procedures effectively help carry out fiscal duties and responsibilities of contract administrators (including public managers and contractor)?
- Probe: What is the biggest challenge (barrier) associated with your agency/organization contracts?
- Probe: What is the biggest advantage associated with your agency/organization contracts?

2. Some researchers found that government agencies primarily depend on information collected/provided by the contractor and sometimes lack integrity for monitoring works (financial oversight) because of limited time and resources and caseload size. As a result, they usually conduct minimal and infrequent oversight or insignificant penalties for contact violations and unsatisfactory financial performance, thereby resulting in fiscal corruption issues (fraud, waste, and abuse). How do you think of these findings?

- Probe: If you do (not) agree with this argument, why?
- Probe: If so, why do you think such findings have been drawn?
- Probe: Is there anything that you see that researchers might have missed out?

3. From your perspectives and experiences, which kinds of requirements and methods among current monitoring and financial oversight efforts (e.g., review of monthly or quarterly self-reports, analysis of financial documents of cost, field observation (site visit), citizen survey (complaint/satisfaction), Independent audit) have been (or not) effective at achieving potential cost savings and further protecting the integrity of public funds prevented from fraud, waste, and abuse?

4. What do you suggest/recommend for government agency to achieve fiscal effectiveness and combat corruption (effective financial management) in the entire contracting process?

Closing

I really appreciate your help and participation again. I've learned a lot that will help me in my dissertation research. I would be happy to send you a copy of the final report generated by this research. If you have any questions or other ideas, please feel free to contact me (sjinkim@pegasus.rutgers.edu).

Appendix G

(Focus Group) Interview Script

Introduction

Good morning everyone. Thank you very much for your time and participation.
My name is Soojin Kim, and I am doctoral candidate at the School of Public Affairs and Administration, Rutgers University, Newark Campus. My research interests are primarily in contract management and performance in state contracting out process.

Before we begin, let me briefly explain about the purpose of this project.

This is academic research that aims to guide the current contract management systems of government agencies for satisfactory financial performance. From public managers' and contractors' perspectives, this research seeks to find new and more feasible and critical strategies for achieving cost savings and maintaining transparent use of public money against fraud, waste, and abuse when public service/good delivery are contracted out.

Although I have permission from [*name of agency head*] to do the research, I am not reporting to [*him or her*] or anyone else in the organization. As we discussed earlier, everything you say to me will be completely confidential. I will share the transcripts with you a few days after this project and you will have an opportunity to clarify or ask to delete any part of it.

Basic Rules and Guidelines

In an effort to encourage open and honest dialogue, there will be very limited structure to this focus group. There is no particular order in which you need to speak, and I invite you to respond to my questions freely, honestly, and completely. If you feel the urge, you can also respond to or build upon a comment of one of the other participants. The only expectation is that of a polite and orderly environment where everyone will feel confident participating in the discussion.

Feel free to speak your mind and please allow others to do the same. Additionally, if there is a question that you do not feel comfortable answering you are free to abstain from the discussion.

You'll notice that we are creating an audio recording and taping of this conversation but all of your comments during the project will be confidential. This project will not be longer than one hour and half.

After this project, if you can think of anything else that you would like to add or discuss more in detail, I am very open to conduct follow-up interviews.

Before we begin, do you have any questions?