JOURNAL OF PUBLIC PROCUREMENT, VOLUME 15, ISSUE 2, 150-176 SUMMER 2015

COMPLEX PRODUCTS AND COMPREHENSIVE SERVICE AGREEMENTS: A CASE STUDY OF OUTSOURCING IN CONTRACT CITIES

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ABSTRACT. This study investigates how outsourcing multiple public functions in a single contract increases the complexity of the services rendered under the agreement. We hypothesize that product complexity arises in these bundled service agreements due to several factors including diseconomies of scope, the "lock-in" problem, and communications problems between the contractor, the government and the public. We investigate these questions using a textual analysis research methodology to examine the initial contract documents that formalized an agreement between the City of Sandy Springs Georgia and the firm CH2M Hill. The results of this qualitative study identified several ways that different combinations of functions increased product complexity. It also revealed ways the contracts were designed to mitigate the risks of outsourcing multiple functions in a single contract.

INTRODUCTION

This study examines the impact of outsourcing multiple services in a single contract agreement. We investigate whether the combination of multiple functions increases the complexity of the outsourced activities. Complexity is defined as uncertainty with respect to the cost, quality and quantity of the products to be delivered under the contract (Bajari & Tadelis, 2001). Product complexity is a problem for contract administration because it makes it difficult to establish the terms of a service agreement and it can provide incentives for both parties to the agreement to act self-interestedly at the other party's expense (Brown et al., 2009). This

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self-interested behavior creates risks that threaten the public good. Our research objective is to identify how combining multiple functions in a single contract can increase product complexity and determine how contract elements impact the risks associated with this form of product complexity.

Developing an understanding of bundled service agreements is important to the study of public procurement because it is an increasingly common approach to outsourcing. Firms offering a set of services can offer economies of scale, meaning a reduction in average costs as the level of service delivery increases. At the extreme, several cities have adopted a "contract city" model of governance in which all public functions are outsourced to one or two private partners and only and handful of public employees remain on the city staff. Although these contract cities have received some attention in the literature (see Bradbury & Waechter, 2009; Ni, 2010), there remain many unanswered questions about what risks this new model of government poses to the public and whether public officials are designing contracts that can adequately mitigate those risks. Local governments that outsource to a lesser extent should also be aware of any risks associated with bundled service agreements.

We develop a principal-agent framework to analyze the interaction between the public good and the risks associated with product complexity. Within this framework, the principals are the governments interested in outsourcing services and the agents are the firms hired to deliver those services. Before an agreement is signed, both parties negotiate the terms of a contract in order to mitigate risk and protect the public good. The agent is also assumed to pursue terms that allow it to maximize its long-term profits. The public good is conceptualized according to Cooper's (2003) model of public outsourcing. The risks of outsourcing through bundled services contracts are identified in the contracting literature. Most prominent are the "lock-in risk" and the concept of "diseconomies of scope" (Bajari & Tadelis, 1999; Brown, Potoski & Van Slyke, 2009; Rawley & Simcoe, 2010). Also, we argue that some risks associated with single service contracts, such as those associated with the termination of a contract or with the distance between the service consumers and government officials, can be heightened in a bundled service context.

We use this framework to analyze one particular contract document that is an extreme case of outsourcing multiple functions in a single agreement. The city of Sandy Springs, Georgia adopted the contract city model at the time of its incorporation in 2006. At that time, it outsourced the majority of municipal services, the primary exception being public safety,[1] to a single private firm. The city manager was the only public employee at the time. The contracts between the city and its private partner are subjected to a textual analysis. This analysis identifies several ways in which outsourcing multiple functions to a single firm creates new challenges for contract administration that would not be present if functions were distributed across multiple firms. The textual analysis also identifies contract elements that mitigate the product complexity risks created by the combination of outsourced functions.

THERORETICAL FRAMEWORK

In this section, we explain why combining multiple functions in a single outsourcing contract can create new risks for a public entity. Our theoretical framework applies the standard assumptions of the principal-agent model. Local officials decide to outsource services when they expect external production provides net benefits to the public. They recognize, however that there are risks associated with outsourcing and that the contract must be designed to protect against uncertainty. Private firms seek to maximize their long-run profits and therefore will accept contracts and seek to meet the agreed upon terms so that at a future date the contract will be renewed. These firms may have opportunities to increase short-run profits by acting at the principal's expense because the officials have limited information regarding the costs of service production and the level of effort exerted by the agent. The contract is designed to reduce problems created by this information problem. As put by Gary Miller (1993, 2), "The principal's job is to anticipate the rational responses of agents and to design a set of incentives such that the agents find it in their own interests (given the incentive system) to take the best possible set of actions (from the principal's perspective)." A well designed contract will align the agent's objective of maximizing long-term profits with the principal's desire for service delivery.

The framework we develop to evaluate comprehensive service agreements mediates two factors in contract design: the public good and risk from product complexity. The first is based on Cooper's (2003) criteria for assessing how contract elements influence the public good. The second encompasses the risks and uncertainties that complex products create. Between the two nodes is an action space where principals and agents negotiate and design contract agreements. Figure 1 depicts this dynamic. The following discussion describes each element in greater detail.

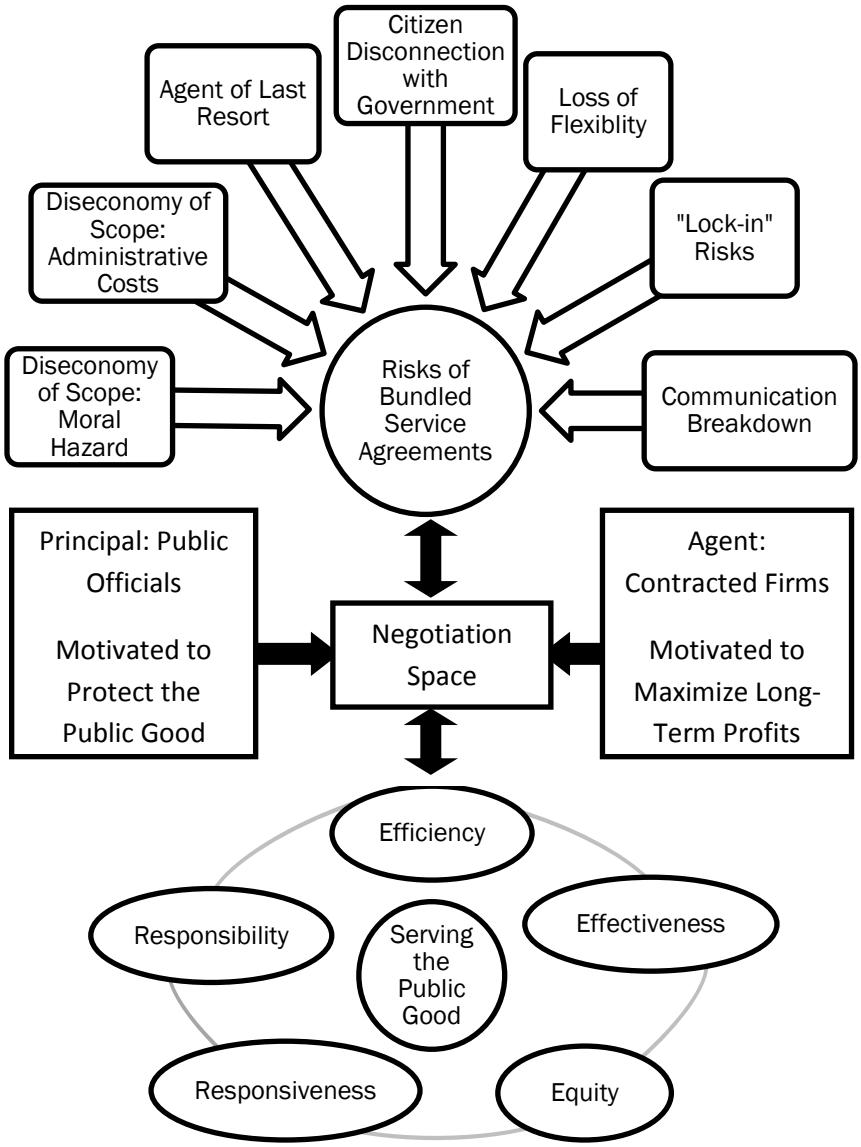
The Public Good

Local officials must balance multiple objectives as they seek to provide public services. Cooper (2003) identifies five evaluative criteria for public service contracts. These are: 1) efficiency 2) equity, 3) effectiveness 4) responsiveness and 5) responsibility. These criteria can be used collectively to evaluate whether an instance of outsourcing is in service of the public good. Officials are interested in developing contracts that exhibit each of these characteristics because they provide them with protections against the risks associated with external service production. There are tradeoffs between these goals, however. For example, an increase in responsiveness to citizen preferences by doing trash pick-up only at certain times of day may increase costs and reduce overall efficiency. Each locality must determine its own balance among competing criteria.

Efficiency is pursued by reducing the cost of producing a given level of output. The underlying premises of the New Public Management doctrine is that private firms are able to operate at a lower cost and a higher level of productivity than the public sector. These cost savings can come from several sources. Overhead costs per unit of services may be smaller in a larger operation that spans multiple cities. For example, a trash collection firm servicing multiple cities may be able to use a more capital-intensive production process that is cheaper, but not economical for individual cities.

The principle of equity has both ethical and legal implications for local government service provision. Many public social services target vulnerable groups such low income households. Cooper describes limiting eligibility for services funded by taxpayers "deliberately

FIGURE 1
Conceptual Framework



unequal treatment in the interests of justice" (p. 6). Public officials outsourcing social services have an interest in ensuring their private partners are able to reach and provide adequate services to the

Service delivery is effective when it has its intended impact on social outcomes. The now common use of performance measures that are spelled out directly within public service contracts is a direct response to local officials' need to ensure that their goals are being addressed.

Responsiveness is another important criterion for localities that have outsourced services. Local conditions and service needs can change over time and it is necessary that both parties to a given contract can come together to discuss adjustments to the agreement. Is the agent able to provide services with the speed and flexibility needed to meet the public's needs?

Responsibility has both a legal and political dimension. Every contract must address the limits of legal responsibility for any actions taken by either party. Cities must protect themselves from the actions taken by their contracted agents. Similarly, private firms are going to require certain protections from legal liability as they provide services to the population. Both must ensure that all activities comply with state and local laws. The balance of liability between both partners is an important criterion for how a given contract protects the public interest. The political responsibility for the provision of public services will remain with public officials even when the production of services is performed by contracted agent.

Risks of Complex Products

There are many potential risks for both the buyers and the sellers of complex products. One of the primary concerns is the "lock-in" problem. First identified by Williamson (1996), the lock-in problem arises when the resources and investments used by the agent to provide services are customized to the buyer's specifications and therefore cannot be easily shifted to other customers. Once the contract has been signed and the initial investments have been made, the agent would face significant losses if the agreement were terminated because it cannot shift resources to another contract. This gives the buyer the opportunity to request additional services at no additional cost lest the agreement be terminated. Additionally, the seller obtains an advantage because no other firms have made the

initial investments and they therefore face diminished competition should the contract be rebid. The lock-in problem gives both the principal and the agent opportunities act in each other's expense and harm the public good.

Brown, Potoski and Van Slyke (2009) explored the lock-in problem and complex products in a case study of the US Coast Guard's procurement of systems and equipment for the "Deepwater" program. The authors model the strategic interaction between principal and agent as a type of "prisoner's dilemma problem", in which two actors must decide whether to cooperate with each other or act self-interestedly. Although both would be better off if they cooperated, the uncertainty they face and the potential advantage they could obtain if they act at the other actor's expense leads both to make the selfish choice and results in the worst possible outcome. The authors found that the complexity of the services specified in the contract and the uncertainty regarding the costs of providing them resulted behavior that closely fits the predictions of a prisoner's dilemma model and explains the poor performance of the Deepwater program.

An issue related to the lock-in problem is whether the market for a given product is "thin", meaning that there are so few providers that there is little competition for a contract. For buyers of complex products, this is a significant concern because there may not be many firms that are able to meet the buyer's specifications. In the context of bundled service agreements, a broad scope of services combined in a single contract limits the number of firms that can provide all of the elements. Unless multiple firms can group together in either a collaborative or hierarchical sub-contractor arrangement, the supply of the services will not be competitive and the agent will be able to increase the price of services.

Also associated with the lock-in problem is the risk of an inflexible service arrangement. If the asset specific investments make it difficult to change the nature of public services provided. Local governments are subject to changes in voter preferences for services and must also respond to unforeseen events that require immediate responses. At a smaller scale of outsourcing, it may be easier to simply replace a service provider with another vendor that offers a better match for services. Comprehensive service contracts are not

easily replaced, however, and therefore may heighten the risk of inflexible service agreements.

When environmental conditions change and new services are required, governments reliant on comprehensive service contracts may use their primary contractor as an "agent of last resort". The lack of internal service delivery capacity means that new services will require new external service delivery arrangements. When there is an explicit expectation that the primary contractor will provide these new functions, then it is the agent of last resort. Possible scenarios are failures in infrastructure due to inclement weather, or the failure of a separate contractor providing other services to the locality. The unknown nature and cost of these potential services introduces complexity to the contractual agreement.

Another set of risks are generated from the mix of products combined in the contract. As the agent becomes responsible for a more diverse set of activities, the costs of administering the contract can increase. The term "diseconomies of scope" (Panzar and Willig, 1981) describes the increases to the cost of production due to a larger set of functions undertaken by a single entity. In their analysis of the impact of corporate diversification on scope diseconomies, Rawley and Simcoe (2010) identified various sources for these costs. First, firms that have diversified their activities may experience greater monitoring costs due to cognitive limitations (Schoar, 2002) and incomplete information (Hölmstrom, 1979). One large firm that only provides a single simple service would be expected to have lower administrative costs than a similarly sized firm that performs multiple unrelated tasks. Managerial expertise used in monitoring productivity and efficiency may not transfer across tasks and therefore requires additional overhead as the number of different functions increases. These risks are identified on Figure 1 as administrative costs associated with diseconomies of scope.

Second, problems associated with "moral hazard" can arise as the combination of activities creates opportunities for the agent to strategically act in its own interest. In a public service contract setting, this refers to changes to the service provider's incentives after the contract has been signed that encourage them to act at the expense of the public good (Baumol, 1984). For example, the function of tax collection is a problematic target for outsourcing because the agent has the incentive to underreport their collections,

therefore requiring the principal to engage in costly monitoring of the agent's behavior.[2] Private collectors may also pursue revenues more aggressively than public workers, at significant political cost (Montgomery, 2014). Anywhere that a conflict of interest arises because of the functions bundled in a single contract requires the principal to monitor the agent's behavior and ensure that the services are rendered with the same degree of effort and honesty that would have occurred if they were provided individually by separate firms.

There are other related risks associated with diseconomies of scope that are not found in the corporate context, but are a concern for local governments. First of these is the connection between the government and the citizens it serves. As the public has more interactions with contracted agents, there may be an increased risk of public officials becoming distanced from the citizens. Milward and Provan argue that "the delegation of authority to nongovernmental agents can lead to potential loss of legitimacy of government action accomplished at arm's length" (Milward & Provan, 2000, p. 363). In the contract city environment, the city manager may be the only public worker that citizens encounter that is not a contracted employee.

Another potential risk associated with outsourcing at this scale is that it requires strong interpersonal relationships that foster trust and communication. Interpersonal relationships have been viewed as a crucial part of contracting relationships for the last two decades (see Davis-Blake and Broshack (2009) for a review). A breakdown in these relationships can contribute to the termination of the contract agreement (Uzzi, 1997, p. 1996). For contract cities, the relationship between the city manager and the primary service provider is a particularly crucial relationship because if it sours there are consequences for the delivery of much greater scope of services. This is a risk that is present for all types of outsourcing, but it is heightened with a greater degree of scope because localities can't diversify the risk by having relationships with multiple contractors. If there are only one or two contractors, then there is more at stake if those relationships break down.

Contract Design

Within the framework depicted in Figure 1, both the principal and the agent are expected to anticipate some or all of the risks

discussed above associated with bundled service agreements. Both parties are interested in mitigating these risks in order to obtain an agreement that will allow them to pursue their own objectives within the principal-agent framework. Risk is reduced through contract structures that clarify expectations and responsibilities for all participants. The central action space at the center of Figure 1 is the arena in which the specific elements of the contract are negotiated and agreed upon.

There are several ways that individual contract elements can mitigate risk. Three categories of contract structures are those dealing with 1) production and delivery of services 2) communication between principal and agent and 3) changes to the agreement. The first category is the broadest as it includes all contract elements that describe the nature of service production and delivery. It covers compensation awarded for adequate performance and would also include performance measures and agreements on cost controls. These elements mitigate risks associated with the agreement by clarifying expectations for what is to be delivered and how it is to be produced.

Second, as a principal becomes dependent on the agent for delivering services there will need to be specific contract elements that address appropriate communication between the two parties to the contract. Norms for how the principal can request changes to services would be specified in the contract. Similarly, the way that the agent represents itself to the public will also be an important part of the contract. Specific rules on how the agent will interact with citizens would be expected. We place contract elements that address any conflicts of interest within this category.

The third classification addresses the need for flexibility to deal with changes to the environment. As a government outsources an increasing share of its functions to a single partner, it reduces its capacity for in house production. In the event of unforeseen events that require public actions that are new or different than those specified in the contract, the government may be dependent on the contractor for these additional functions. Contract elements that lay out strategies for negotiating additions or subtractions from the contract as the need for services change over time. This is similar to the “cost plus” contract designs used in the construction

management context to address the risk inclement weather increasing projects' cost and time (Bajari & Tadelis, 1999).

The objective of this study is to examine how the contract elements arising from the negotiating space address the risks that are created by combining multiple service functions in a single contract. How do the specific structures of the agreement protect the public good against the complexity created by grouping multiple services in a single contract? Are there risks that are overlooked that create vulnerabilities for either the principal or the firm? The theoretical framework developed in this section identifies provides a structure for analyzing how contracts are designed in light of government officials' interest in protecting the public good from the risks associated outsourcing services in bundled contracts. The following section describes how this framework is applied to a qualitative textual analysis methodology.

RESEARCH DESIGN

In order to examine how contract structures address the risks associated with bundled outsourcing agreements, we conduct a textual analysis case study of a pair of contract documents that governed the initial outsourcing agreement between the City of Sandy Springs, Georgia and the firm CH2M Hill. This contracting agreement was chosen for analysis because it represents a critical case for testing the theory of diseconomies of scope. Yin describes the conditions when a critical case research design may be appropriate:

> The theory has specified a clear set of propositions as well as the circumstances within which the propositions are believed to be true. A single case, meeting all of the conditions for testing the theory, can confirm, challenge, or extend the theory. The single case can then be used to determine whether a theory's propositions are correct or whether some alternative set of explanations might be more relevant (Yin 2008, p. 47).

We argue that the initial contracting arrangement between Sandy Springs and CH2M Hill meets these conditions. The scope of services outsourced in the contracting agreement is extremely broad; it included all administrative and technical functions for the new city. Table 1 provides a detailed description of which functions were

outsourced to CH2M Hill, which were retained internally and those that were obtained via contract from other local governments. If diseconomies of scope ever arise due to bundled service contracts then they would at least be present in the most extensive form of

TABLE 1
Initial Service Production Methods of Sandy Springs, GA

Alternatives	Service/Function
Internal Production	- Mayor - City Council - City Manager - Courts - City Clerk - Clerk of Court - Office of City Attorney
Contract with Current Government (Fulton County)	- Police (6-month contract) - Fire (6-month contract) - E911 (6-month contract) - Sewer
Contract with other local governments	- City of Roswell, GA: Jails - City of Smyrna, GA: Enhanced Library Service - City of Atlanta, GA: Water
Private Partnerships	- Accounting - Finance - Information Technology - Administration - Human Resources - Administrative support of: Courts, Police and Fire. - Parks and Recreation - Community Development (Planning, Zoning and Permitting) - Public Works - Transportation - Solid Waste (one-year nonexclusive contract, evolving into franchises)

Source: Porter (2006, pp. 60, 116–118).

municipal outsourcing – the contract city model of governance. If the potential for their existence is observed in this case, then there may be reason to search for their presence in less extensive outsourcing arrangements. If they are absent here, then it would appear to be less likely that they would be present elsewhere.

The first step of the textual analysis approach was to develop a set of codes that could be used to assign meaning to individual contract elements. Our development of codes was influenced by interview methodology (DeCuir-Gunby et al., 2011; Miles and Huberman, 1994). We used a theory-driven approach to code development that operationalized the theoretical framework discussed in the previous section into three tiers of codes. In an iterative process, the codes were developed from the framework, applied to the data and then reviewed within the context of the data. Following each review, the code definitions were adjusted and then reapplied to the data. The task of creating, applying and tracking the codes were performed using the Dedoose software package.

This iterative process developed three tiers of thematic codes that operationalize different elements of our theoretical framework. The first two tiers identify where the concepts of the public good and risks associated with bundled services are found within the contract elements. The third tier identifies specific structures within the contract that are designed to mitigate risks or protect the public good. This latter tier of codes is assigned to the intentional design elements of the contracts that were developed within the negotiation process to mitigate the risks of complex produces stemming from the bundled nature of the contract.

The Tier 1 codes are displayed in Table 2. These codes were developed directly from the five elements of the public good that we have adapted from Cooper (Cooper, 2003). Contract elements that relate to one or more aspects of the public good are applied with the corresponding codes.

Table 3 displays the Tier 2 codes that identify the risks associated with bundled service agreements. Each of the seven codes corresponds to one of the risks identified in the theoretical framework. We apply codes to elements that both directly and indirectly relate to one of these risks. Direct relationships are interpreted as single contract elements that either identifies the risk

TABLE 2
Tier 1 Thematic Codes: Expressions of Public Good

#	Code	Description
1.1	Efficiency	Getting the most economical value for the output per unit invested
1.2	Effectiveness	Scope and quality of contracted service outcome.
1.3	Equity	Non-discrimination and ensuring programs meet a variety of population needs.
1.4	Responsiveness	Meeting constituent demands for timeliness and appropriateness of services.
1.5	Responsibility	Political and legal accountability

or which create the risk. Indirect relationships are those that would not be generated by a single contract element alone, but arise through a combination of multiple elements of the contract. As an example of an indirect relationship, the code for a diseconomy of scope associated with moral hazard was associated with an excerpt requiring that the firm provides annual recommendations to the City on the capital program requirements for future years, and also with a separate excerpt requiring that the firm will purchase, procure and maintain these assets. This combination of functions was identified as a potential source of moral hazard because the firm has the discretion to recommend projects that will be more profitable for it to procure and administer.

TABLE 3
Tier 2 Thematic Codes: Risks to Public Good Expression

#	Code	Description
2.1	Diseconomy of Scope: Moral Hazard	The combination of diverse functions performed by the agent gives them opportunities to strategically act at the principal's expense to increase its immediate profits.
2.2	Diseconomy of Scope: Administrative Costs	Monitoring a diverse set of functions performed by a single agent may be more complicated and costly than if they were outsourced to separate entities.

TABLE 3 (Continued)

#	Code	Description
2.3	Vendor Acting as "Agent of Last Resort"	The agent may be expected to provide additional services that are initially unclear because it is responsible for maintaining an overall continuation of services.
2.4	Risk of citizen disconnection with government - distance between citizens and their government	Contracting often places the private contractor in between citizens and their government. They can come to believe that government does nothing and everything needed is provided by the private sector. The connection between the public funding and initiation and ultimate accountability between a government and its citizens is weakened and obscured.
2.5	Risk of lack of flexibility to make changes and course corrections given contractual relationship	Environmental or political changes will require adjustments to services. Can an agent that provides a diverse set of functions adapt with the required speed?
2.6	"Lock-In" Risks	The agent knows that the market is thin and that few if any other firms could compete with it on price. Also, the principal knows the agent stands to lose its specific investments if it should lose the contract.
2.7	Risk of breakdown of relationship and communication between elected officials and contracted administration	The principal's increased dependence on its agent requires good working relationships. They are not conducive to arm's-length transactional approaches and instead, require a relational approach based upon good two-way communication, trust and flexibility.

The Tier 3 codes listed in Table 4 identify strategies that may be used to mitigate the risks associated with outsourcing multiple functions in a single contract. Individual contract elements that correlate to one of these strategies are given the appropriate code.

The codes were applied to the contract documents over the course of multiple successive readings of the text. After applying the codes, they were analyzed in order to identify patterns and connections across the codes. Our analysis focused on identifying any patterns among the coded excerpts that related to how combinations of function might influence the complexity of the overall service package. The primary tool used to identify such patterns was a code co-occurrence table that identifies instances where codes are applied in combination with each other. Review of the excerpts that received multiple codes was helpful in identifying relationships

TABLE 4
Tier 3 Thematic Codes: Ways in Which the Contract Anticipates and Responds to Risks to the Public Good

#	Code	Description
3.1	Cost control and management strategies	Direct and indirect ways in which the City retains control over cost issues
3.2	Service quality strategies	How service quality is addressed and assured
3.3	Communication and relationship strategies	Direction as to when and how communication between contractor and City is to occur
3.4	Citizen responsiveness and engagement strategies	Ways in which issues of citizen connection are addressed
3.5	Conflict of interest strategies	These are contract responses that appear directed at issues of moral hazard
3.6	Change management strategies	How change is anticipated and ways it is managed
3.7	Contract termination strategies	How the ending of the contract is handled

between risks and the structures placed to mitigate risks and/or to protect elements of the public good.

The initial theoretical propositions relating to impact of combining multiple functions in a single contract were used as a lens guiding this analysis. One way this impacted the analysis of patterns among the codes was to filter out relationships that did not appear relevant to the focus of the study on bundled service contracts. For example, one of the strongest co-occurrence relationships observed in the data was between the Tier 1 codes for Effectiveness and Efficiency. Many of these excerpts dealt with requirements that services be delivered in both "competent" and "economically feasible"[3] fashion and were applicable to outsourcing in general and did not relate to the comprehensive nature of the service agreement. Co-occurrence was used as a starting point for examining how the contract elements relate to risks to the public good, but was followed by comparison to the theoretical propositions. The following section discusses the findings that were both relevant and revealing.

An additional source of information was also used to help put the development of the contract documents into context. Oliver Porter, the Interim City Manager for the City of Sandy Springs prior to its incorporation and one of the key organizers of the incorporation effort, wrote a personal account of the process that resulted in a contract between Sandy Springs and CH2M Hill.

RESULTS

Several patterns emerged from analyzing the co-occurrence of codes across the contract documents. This section will discuss these findings and their implications for the hypotheses regarding bundled services contracts.

Diseconomies of Scope

The textual analysis revealed multiple interactions across service functions that create the potential for diseconomies of scope. These interactions increase the complexity of the product being outsourced because they either create opportunities for moral hazard or require additional monitoring functions. Both introduce uncertainty regarding the costs associated with administering the contract.

Two services included in the contract document that exemplify this type of interaction are 1) the provision of advice on investment practices,[4] including the selection of an investment firm, and 2) advice on capital improvements to municipal infrastructure.[5] This combination of functions means that the agent is acting as a matchmaker between the city and a financial services firm and at the same time providing advice on a broad range of investment policies. Although procedures for issuing municipal debt are not explicitly discussed in the contract, it is likely that the financial services firm recommended by the agent would be the same entity that would underwrite any bonds that the city would issue. This combination of functions would require an assessment of whether these services come under the jurisdiction of the Municipal Securities Rulemaking Board (MSRB) Rule G-23, covering the activities of financial advisors. The agent would likely need to register as a Municipal Adviser under this rule.

The threat of potential violations of rule G-23 has already been raised for the conventional contracting context. Tamar Frankel (2007) raised the issue that some brokers have contracted with cities to provide financial advice and then have terminated the relationship to then subsequently begin a new relationship as bond underwriter. Frankel's point that while the rule only prohibits firms from providing both types of services simultaneously, serially providing both services to skirt the rule still allows for a significant conflict of interest because the firm has developed a relationship of trust with the issuer and could potentially capitalize on this trust. On May 27, 2011 the MSRB approved amendments to rule G-23 that prohibited this practice (Municipal Securities Rulemaking Board, 2011). The extreme dependence of a contract city on its primary service provider can create a similar degree of trust that may leave the city vulnerable to a conflict of interest.

Recent changes to the Municipal Securities Rulemaking Board under the Dodd-Frank Wall Street Reform and Consumer Protection Act have expanded the MSRB's role to include the protection of state and local bond issuers. Part of the new regulations requires that "municipal advisors" register with the Securities and Exchange Commission. The MSRB's has issued statements explaining that:

> Municipal advisors also include firms and individuals that solicit business from municipal entities on behalf of broker-

> dealers, banks, other municipal or investment advisers to secure certain types of investment banking, financial advisory or investment advisory work with municipal entities, such as public pension funds, 529 plans, local government investment pools and other state and local governmental entities or funds. These municipal advisors are sometimes referred as consultants, third-party marketers, placement agents, solicitors or finders (MSRB, 2014).

The investment services that CH2M Hill provides to the City of Sandy Springs appear to qualify under this definition of municipal advisor. If the functions of providing investment advice, help selecting a financial services firm and providing capital improvement advice were separated across multiple firms then registration with the SEC as a formal municipal advisor would not be necessary.

The agent's responsibility for advising the city in capital improvements also interacts with the responsibility for producing those same projects. The contract agreement combines both the administrative function of providing advice on which projects to select with the public works function of procuring and maintaining those same projects. This grouping of responsibilities creates a new moral hazard risk. The firm has the ability to advise projects to its own advantage, rather than to the public's benefit. Although the contract has language that prohibits any conflict of interest,[6] monitoring the contractor's behavior to verify that this element of the contract is obeyed would require greater effort than would be necessary if the functions were separated.

This interaction between an administrative function and a public works function is typical of several other connections across functions identified through the textual analysis. There are a variety of information production activities that the agent is responsible for that create opportunities for moral hazard. The most important of these are the development and preparation of the budget, the generation of economic forecasts used in determining future needs within the municipality, and assessing for the city the cost of producing public works. By outsourcing the entire set of information production functions, the city is without internal capacity to obtain information on the true cost of services. This creates uncertainty with respect to the set of services outsourced through the agreement. The contract document is silent on the topic of how to evaluate the quality of

information produced externally when that information may be biased to increase the agent's profits in the provision of technical public works services. Even the audit process may be subject to the pressures of moral hazard because the contracted agent is responsible for recommending an auditor to the city.[7]

Maintaining transparency and ensuring proper control of public funds are important aspects of public financial management. One aspect of administering a bundled service agreement that complicates ensuring transparency and control is the movement of funds across contracted activities. The contract agreement allows the agent to move funds across agreements as long as it does not increase costs or harm service delivery.[8] There is a strong justification to allow this practice – it allows for greater flexibility across changing environmental conditions. The cost, however, is that if transfers from one set of services to another are not clearly documented, it heightens the information asymmetry between the principal and the agent regarding the true cost of producing services. If the city comes to a situation where it needs to either renegotiate the agreement or rebid it entirely, this lack of information will put it at a disadvantage.

Communication Breakdown

One of the key concepts to arise through this review of the contract documents relates to the crucial role of interpersonal relationships for outsourcing at this scale. This analysis identified several ways how the scale of outsourcing in the contract city model heightened the vulnerability to the public interest if these relationships deteriorate. First, the relationship between the City Manager and the primary firm is central to the health of the contract agreement. In this arrangement, the manager is essentially the only city employee that the contractor has contact with. A communications breakdown would threaten the entire operation of the city given the scale of service delivery in this agreement. It also would threaten to impose the loss of the asset specific investments associated with the "lock in" problem.

There are several elements of the contract document that are designed to mitigate the risk of a deteriorating relationship between the city and its agent. These include explicit descriptions of how the principal and the agent to the agreement will communicate with each other and the public. For example, there is language requiring that

the agent will "foster and maintain harmonious relationships"[9] with public officials, citizens and other contractors employed by the city. There is also a requirement that CH2M Hill implement a code of conduct for its employees that requires professional and polite conduct.[10] These elements describe the behaviors that are undesirable for both parties to the agreement. The contract also contains procedures that the city manager can follow in order to address problems related to interpersonal relationships. Specifically, the city manager is allowed to require that individual employees of CH2M Hill be transferred out of the city.[11] Additionally, CH2M Hill agreed to make its senior executive available to meet with the City Manager in person on an annual basis in order to discuss the status of the agreement.[12]

These contract elements target the agent's role in maintaining interpersonal relationships, but they are silent regarding the risks associated with the position of city manager. If it is the city manager's behavior that is damaging to the relationship, there is little recourse for the agent, particularly given the prohibition on the firm contacting council members directly. Without additional contract elements to protect against this risk, firms may need to consider the individual character of the city manager they enter into business with as a factor before they commit non-transferrable assets to a city contract.

Agent of Last Resort

The scale of outsourcing in a contract city means that the principal relies heavily on the agent for the provision of additional services that arise through unforeseen circumstances. The contract documents contained multiple elements that all for the City Manager to request "additional services as may from time to time be needed at the discretion of the City."[13] By its very nature, this meets the definition of a "complex product". In the event of any unforeseen circumstance that requires services that go beyond normal operations, there is an explicit assumption written into the contract that the agent will be asked to provide these functions.

The contract contains rules and procedures for managing these requests, whether they are for one time assistance or for ongoing services that will be permanently added to the agreement. These structures provide the city with the ability to respond to variable circumstances. They also protect the agent from uncertain costs. By

designing procedures for handling these uncertain costs, the contract allows both parties to manage the complexity associated with the outsourced services.

Contract Termination

Given the scale of outsourcing in a contract city, termination of the service agreement has the potential to cause great disruption in the provision of public services. Several contract elements that dealt with contract termination procedures showed a code co-occurrence between the Tier 1 code for public service effectiveness. These contract elements describe strategies for reducing the disruption that would occur should the agreement end. One contract element provides the city "the absolute right to offer employment to any of the Corporation Employees" in the event that the contract is fully or even only partially terminated.[14] This effectively allows the city to internalize services with a trained and experienced workforce. The city would not have to start the time intensive bidding process to find a new agent. Strategies such as this would be less important in a market where there are multiple firms providing similar services, or in cities with sufficient internal production capacity to handle the new functions.

One of the objectives of this textual analysis is to identify how contract structures can mitigate the risks associated with outsourcing multiple functions in a single contract. Allowing the transfer of human and capital resources from the agent to the firm in the event of contract termination is one of the key approaches to accomplish this.

CONCLUSION

The goal of this analysis was to identify how multiple outsourced services become more complex when they are combined into a single agreement. The theoretical framework identified several risks associated with bundled agreements that reduce the certainty regarding the nature and the cost of externally produced services. The textual analysis then identified specific features of the contract documents that illustrate how these risks materialize. The analysis also highlighted several contract structures that help to mitigate these risks and show awareness on the part of both principal and agent of the unique challenges associated with a comprehensive service agreement.

This study contributes to the literature on complex products by showing how the arrangement of the contract agreement and the distribution of functions across contracting partners matters in determining how difficult it will be to monitor and administer an outsourcing agreement. Individual service functions may be simple when they are outsourced in isolation to a single private partner, but then become complex when combined with certain other functions.

For practitioners interested in contract management, this study calls for increased attention to contractor performance when there is potential for moral hazard, particularly when information production functions are paired with administrative functions. Audits of contractor performance should include external validation of forecasts, budget proposals and economic assessments. Financial services combined with "matchmaking" services in which the agent helps the city find an underwriter for its debt should also be scrutinized in order to determine whether all parties are fully compliant and registered, if necessary, with the appropriate regulatory commissions.

These findings and conclusions come with some caveats. First, we wish to reiterate that this paper is confined to the incentives and the potential behaviors that may be spurred on by them, but in no way does it reveal any actual behavior on the part of CH2M Hill in conflict of its interest to provide services to the City of Sandy Springs. The findings and conclusions drawn from this research should be a guide to both public and private partners on how to design appropriate contract structures so as to protect both participants in contract agreements. Second, this study examined the initial contracts signed at the time of municipal incorporation before any services had been delivered and before the City of Sandy Springs had gained any direct experience with the contract city model of governance. Future research that examines a greater number of contract agreements, or looks at cities that have gained greater experience in negotiating this type of principal-agent relationship will certainly add to our understanding of bundled service agreements.

ACKNOWLEDGEMENTS

The authors would like to gratefully acknowledge the helpful comments and recommendations given by Professors W. Bart Hildreth and David L. Sjoquist at Georgia State University. We also

would like to thank three anonymous referees for their constructive feedback which led to great improvements in this work.

NOTES

1. These functions were obtained by contract from neighboring local governments.
2. Privatized tax collection can be desirable, however, if it allows the government to shift some of the risk of volatile revenue collections to the private agents. Multiple different contractual arrangements for privatized tax collection existed in France up until the late 18th century with varying degrees of success (White, 2004).
3. See "Agreement 1" (City of Sandy Springs, Georgia [2005], p. 1).
4. See "Scope of Services 1" (City of Sandy Springs, Georgia [2005], Paragraph 1.2.3).
5. See "Scope of Services 1" (City of Sandy Springs, Georgia [2005], Paragraph 1.2.2).
6. See "Agreement 1" (City of Sandy Springs, Georgia [2005], Section 17).
7. See "Agreement 1" (City of Sandy Springs, Georgia [2005], Paragraph 3.3).
8. See "Agreement 2" (City of Sandy Springs, Georgia [2005], Paragraph 2.3).
9. See "Agreement 2" (City of Sandy Springs, Georgia [2005], Paragraph 2.6).
10. See "Agreement 1" (City of Sandy Springs, Georgia [2005], Paragraph 1.2.11.2)
11. See "Agreement 2" (City of Sandy Springs, Georgia [2005], Paragraph 5.6).
12. See "Agreement 2" (City of Sandy Springs, Georgia [2005], Paragraph 2.8).
13. See "Agreement 2" (City of Sandy Springs, Georgia [2005], Paragraph 3.1).

14. See "Agreement 1" (City of Sandy Springs, Georgia [2005], Paragraph 14.2).

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