

Understanding Contracting Performance

An Empirical Analysis

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This study explores the outcomes of contractual relationships between American local governments and private service providers. Researchers have approached the issue of contract administration and performance from a variety of theoretical perspectives, each providing its own insight into how to manage contractual relationships effectively. The analysis, which is based on a unique data set of more than 400 contractual relationships, focuses on the effects of contract monitoring, competition, and trust on contracting performance. The results of the analysis indicate that trust has an independent positive effect on overall contracting performance, as well as on eight specific dimensions of performance. In most of the models tested, monitoring and competition were not related to contracting performance. The relationship between monitoring and contracting performance appears to be more complex than previously thought, involving interactions with moderating variables.

Keywords: *contracting; privatization; performance; trust*

Privatization refers not to a single idea or innovation but rather to a broad set of alternative service delivery arrangements (Hodge, 2000; International City/County Management Association [ICMA], 1989; Lavery, 1999; Savas, 1987, 2000; Sclar, 2000; Seidenstat, 1999). In the United States, the most pervasive form of privatization has been contracting for services (Martin, 1999; Miranda & Andersen, 1994), with hundreds of billions of dollars contracted out to for-profit and nonprofit providers every year (Kelman, 2002; Savas, 2000). Contracting for services continues to spread in the United States and has gained a significant degree of legitimacy in the American system of governance (Brudney, Fernandez, Ryu, & Wright, 2005; Donahue, 2002; Kelman, 2002; Kettl, 2000; Martin, 1999; Miranda & Andersen, 1994). Interestingly, experts disagree about the extent to which contracting out improves efficiency and quality of service. Savas (2000) asserted that private contractors generally perform more efficiently

than public agencies, while performing work of equal quality. Hodge (2000) concluded that, overall, contracting out produces cost savings but that the savings concentrate in a few service areas and that there are no general differences between cost savings through contracting with private firms and contracting with other public organizations (see also Sclar, 2000). Kamerman and Kahn (1989), and others warned that cost reductions may come at the expense of lower quality of service. In short, improvements in performance through contracting appear to be contingent on how public managers manage contractual relationships with external providers and on certain characteristics of those relationships.

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Explaining Contracting Performance

Researchers have approached the issue of contract administration and performance from a variety of theoretical perspectives. Much of the privatization literature highlights the salutary effects of competition on contracting outcomes (e.g., Hodge, 2000; Savas, 2000). Other experts have approached the issue from a transaction cost or principal-agent perspective, emphasizing the need to reduce transaction or agency costs and reduce opportunistic behavior on the part of contractors (e.g., Breaux, Duncan, Keller, & Morris, 2002; Brown & Potoski, 2003a). Research on relational contracting has focused on the role of cooperation, trust, and mutual adjustment in contractual relationships (e.g., DeHoog, 1990; Sclar, 2000). Policy implementation experts have examined the effects of political support, resource munificence, program specificity, and leadership on contracting performance (O'Toole, 1989; Romzek & Johnstone, 2002). In short, there is no single theoretical approach that governs our understanding of how contractual relationships are managed effectively. Nevertheless, the literature does make frequent

mention of three factors accounting for contracting performance: monitoring, competition, and trust. These three factors have received considerable attention from economists and organization theorists as mechanisms for governing economic exchanges and interorganizational relationships (Bradach & Eccles, 1989) and have been the focus of extensive theoretical development and empirical analysis. A theoretical explanation of how these three factors influence contracting performance is offered below.

Monitoring

Most studies of contracting for services emphasize the importance of monitoring contractor behavior and performance (e.g., see Brown & Potoski, 2003a; Hefetz & Warner, 2004; ICMA, 1989, 1992; Lavery, 1999; Marlin, 1984; Prager, 1994; Rehfuess, 1989; Savas, 2000; Seidenstat, 1999; Wesemann, 1981). Principal-agent theory, dating back to Weber's analysis of bureaucracy (Kiser, 1999), offers a theoretical framework for understanding the impact of monitoring on contracting outcomes. Weber described many of the agency problems that arise in the relationship between political principals and their bureaucratic agents, including divergent interests, information asymmetry favoring the agents, and the need to monitor agent behavior (Weber, 1968). Economists also have written extensively about agency relationships (Fama & Jensen, 1983; Jensen & Meckling, 1976; Moe, 1984; Pratt & Zeckhauser, 1985). Principal-agent theory in economics rests on several key assumptions about human and organizational behavior. Individuals and organizations are assumed to rationally pursue their self-interest, resulting in divergence of interests between the principal (owner) and agent (producer). The separation of ownership from production increases the cost and difficulty involved in monitoring the agent's behavior. This creates information asymmetry that benefits the agent as he goes about performing a task on behalf of the principal.

Under these conditions, two agency problems arise: moral hazard and adverse selection. Moral hazard refers to instances of opportunistic behavior by the agent. Divergent interests and information asymmetry favoring the agent create opportunities for the agent to engage in behavior that maximizes his utility but that conflicts with the goals of the principal. Monitoring allows the principal to detect opportunistic behavior and align the agent's behavior with his own goals, thus helping to improve the outcomes of contractual relationships. Adverse selection describes a situation in which the principal decides to enter into a contractual relationship with an agent without knowing the true extent of risk or costs involved. This

situation also is a product of asymmetry of information, which allows the agent to withhold or misrepresent information about his experience, expertise, and/or capabilities to win the contract. The principal can lessen the effects of adverse selection by conducting a thorough *ex ante* evaluation that requires potential agents to reveal more information about their performance capabilities and history.

The discussion above indicates that monitoring, by aligning the agent's behavior with the interests of the principal, should have a positive independent effect on contracting outcomes, including cost, quality of service, and responsiveness to the principal's interests. In addition, monitoring may interact with other factors to influence the outcomes of a contractual relationship. For instance, monitoring may interact with whether the agent is a private for-profit entity. Nonprofit organizations and public agencies are perceived to pursue similar goals (Bryce, 2005; Cooper, 2003). Goal alignment between principals and agents should reduce opportunistic behavior, causing monitoring of nonprofits to have little if any effect on performance and imposing unnecessary costs on public organizations. Conversely, when goals diverge, as is more likely to occur when public organizations contract with for-profit firms, the effect of monitoring should be positive.

Contract monitoring may interact with the amount of communication between principals and agents. Frequent communication between the parties can reduce information asymmetry and lessen the impact of monitoring by serving as a substitute for it (Weber, 1968). Task uncertainty and complexity also may moderate the effects of monitoring on performance. Contracting for services and functions that are more difficult to specify and measure can heighten the risk of opportunistic behavior by contractors, a risk that can be reduced by more frequent and effective monitoring (Brown, Potoski, & Van Slyke, 2006). The effects of monitoring on contract outcomes therefore may be greater at higher levels of task uncertainty and complexity than at lower levels. Finally, the duration of the contractual relationship may moderate the effects of monitoring. During the initial period of a contractual relationship, public managers may be more likely to view contractors as agents with divergent goals, prompting them to place greater emphasis on monitoring to curb opportunistic behavior (Van Slyke, 2006). Trust between public organizations and private contractors can develop over time, however, through repeated interaction and as the contractor demonstrates goodwill and its ability to perform. The benefits of contract monitoring, therefore, may diminish as the contractual relationship matures and becomes governed by mutual trust and shared norms.

Competition

Firms compete with each other for market share by allocating their resources in an efficient manner to maximize profit. According to one economist, the quantity of output of a good or service produced by a budget-maximizing public bureaucracy is “technically and allocatively inefficient” (Averch, 1990, p. 60). That is, the public bureau will produce a level of output greater than the socially efficient level and for a higher than minimal cost. Efficiency in the public sector can be improved by allowing profit-maximizing businesses to bid competitively for the production of public goods and services (Greene, 2002; Hodge, 2000; Pack, 1987; Savas, 2000).

Not all experts agree, however, that competition will necessarily improve contracting outcomes. Some have noted that fostering and managing a competitive process can increase transaction costs for a public organization (Donahue, 1989; Kettl, 1993; Sclar, 2000). In addition, competition can disrupt public service delivery through periodic changes in providers (Kettl, 1993; Provan & Milward, 1995; Smith, 1996; Smith & Lipsky, 1993; Smith & Smyth, 1996). Finally, public managers must guard against cost reductions that occur as a result of lower quality of service or creaming (Kamerman & Kahn, 1989). In short, the relationship between competition and contracting outcomes is complex and is likely to involve trade-offs between various dimensions of performance. Although competition should result in lower costs when contracting for services, it might also have negative effects on quality of service and service continuity.

Public managers rely on several forms of competition when contracting for services. Competitive bidding between external service providers should enhance efficiency by keeping bidders honest and compelling them to minimize their price. Another form of competition involves allowing public employees to bid on contracts. This alternative can stimulate competition and increase the likelihood of success in contracting by adding to the mix of bidders a qualified service provider, namely, the bureau with previous experience delivering the service. Local governments have adopted this form of public-private competition with some success (Greene, 2002). Finally, competition can entail awarding contracts to multiple providers who then compete with each other on an ongoing basis (Greene, 2002; Rehfuess, 1989).

Trust

A number of experts have commented on the benefits of interorganizational trust in contractual relationships and partnerships (Lawther, 2002;

Macneil, 1980; Sclar, 2000; Williamson, 1985; Zaheer & Venkatraman, 1995). Interorganizational trust is a construct involving the three components of dependability, predictability, and faith in a relationship between two or more parties (see Young-Ybarra & Wiersema, 1999; Zaheer, McEvily, & Perrone, 1998). As Young-Ybarra and Wiersema (1999) explained,

Dependability refers to expectations that the partner will act in the alliance's best interest, predictability refers to consistency of actions by the partner, while faith refers to the belief that the partner will not act opportunistically, even in unforeseen or novel situations. (p. 443)

Arrow (1974) noted, "Trust is an important lubricant of a social system. It is extremely efficient; it saves people a lot of trouble to have a fair degree of reliance on other people's words" (p. 23). Macneil (1980) argued that exchanges in the modern world "require solidarity, and hence a degree of trust, or faith in others, to work successfully" (p. 21). Moreover, Williamson (1985) observed that "things being equal, idiosyncratic exchange relations that feature personal trust will survive greater stress and will display greater flexibility" (pp. 62-63).

How does trust affect contracting performance? The literature suggests three causal paths. First, trust serves as a deterrent against opportunistic behavior. Trust between partnering organizations reduces each partner's motivation to behave opportunistically and increases the likelihood that they will forgo short-term advantages in favor of mutual long-term gains (Aulakh, Kotabe, & Sahay, 1996; Jeffries & Reed, 2000; Luhmann, 1979; Macaulay, 1963). Second, trust can be a cost-effective substitute for authority and control mechanisms (Arrow, 1974; Aulakh et al., 1996; Hill, 1990; Mayer, Davis, & Schoorman, 1995; Zaheer et al., 1998). If parties that trust each other are discouraged from behaving opportunistically and tend to behave in ways that conform to mutual expectations, their behavior becomes much more predictable. Predictable patterns of behavior in turn reduce agency and transaction costs in contractual relationships by diminishing the need for highly detailed contract requirements and rigorous contract monitoring. As Hill (1990) explained, opportunistic behavior, and all of the efforts that are taken to minimize it, makes for inefficient economic exchanges that are less likely to survive than other, more efficient, exchanges based on high levels of cooperation and trust. Finally, as Young-Ybarra and Wiersema (1999) explained,

In the literature on interorganizational relationships, there has been a somewhat consistent argument that the existence of relationships based on trust

between partners has a positive impact on the ability of the partners to adjust to changing environmental demands or unintended problems that may arise. (p. 443; see also Williamson, 1985)

Interorganizational trust should have independent positive effects on contracting outcomes, including greater efficiency, higher quality of service, and more resilient contractual relationships with fewer disruptions. Trust also may interact with other variables to influence contracting outcomes. As alluded to by Williamson (1985), trust may interact with asset specificity or the extent to which either or both parties makes large specialized investments as part of a contractual relationship. These types of investments place a premium on ways to overcome disturbances in the relationship and preserve it. Trust appears to fulfill this need. As the literature suggests, trust serves as a deterrent against the kind of opportunistic behavior that puts at risk mutual long-term gains, and trust facilitates mutual adjustment between the parties, making the relationship more resilient to disturbances. These benefits associated with trust become less significant for the success of a contractual relationship when the relationship itself is of less value to the parties because the parties can efficiently redeploy their assets to other transactions. It also should be noted that asset specificity can increase costs. The lock-in effects of asset specificity commit the parties to sustaining the contractual relationship (Williamson, 1985). This imperative can increase transaction costs associated with resolving conflicts between the parties and achieving mutual adjustment.

Interorganizational trust may interact with monitoring to affect contracting outcomes. Insofar as trust and monitoring are substitutes for regulating interorganizational relationships (Bradach & Eccles, 1989), higher levels of trust between contracting parties can make monitoring efforts redundant, thereby diminishing their effects and imposing unnecessary transaction costs on a public agency.

The duration of the contractual relationship also may moderate the effects of trust on contracting performance. From a principal-agent perspective, we would expect public organizations to trust nonprofit organizations more than for-profit firms, even before they enter into contractual agreements, because of the convergence of goals and interests between these two types of organizations (Bryce, 2005). However, trust between public organizations and private contractors also develops over time through repeated interaction and demonstrations of goodwill and performance (Bloomfield, 2006; Van Slyke, 2006). If this indeed is the case, the influence of trust on performance would be greater in mature contractual

relationships, where the agent has had sufficient time to gain the principal's confidence, than in nascent ones.

The important role of trust in many contractual relationships requires an understanding of how trust emerges and evolves. The rich and voluminous literature on trust points to a variety of factors that explain the level of trust in contractual relationships. These factors can be grouped into four categories: characteristics of the trustor; characteristics of the trustee, as perceived by the trustor; behavior of the trustor and trustee and the nature of their interactions; and institutional and contextual factors influencing the relationship. Psychologists and other scholars interested in personality have pointed to the trustor's general willingness or disposition to trust others as a key predictor of the level of trust in a relationship (Rotter, 1967). This general willingness or disposition is akin to a personality trait thought to be highly stable over time. A variety of characteristics and traits of the trustee also have been linked to higher levels of trust. As Mayer et al. (1995) explained, "even though a number of factors have been proposed, three characteristics of the trustee appear often in the literature: ability, benevolence, and integrity. As a set, these three appear to explain a major portion of trustworthiness" (p. 717). Ability refers to the skills and expertise that allow the trustee to perform in a particular technical area or situation; it also has been described as competence or perceived expertise. Benevolence is the degree to which the trustee can be expected to act in the best interests of the trustor, and it can be judged in terms of the intentions and motives of the trustee. Integrity involves the extent to which the trustee is perceived by the trustor to comply with principles acceptable to the latter. A trustor who perceives consistent behavior on the part of the trustee, who perceives that the trustee has a strong sense of justice, and who receives positive feedback about the trustee from third parties is likely to have higher levels of trust in the trustee.

Unlike the stable characteristics of the trustor, the trustor's perceptions of these characteristics of the trustee can change as the relationship unfolds (Bhattacharya, Devinney, & Pillutla, 1998; Bloomfield, 2006; Jones & George, 1998; Mayer et al., 1995; Van Slyke, 2006). As alluded to in the previous discussion, trust evolves in part through repeated interactions between the trustor and trustee, with the level of trust influenced by the type of behavior the parties engage in during their relationship. Among the types of behavior that engender trust between parties are as follows: risk taking behavior, particularly the taking of gradual and reciprocal steps to expose oneself to risk early on in a relationship when trust is lacking (Cook et al., 2005); behavior that promotes equity in process and distribution of resources between the parties (Das & Teng, 1998; Lindsfold, 1978); actions that demonstrate a party's willingness to adjust to the needs of the other party

(Macneil, 1980); frequent and open communication and sharing of information that allows the parties to familiarize themselves with and predict each others' behavior (Doney & Cannon, 1997; Macneil, 1980); efforts by the parties to court or get to know each other better on a personal level and share experiences (Lewicki & Bunker, 1995); and altruistic behavior that exhibits care and concern for the other party's interests and that causes positive attributions of the trustee's motives (McAllister, 1995).

Contextual factors and institutional arrangements in the relationship also have a bearing on the level of trust between parties. The past performance of the trustee, either in relationships with the trustor or with third parties, is an antecedent of trust (Lindskold, 1978; McAllister, 1995; Zucker, 1986). A proven track record contributes to trust and increases the likelihood that the trustor will select the trustee as a partner. The length of the relationship also helps to account for the level of trust. Experience allows the trustor the opportunity to become more familiar with the trustee's behavior and to predict it in the future (Williamson, 1985). Long-term relationships also come to be viewed by the parties as an investment valued by them (Doney & Cannon, 1997). In addition, the social-embeddedness perspective indicates that trust is influenced by the duration and intensity of social interactions between individuals (Granovetter, 1985). Trust emerges from the bonds of attraction that develop through repeated interaction; moreover, the threat of social sanctions, such as loss of affection or respect, discourages cheating (Dyer & Chu, 2000; Macaulay, 1963). Finally, economists have treated the decision whether to trust or cheat as a calculative process (Lindskold, 1978; Williamson, 1985, 1993). From this perspective, trustworthy behavior can be encouraged by creating conditions that make it in the parties' economic self-interest not to cheat, such as by offering rewards that exceed the benefits of cheating and imposing sanctions that discourage cheating because of the net costs that would be incurred. Increasing the exit costs of the parties to a contract through the exchange of credible commitments also promotes trustworthy behavior. Asset-specific investments, in particular, have been argued to be effective hostages that discourage opportunistic behavior because of the substantial loss in value of these investments that occurs if the relationship ends. Cooperative reward structures that reward the parties for their joint performance also have been found to contribute to trust (Ferrin & Dirks, 2003).

Method and Data

This section discusses the measures, data, and methodology used to estimate the independent and interactive effects of monitoring, competition,

and trust on various measures of contracting performance. Most of the factors hypothesized to influence the outcomes of contractual relationships are at the contract level of analysis. The unit of analysis in this study, therefore, is the individual contractual relationship between a local government and a private contractor (for-profit or nonprofit); adopting a higher level of analysis (e.g., the local government) would be akin to committing the ecological fallacy.

Data and Statistical Modeling

The data for this study were gathered from a survey of American local governments conducted in 2003-2004. A stratified random sample of 982 local government contracts was drawn from among the many local government contracts reported in the 2002-2003 International City/County Management Association (ICMA) alternative service delivery data set.¹ The sample includes contracts for 67 different public services and functions. The surveys were mailed to the chief administrative officers of the local governments, asking them to answer a series of questions about a specific contract with a private for-profit or nonprofit provider. Respondents completed and returned 438 surveys, representing a response rate of 48%.

A comparison of survey respondents and nonrespondents shows that the two groups are remarkably similar in terms of type of local government, type of jurisdiction, population size, geographic region, metropolitan status, and form of government,² thus offering no indication of nonresponse error (Groves, 1989). In addition, the types of service contracts reported in the survey are quite comparable to the contracts in the sampling frame, a finding that bodes well for the external validity of the findings.³

The data are analyzed using ordinary least squares (OLS) and ordered probit regression, as well as two-stage least squares (2SLS) regression. Moderated multiple regression with multiplicative terms is used to test for interactive effects between the primary independent variables and the moderating variables discussed above.

Dependent Variables

Contracting performance is a multidimensional concept that captures important aspects of a service provider's performance on a contract. The main dependent variable in this study, overall contracting performance, is measured using a factor score created from ordinal indicators of eight dimensions of contractor performance:⁴ 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. These ordinal indicators are coded 4 = *excellent*, 3 = *very good*, 2 = *fair*, and 1 = *poor*. The factor analysis of the eight indicators of contracting performance yields a one-factor solution (eigenvalue of 4.81, 60.1% of the variance explained).⁵ Six of the eight indicators have factor loadings of 0.77 or higher on this component; the first two indicators measuring cost have loadings of 0.60 and 0.60, respectively. These results indicate that this is a good measure of overall contracting performance.

The privatization literature suggests the possibility of trade-offs between different dimensions of contracting performance. For example, to maximize efficiency, contractors may cream cases or reduce service levels. Similarly, efforts to streamline service delivery to improve timeliness could negatively impact service quality. To explore these possible trade-offs, the analysis also includes tests for the effects of monitoring, competition, and trust on each of the eight ordinal indicators of contracting performance identified above.

Independent Variables

The literature indicates that monitoring, competition, and trust have positive independent effects on contracting performance; monitoring and trust also could interact with other variables to influence contracting performance. Monitoring should reduce the risks posed by moral hazard and opportunistic behavior by the contractor. A variety of measures of monitoring are used in this analysis. The first is a measure of the scope of monitoring, which captures all of the aspects of performance that are monitored simultaneously by public managers. Monitoring scope is operationalized as the count of eight types of performance data collected by the local government to monitor the contractor's performance. The definitions of all of the variables used in the analysis are shown in Table 1. The second measure of monitoring, representing monitoring intensity, is developed by factor analyzing six ordinal indicators of how frequently the local government used the following six monitoring tools and procedures to assess the contractor's performance: inspections of work in progress, inspections of work completed, complaints monitoring, examining contractor reports, performance measurement systems, and citizen surveys. Information regarding the factor analyses used to measure independent and control variables is reported in Table 1. Some of the models that were tested include these six ordinal indicators of monitoring tools and procedures as separate measures of monitoring.

Table 1
Variables and Measures

Variable	Measure(s)
Monitoring scope	The total number of the following eight types of contractor performance data collected by the local government: work inputs, work processes, work outputs, timeliness, cost, accuracy of invoicing, legal compliance, and complaints.
Monitoring intensity	Factor score created from responses to how frequently the local government used each of the following six monitoring tools or procedures to assess the contractor's performance: inspections of work in progress, inspections of work completed, complaints monitoring, examining contractor reports, performance measurement systems, and citizen surveys (6-point ordinal scale). One-factor solution, eigenvalue of 2.73, 45.5% of the variance explained.
Ex ante evaluation	The total number of the following seven factors that were taken into consideration when evaluating the bidders' capacity to perform the work prior to awarding the contract: the provider's financial capacity or financial health, technical capacity, staffing capacity, cost for service delivery, reputation, total previous experience performing the work, and previous performance on other contracts with city/county.
Number of bidders	A 5-point ordinal indicator for the approximate number of providers who submitted bids or proposals for the contract.
Public-private competition	Response to the question, "Were public employees allowed to bid on the contract?"
Number of contracts awarded	Response to the question, "How many contracts were awarded for this service?"
Trust	Factor score created from responses to the following four Likert-type questions: "When we encounter difficult and new circumstances, we do not feel worried or threatened by letting the contractor do what it wants," "We are familiar with the patterns of behavior the contractor has established, and we can rely on the contractor to behave in certain ways," "We have found that the contractor is always dependable," and "The contractor can never be trusted to act properly" (5-point ordinal scale). One factor solution, eigenvalue of 1.95, 48.8% of the variance explained.
Frequency of communication	Factor score created from responses to how frequently the local government used each of the following four channels of communication to share information with the contractor's staff: scheduled face-to-face meetings, informal face-to-face conversations, telephone conversations, and written

(continued)

Table 1 (continued)

Variable	Measure(s)
Task uncertainty	<p>communications (6-point ordinal scale). One factor solution, eigenvalue of 2.48, 61.8% of the variance explained.</p> <p>Factor score created from responses to the following five Likert-type questions: "The contract has numerous desired outcomes," "When the contractor achieves one desired outcome, it conflicts with other desired outcomes," "There is more than one method for achieving each desired outcome," "It is difficult to measure or evaluate the quality of the work performed by the contractor," and "The work performed by the contractor is always affected by unforeseen technical changes or developments" (5-point ordinal scale). Two-factor solution, with the first factor having an eigenvalue of 1.68 (33.5% of the variance explained), and the second factor having an eigenvalue of 1.11 (22.4% of the variance explained). The first factor is used as the measure of task uncertainty.</p>
Asset specificity	<p>Factor score created from responses to the following four Likert-type questions: "The service provided by the contractor is highly customized to satisfy our unique requirements," "The technical skills and knowledge of this contractor are unique," "The agreement requires the contractor to make large specialized investments to perform the work," and "The contractor can easily transfer only a small portion of the investments to another job" (5-point ordinal scale). Two-factor solution, with the first factor having an eigenvalue of 1.72 (43.0% of the variance explained) and a second factor with an eigenvalue of 1.01 (25.1% of the variance explained). The first factor is used as the measure of asset specificity.</p>
Contract specificity	<p>Response to the question, "On a scale from 1 to 10, with 1 being <i>vague</i> and 10 being <i>very specific</i>, how specific was the language used to write the contract's scope of work (or technical specifications)?"</p>
Reliance on legal means for resolving disputes	<p>Factor score created from responses to how frequently the local government relied on the following three means for resolving contract disputes: financial penalties, threat of contract termination, and litigation to resolve disputes (4-point ordinal scale). One-factor solution, eigenvalue of 1.72, 56.7% of the variance explained.</p>
Expertise in contract administration	<p>Response to the question, "How would you rate the level of expertise in contract administration among local government employees managing the contract?" (5-point ordinal scale).</p>

(continued)

Table 1 (continued)

Variable	Measure(s)
Technical knowledge of the service	Response to the question, "How much technical knowledge about the service do local government employees have?" (4-point ordinal scale).
Reliance on alternative means for resolving disputes	Factor score created from responses to how frequently the local government relied on the following three means for resolving contract disputes: negotiations, arbitration, mediation (4-point ordinal scale). One-factor solution, eigenvalue of 1.80, 60.07% of the variance explained.
Financial incentives	The total number of the following three types of financial incentives that were included in the contractual agreement: gain sharing, contract renewal based on good performance; and bonus for reaching certain goals.
Joint problem solving	Factor score created from responses to the following two Likert-type questions: "We always work together with the contractor to identify problems" and "We always work together with the contractor to solve problems" (5-point ordinal scale). One-factor solution, eigenvalue of 1.81, 90.3% of the variance explained.
Contract duration	The number of months that the contract has been in operation.
Political support for contracting out	Factor score created from responses to how supportive top management, lower-level management, and frontline (street-level workers) are of the contracting initiative (4-point ordinal scale). One-factor solution, eigenvalue of 2.08, 69.5% of the variance explained.
Financial resources	Factor score created from responses to how adequate is the amount of funding your local government has allocated for administering the contracting process, monitoring the contract, and paying or reimbursing the contractor (4-point ordinal scale). One-factor solution, eigenvalue of 2.10, 70.0% of the variance explained.
Subcontractors	Response to the question, "Approximately how many subcontractors does the contractor use to deliver the service?" (5-point ordinal scale).

Related to monitoring, public managers should be able to diminish the risks posed by adverse selection by conducting a comprehensive ex ante evaluation of bidders' performance capacity prior to awarding the contract (ICMA, 1992; Marlin, 1984; Rehfuss, 1989; Romzek & Johnston, 2002). This evaluation should be based on a variety of criteria that capture a service provider's potential for meeting the requirements of the contract. The models include a measure of ex ante evaluation, operationalized as a count

of seven evaluation criteria considered by the local government when evaluating bidders.

Three measures of competition are used in the analysis. The first measure is an ordinal indicator of the approximate number of providers who submitted bids or proposals for the contract. The second measure of competition represents public-private or managed competition and is operationalized as a dichotomous indicator of whether public employees were allowed to bid on the contract. The third measure of competition, one of ongoing competition among contractors, is an indicator of the number of providers awarded contracts for the same service.

Trust is measured as a factor score created from four Likert-type survey indicators. This measure of interorganizational trust was developed by Young-Ybarra and Wiersema (1999).

Task uncertainty, the extent of communication between the parties, the degree of asset specificity associated with the contracted service, and contract duration are hypothesized to interact with either monitoring or trust. The first three variables are measured by factor analyzing multiple ordinal indicators shown in Table 1. Contract duration is measured as the number of months the contract was in operation. These measures are also included in the models as separate control variables. Finally, monitoring intensity will be interacted with a dummy variable for whether the contractor is a private for-profit firm.

Control Variables

The models include additional controls for other variables that have been hypothesized to influence contracting performance. Until recently, most of the literature on contracting for services emphasized contract specificity (ICMA, 1992; Marlin, 1984; Rehfuss, 1989; Romzek & Johnstone, 2005; Savas, 2000). A high level of specificity should serve to make the government's expectations clear to the contractor and to help public officials hold the contractor accountable for performance. A measure of contract specificity is therefore included in the models.

The literature on contracting for services discusses competing approaches to resolving contract disputes and enforcing contractual agreements. Some experts have pointed to the need to rely on legal means for resolving disputes, particularly sanctions to rein in an unresponsive contractor found to be in violation of the agreement (see DeHoog, 1990; ICMA, 1992; Macneil, 1974, 1978). Conversely, the relational contracting literature calls for an approach to contract management that eschews confrontation and

emphasizes flexibility and the use of alternative means for resolving disputes, such as negotiation, arbitration, and mediation (DeHoog, 1990; Lawther, 2002; Sclar, 2000; Smith, 1996; Williamson, 1985). Relying on legal means for resolving disputes can be expensive, as litigation imposes substantial costs in terms of money and time on both parties; a negotiated settlement often presents an efficient alternative to confrontation. Moreover, the threat or use of legal sanctions to enforce a breach of contract can heighten conflict and cause serious damage to an effective working relationship. Controls for these two approaches to resolving contract disputes are included in the models. The models also include a variable for the inclusion of financial incentives in a contract to encourage good performance by contractors and to prevent conflicts from arising (Behn & Kant, 1999; Cooper, 2003).

Contracting 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 (DeHoog, 1990; ICMA, 1992; Rehfuess, 1989; Romzek & Johnston, 2002). In addition, in-house technical knowledge of a service or function allows the agency to set its own goals (i.e., knowing what to buy), thereby preventing the erosion of accountability and the emergence of conflicts of interest that can result when private contractors are permitted to set goals (Kettl, 1993). The models include control variables for public managers' levels of expertise in contract administration and for their technical knowledge of the service.

The models also include controls for three variables mentioned in the policy implementation literature as potential determinants of contracting performance: political support for contracting among public employees and managers, resource munificence, and the complexity of interactions between contractors and subcontractors. In contracting, adequate financial resources can help to enhance performance by enabling the agency to effectively administer the solicitation process, monitor performance, and manage the ongoing relationship; adequate funding of the contracting initiative also is needed to protect the provider from financial stress (Romzek & Johnston, 2002). Political support for the contracting initiative can facilitate cooperation and make for a good working relationship between public employees and the contractor's staff (Fernandez & Smith, 2006). Complex service delivery arrangements involving multiple subcontractors impose additional burdens on the prime contractor, including higher coordination costs, the likelihood of delays, and even conflict over the choice of goals and means, all of which can ultimately weaken performance.

Table 2
Descriptive Statistics

	Min.	Max.	<i>M</i>	<i>SD</i>
Monitoring scope	0.00	8.00	5.45	2.05
Monitoring intensity	-3.57	1.77	0.00	1.00
Ex ante evaluation	0.00	7.00	5.01	1.74
Number of bidders	1.00	5.00	2.15	0.96
Public-private competition	0.00	1.00	0.16	0.37
Number of contracts awarded	1.00	25.00	1.47	1.85
Trust	-4.09	1.69	0.00	1.00
Communication	-2.22	2.14	0.00	1.00
Task uncertainty	-2.68	3.26	0.00	1.00
Asset specificity	-2.29	2.18	0.00	1.00
Contract specificity	0.00	10.00	7.12	2.26
Legal means for resolving disputes	-1.53	3.17	0.00	1.00
Expertise in contract administration	1.00	5.00	3.82	0.89
Technical knowledge of service	1.00	4.00	3.37	0.66
Alternative means for resolving disputes	-1.18	3.96	0.00	1.00
Financial incentives in contract	0.00	3.00	0.62	0.57
Joint problem solving	-0.87	5.57	0.00	1.00
Contract duration	1.00	600.00	49.29	73.38
Political support for contracting	-0.83	5.59	0.00	1.00
Financial resources for contracting	-1.89	3.92	0.00	1.00
Subcontractors	0.00	5.00	1.40	0.82

Finally, as the data used in this study are in part attitudinal, all of the models include control variables for four respondent characteristics: years in government, political ideology, level of education, and overall opinion about privatization. These respondent characteristics could bias the responses and allow for spurious relationships if not controlled for in the analysis.

Results

The descriptive statistics for the variables in the models are shown in Table 2. Many of the independent and control variables are factors scores that are standardized with a mean of 0 and a standard deviation of 1. The descriptive statistics for the three competition variables suggest relatively low levels of competition at the local level. The median response on the number of bidders on a contract was two to three bidders, while only 16% of respondents indicated that public employees were allowed to bid on the contract. Based on the mean scores, respondents indicated collecting a wide range of

different types of data to monitor contractor performance (monitoring scope), considering a large number of criteria in assessing a provider's capacity to perform (ex ante evaluation), and relying on high levels of specificity in their contractual agreements (contract specificity). Finally, the mean for contract duration in months (contract duration) indicates that the average contract was in operation for approximately 4 years, a finding that is suggestive of longer-term contract awards and frequent contract renewals.

The discussion now turns to the effects of monitoring, competition, and trust on overall contracting performance. The results of the OLS regression models are shown in Table 3. Two diagnostic tests failed to reveal a high level of multicollinearity in the OLS models.⁶ To examine the OLS regression errors, the models' standardized residuals were plotted against the predicted values. The plot revealed no extreme outliers, as all of the standardized residuals were within three standard deviations of zero. The OLS models were not sensitive to leverage points.⁷

None of the four control variables for respondent characteristics achieve statistical significance at the $p < .10$ level in any of the models. This finding is encouraging and should help to allay fears about biased responses and spurious relationships influencing the regression results.

The three measures of competition were hypothesized to be positively correlated with overall contracting performance. The results show, however, that none of the three competition variables—number of bidders on the contract, allowing public employees to bid on the contract, and the number of contracts awarded for the service—achieve statistical significance at the $p < .05$ level in the first OLS model.

The first OLS model includes two measures of monitoring, monitoring scope and monitoring intensity. The coefficient for monitoring scope fails to achieve statistical significance at the $p < .05$ level. Collecting a wide range of performance data has no independent effect on overall contracting performance. The coefficient for monitoring intensity also fails to achieve statistical significance at the $p < .05$ level. Monitoring the contract using a variety of monitoring tools and procedures at frequent intervals by itself has no influence on overall contracting performance. To determine if any of the individual monitoring tools and approaches is correlated with overall contracting performance, OLS regression is run again with the monitoring intensity variable disaggregated into the six original ordinal indicators. These results are shown in the second column in Table 3. None of the six coefficients are statistically significant at even the $p < .10$ level. In short, the results of these two OLS models suggest that the discovery of performance problems through monitoring by itself does little to improve overall

Table 3
Ordinary Least Squares (OLS) and Two-Stage Least
Squares (2SLS) Regression Results

	OLS	OLS	2SLS
Monitoring scope	-0.00	-0.00	0.00
Monitoring intensity	0.02		0.04
Inspections of work in progress		0.04	
Inspections of work completed		-0.02	
Complaints monitoring		-0.03	
Examining contractor reports		0.01	
Performance measurement systems		0.01	
Citizen surveys		-0.06	
Ex ante evaluation	0.03	0.04	0.04
Number of bidders	-0.06	-0.06	-0.07
Public-private competition	-0.06	-0.06	-0.05
Number of contracts awarded	0.03	0.03	0.03*
Trust	0.45***	0.45***	0.43***
Communication	-0.06	-0.04	-0.06
Task uncertainty	-0.11**	-0.10**	-0.09*
Asset specificity	-0.01	-0.01	0.02
Contract specificity	0.03	0.03	0.02
Legal means for resolving disputes	0.01	-0.00	0.01
Expertise in contract administration	0.07	0.08	0.07
Technical knowledge of service	0.12*	0.14*	0.11
Alternative means for resolving disputes	0.08*	0.08*	0.09*
Financial incentives in contract	-0.07	-0.06	-0.11
Joint problem solving	0.11**	0.11**	0.12**
Contract duration	0.00	0.00	0.00
Political support for contracting	0.14***	0.14***	0.15***
Financial resources for contracting	0.09***	0.09***	0.11***
Subcontractors	-0.09*	-0.09*	-0.09
R-square	0.51	0.51	0.51
F statistic	17.00	14.29	15.10
Observations	438	438	392

Note: Dependent variable = overall contracting performance.

* $p < .05$. ** $p < .01$. *** $p < .001$.

contracting performance. It is possible that overall contracting performance is improved when the parties act on such information, by working together to find a solution to a performance problem and to implement it. As discussed below, other findings lend support to this proposition. Another explanation for this finding is that public managers who monitor contracts must incur the agency or transaction costs associated with setting up monitoring systems

and hiring employees to collect and assess performance data, and that these costs might offset any gains in overall performance that are realized through monitoring.

Conducting a thorough *ex ante* evaluation of bidders before awarding a contract seems to have no effect on overall contracting performance, as the coefficient for this variable fails to achieve statistical significance in the OLS regressions. This contracting practice does not appear to reduce the adverse-selection problems discussed in the principal-agent literature.

Trust has a positive independent effect on overall contracting performance. The coefficient for trust is positive and statistically significant at the $p < .001$ level.⁸ Trust also has the highest standardized coefficient in the OLS models. As previous research has indicated, the presence of trust seems to reduce the incidence of shirking and other forms of opportunistic behavior that can weaken performance. Trust also may be contributing to contracting performance by facilitating the parties' efforts to respond in a flexible manner to unforeseen contingencies and other disturbances in the relationship.⁹

Some of the literature on trust suggests the possibility of an endogenous or simultaneous relationship between trust and performance (Bigley & Pearce, 1998; Mayer et al., 1995). Endogeneity causes OLS regression coefficients to become inconsistent, making it difficult to estimate causal effect. In this analysis, the concern is that endogeneity could bias the coefficients and levels of statistical significance for the monitoring and competition variables. To address this concern, 2SLS regression is used to develop an instrument for trust.¹⁰ The results of the 2SLS regression are shown in the third column in Table 2. As in the OLS regression models, the monitoring scope and intensity variables fail to achieve statistical significance at even the $p < .10$ level. An *ex ante* evaluation of bidders during the selection phase of the contract also fails to achieve statistical significance. Conversely, trust continues to have a positive and statistically significant effect on overall contracting performance. Two of the competition variables—the number of bidders on a contract and allowing public employees to bid on the contract—remain statistically insignificant in the 2SLS regression. Interestingly, however, the number of contracts awarded for the same service has a positive coefficient that achieves statistical significance at the $p < .04$ level. Ongoing competition between contractors during the implementation phase, rather than *ex ante* competition during the bidding phase, appears to be the form of competition that improves overall contracting performance.

Several interactions involving the variables monitoring intensity and trust were proposed. The results of the tests for interactions, shown in Table 4, indicate that monitoring intensity does not interact with either task uncertainty

Table 4
Ordinary Least Squares Regression Results for Interactive Terms

Interaction	Coefficient	Significance	R-square for Equation With Interactive Term
Monitoring intensity and communication	-.00	.94	.51
Monitoring intensity and task uncertainty	-.02	.56	.51
Monitoring intensity and private for-profit contractor	-.28	.02	.52
Monitoring intensity and contract duration	-.00	.12	.51
Trust and monitoring	-.02	.52	.51
Trust and asset specificity	.09	.01	.51
Trust and contract duration	.00	.19	.51

Note: Dependent variable = overall contracting performance.

or the amount of communication between the parties; these two interactive terms fail to achieve statistical significance at even the $p < .10$ level. Communication does not appear to act as a substitute for monitoring that lessens its effect on overall contracting performance. In addition, there is no evidence that the effects of monitoring on overall contracting performance increase as task uncertainty increases. It also was hypothesized that monitoring and trust would serve as substitutes, so that as the level of one increases, the impact of the other would decline. The results fail to offer evidence of this interaction, however.

The results suggest that monitoring intensity and contract duration interact to influence contracting performance. The coefficient for this multiplicative term is negative, as was hypothesized, and statistically significant at the $p = .12$ level. Early on in a contractual relationship, when the principal lacks trust in the agent, principals may rely more heavily on monitoring as the most effective mechanism for managing the relationship. As the relationship matures, the effects of monitoring appear to diminish. Contract duration, however, does not appear to interact with trust. That is, the effect of trust on contracting performance does not increase as the relationship evolves over time.

Two of the interactive terms achieve statistical significance at the $p < .05$ level. The coefficient for the interactive term for trust and asset specificity is .09 and statistically significant at the $p = .01$ level. As higher levels of asset specificity lock in the parties, trust, which promotes flexibility and discourages opportunistic behavior, has a greater effect on overall contracting performance. These benefits associated with trust become less significant for the success of a contractual relationship when the parties can more

efficiently redeploy their assets to other transactions (i.e., when the level of asset specificity is low).

The results also show that the interactive term for monitoring intensity and the dummy variable for private for-profit provider is negative and statistically significant at the $p = .02$ level. Monitoring intensity has a negative effect on overall contracting performance when the contractor is a private for-profit firm but has a positive effect when the contractor is a nonprofit organization. This is a surprising finding and one that contradicts the assumption that greater goal alignment between the public and nonprofit sectors diminishes the frequency of opportunistic behavior by nonprofit organizations. Nonprofits at the local level may be pursuing more narrow interests than those of the broader public, making monitoring an effective mechanism for aligning their behavior with the interests of local governments.

The next portion of the analysis explores the effects of trust, competition, and monitoring on eight different dimensions of contracting performance. The results of these ordered probit models are presented in Table 5; the regression coefficients shown are fully standardized coefficients.

Trust is positively correlated with all of the eight measures of performance. As the literature on interorganizational trust suggests, trust between contracting parties appears to result in lower costs and greater efficiency. It also seems to improve the quality of service, most likely because the parties are reluctant to engage in opportunistic behavior and because of their willingness to mutually adjust to the each others' needs.

Two of the three measures of competition—allowing public employees to bid on the contract and the number of contracts awarded—fail to achieve statistical significance in any of the eight ordered probit models. The third measure of competition, the number of bidders on the contract, is negatively correlated with timeliness and service continuity but appears to have no effect on the other six dimensions of contracting performance. Promoting competition among bidders may prolong the solicitation process, which may explain why increasing the number of bidders on a contract is negatively correlated with timeliness. Overall, the results provide little evidence that competition enhances contracting performance.

The variables *ex ante* evaluation, monitoring scope, and monitoring intensity fail to achieve statistical significance in any of the ordered probit models shown in Table 5. These three variables appear to have no effect on any of the eight dimensions of contracting performance. As with the OLS models, ordered probit models are run in which the monitoring intensity variable is disaggregated into the six original monitoring tools and procedures indicators. These results are shown in Table 6. Four of the coefficients

Table 5
Ordered Probit Regression Results

	Cost in Comparison to Projected Cost	Cost in Comparison to In-House Cost	Quality of Work	Responsiveness to the Government's Requirements	Timeliness	Service Continuity	Legal Compliance	Customer Satisfaction
Monitoring scope	.01	-.08	-.02	.04	-.00	-.01	.09	-.05
Monitoring intensity	.01	.05	.03	.01	.03	.02	.07	-.03
Ex ante evaluation	.04	.09	.05	.04	.07	.03	.06	.04
Number of bidders	.04	.01	-.06	.01	-.14**	-.14**	-.10	.00
Public-private competition	-.01	-.01	-.03	-.02	-.05	.02	.01	-.05
Number of contracts awarded	.02	.04	.03	.06	.07	.08	.06	-.00
Trust	.24***	.26***	.49***	.45***	.40***	.37***	.37***	.45***
Communication	-.09	-.12*	-.09	-.05	.02	-.04	-.04	-.06
Task uncertainty	-.17**	-.11*	-.12**	-.08	-.10*	-.02	-.09	-.07
Asset specificity	-.10	-.07	.04	.03	-.02	.00	-.04	-.01
Contract specificity	.17*	.13*	.00	.09	.07	.08	.02	-.03
Legal means for resolving disputes	-.03	-.07	.05	.03	.03	-.04	.01	.03
Expertise in contract administration	.03	.11	.04	-.02	.02	.11*	.13*	.07
Technical knowledge of service	.04	.06	.05	.09*	.14**	.14**	.00	.00
Alternative means for resolving disputes	-.04	.05	.03	.05	.11*	.14**	.05	.12*
Financial incentives	-.04	.03	-.01	-.06	-.04	-.02	-.10*	-.02
Joint problem solving	.07	.00	.10*	.19***	.09	.06	.10	.10*
Contract duration	.07	.09	.02	.09	.04	.07	-.03	.02
Political support	.18**	.15**	.19***	.23***	.21***	.22***	.17**	.28***
Financial resources	.09	.10*	.13**	.13**	.16**	.12**	.12*	.10*
Subcontractors	-.03	-.12*	-.07	-.09*	-.07	-.07	.02	-.07
Pseudo <i>r</i> -square	.13	.12	.26	.26	.21	.19	.20	.26
Cut Point 1	0.78	0.92	0.39	1.28	1.09	1.48	-0.49	1.20
Cut Point 2	2.14	2.00	2.46	3.18	2.79	3.22	1.51	3.07
Cut Point 3	4.26	3.98	4.67	5.30	4.85	5.01	3.83	5.65

Note: Dependent variable = eight dimensions of contracting performance.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 6
Ordered Probit Regression Results for Individual Contract Monitoring Tools and Procedures

	Cost in Comparison to Projected Cost	Cost in Comparison to In-House Cost	Quality of Work	Responsiveness to the Government's Requirements	Timeliness	Service Continuity	Legal Compliance	Customer Satisfaction
Inspections of work in progress	.11	.06	.17*	.02	.07	.02	-.05	.14*
Inspections of work completed	-.02	-.05	-.09	-.04	-.04	.03	.02	-.02
Complaints monitoring	.14*	.08	-.12	-.07	-.08	-.12*	-.03	-.07
Examining contractor reports	-.12*	-.08	.04	.01	-.04	.12*	.07	.02
Performance measurement systems	.02	-.00	.02	.06	.07	-.05	-.05	.04
Citizen surveys	-.15**	-.08	-.03	.00	-.01	-.02	-.08	-.02

Note: Dependent variable = eight dimensions of contracting performance.

* $p < .05$, ** $p < .01$, *** $p < .001$.

for monitoring tools and procedures are positive and statistically significant. Inspections of work in progress appear to enhance both quality of work and customer satisfaction, and complaints monitoring positively affects actual costs in comparison to projected costs. On the other hand, three coefficients for monitoring tools and procedures have a negative and statistically significant effect on a particular dimension of contracting performance. In most instances, these six monitoring tools and procedures fail to have an effect on contracting performance, with only 7 out of the 48 standardized coefficients achieving statistical significance in the ordered probit models.

The control variables in the OLS, 2SLS, and ordered probit models offer some interesting insights. Reliance on alternative means for resolving disputes is positively correlated with overall contracting performance. This control variable also is positively correlated with three dimensions of contracting performance. Negotiation, arbitration, and mediation appear to be more effective at resolving disputes, perhaps because of their lower cost compared to litigation and also because they minimize conflict between the parties and preserve an effective working relationship (see Macaulay, 1963; Williamson, 1985). Conversely, the use of legal sanctions to discourage poor performance and rein in an unresponsive contractor appears to have no effect on contracting performance.

Joint problem solving efforts are positively correlated with overall contracting performance, as indicated by the OLS and 2SLS results, and positively correlated with three individual dimensions of contracting performance. As public managers work more closely with the contractor's staff to solve performance issues, the level of contracting performance tends to increase, as experts on relational contracting have stipulated. Task uncertainty is negatively correlated with overall contracting performance and four individual dimensions of contracting performance. This is a sensible finding, insofar as one would expect uncertainty about the best means for accomplishing the work, difficulty measuring outcomes, and shifting technical requirements to complicate the work of the contractor and diminish the chances of the government getting the outcomes it desires (see Bendick, 1984; Hodge, 2000). The control variable for the service's level of asset specificity fails to achieve statistical significance in the OLS, 2SLS, and ordered probit models.

The results offer some evidence in support of the proposition that having public managers with technical knowledge of the service improves contracting performance. Although the coefficient for this control variable is not statistically significant in the 2SLS regression, it is statistically significant at the $p < .05$ level in the OLS model of overall contracting performance.

Moreover, technical knowledge of the service has positive and statistically significant coefficients in three of the ordered probit models.

Political support for contracting out among public employees and managers and the amount of financial resources dedicated to the contracting initiative are positively correlated with overall contracting performance, as well as with most of the eight dimensions of contracting performance. Mid- and low-level managers and street-level employees who are supportive of the contractual relationship appear less likely to fear privatization and more inclined to work in partnership with the contractor's staff to resolve problems that arise during service delivery. Adequate funding to support various managerial activities and functions during the contracting process also appears to contribute to successful contracting.

The coefficient for the number of subcontractors involved in service delivery is negative and statistically significant at the $p < .05$ level in the OLS model and in three of the ordered probit models. The need to coordinate the actions of multiple service providers may increase contract costs and create delays. In addition, the presence of multiple clearance points (i.e., subcontractors) could be weakening the government's control over the service delivery process and undercutting public managers' ability to influence the outcomes of the contractual relationship.

Discussion and Conclusion

This study set out to explore the effects of monitoring, competition, and trust on contracting performance. The results suggest that trust has an independent positive effect on overall contracting performance, as well as on all of the eight dimensions of contracting performance analyzed in this study. In the vein of previous research on trust, the results indicate that higher levels of trust result not only in lower costs but also in higher quality of service and greater responsiveness to the needs of local governments.

Monitoring and ex ante evaluation of bidders were hypothesized to improve a contractor's performance by attenuating agency problems that arise when governments contract with external providers. In none of the models does ex ante evaluation have a statistically significant effect on contracting performance. No evidence is found, therefore, that this type of evaluation improves performance by reducing the risks posed by adverse selection. The findings regarding monitoring are more mixed, although the pattern of results across all of the models indicates that monitoring generally fails to reduce shirking and other types of opportunistic behavior that can negatively affect contracting performance. The measures of monitoring

scope and monitoring intensity do not have independent effects on overall contracting performance or on any of the individual dimensions of contracting performance. Disaggregating the measure of monitoring intensity to explore the effects of six different monitoring tools and procedures fails to produce evidence that any of these tools and procedures contribute to overall contracting performance. In a small number of instances, a particular monitoring tool or procedure is positively correlated with one or more dimensions of contracting performance; however, there are nearly as many instances in which the correlation is negative.

The relationship between monitoring and performance appears to be more complex and contingent than the one described in much of the literature on contracting for services. First, as this study shows, in many cases, monitoring may not improve contracting performance, and in some instances, the costs of monitoring may offset or even outweigh any benefits derived from it. Indeed, some experts have noted that monitoring expenses can be considerable and that these expenses should be factored into the total cost of purchasing services before determining the efficiency of this alternative (Rehfuss, 1989; Seidenstat, 1999). Moreover, the effectiveness of monitoring may depend on certain characteristics of the contractor or the service being outsourced. Although the purpose of this study was not to explore every possible interaction involving monitoring, several interactions discussed in the literature were tested, and the results were suggestive of a contingency approach to contract monitoring. For example, monitoring may be more effective when the contractor is a nonprofit organization and when monitoring is undertaken during the earlier phases of the contractual relationship.

The results offer only limited support for the proposition that competition improves contracting performance. In most of the models, the measures of competition are not statistically correlated with performance. Awarding multiple contracts is the only competition variable that is positively correlated with overall contracting performance. The results even show that increasing the level of competitive bidding among contractors seems to have a negative effect on timeliness and service continuity. What might explain this overall pattern of results? One plausible explanation is that fostering competition can be costly for government, as Donahue (1989) and Sclar (2000) observed. A second possibility is that stability in contractual relationships contributes much more to success than competition (Provan & Milward, 1995; Smith, 1996; Smith & Lipsky, 1993; Smith & Smyth, 1996).

Potential methodological problems, such as endogeneity and nonresponse bias, have been addressed in this study and seem not to be biasing the results. Although the data used in the analysis are in part attitudinal, the results are

strengthened by the fact that the four control variables for respondent characteristics failed to achieve statistical significance. Also, the data for the independent and control variables exhibit sufficient variability to allay fears of social desirability biasing the survey responses. In addition, the results should be generalizable to most instances of contracting out by local governments in the United States, especially among medium and large local governments, as the response rate for the survey was about 50%, respondents and nonrespondents were highly comparable on a number of theoretically important variables, and the data capture contracts for more than 60 different services. Whether these findings are generalizable beyond local government contracting is an empirical question that is more difficult to answer. The findings may be generalizable to state agency contracting for similar types of services on a similar scale (e.g., public works, transportation, health and human services, support services). However, at the federal level, the procurement process is more elaborate and formalized, with many policies and regulations governing how public managers undertake the make-or-buy decision, sourcing, and contract management. Public managers operating in such a constraining environment may find it more difficult to bargain, to make quick and efficient adjustments to a contractual relationship, and to take steps to gain the trust of the other party. Further empirical research on the determinants of contracting performance at the state and local levels is clearly needed.

The significance of trust as a determinant of contracting performance raises some concerns about loss of accountability in contracting for services. Various experts suggest that external mechanisms of accountability, such as oversight and regulation, are needed to hold private contractors accountable for their behavior (Bardach & Lesser, 1996; Kamarck, 2002; Smith & Smyth, 1996). On one level, one might be concerned that too much trust weakens the ability of public managers to hold contractors accountable for their behavior and performance. Little if any empirical evidence from this analysis or from the relational contracting literature suggests that this is the case. The data show that public managers do not necessarily engage in less monitoring when they report high levels of trust in the contractor.¹¹ In addition, trust is positively correlated with all eight dimensions of contacting performance. Thus, trust may not only contribute to greater efficiency but it also appears to increase contractor responsiveness to the government's requirements, compliance with the law, and customer satisfaction, three key forms of contractor accountability (Cooper, 2003). Finally, previous work on the role of trust in economic exchanges indicates that like authority, trust acts as a mechanism for holding a party accountable for its behavior (Aulakh et al., 1996; Luhmann, 1979; Macaulay, 1963).

On another level, there might be a concern that public managers who trust their contractors and develop close personal relationships with them become unresponsive to elected officials, the public, and the law. One could argue that public managers who develop a close bond with a contractor's staff would be more inclined to give them preferential treatment or to view the continuation of the contractual relationship as more important than the requirement to rebid or terminate the contract. The survey data used for this study does not lend itself to answering these empirical questions because all of the data represent survey responses from public managers and not from other actors in the political system, such as elected officials or service recipients. Future research is needed to fill this particular gap in our understanding of accountability in the area of contracting for services, particularly in regards to relational contracting.

Notes

1. The sample of 982 local government contracts with for-profit and nonprofit providers was stratified by the seven categories developed by International City/County Management Association (ICMA) to group local government services and functions.

2. Approximately, 77% of survey respondents were from municipalities, and 23% were from counties. Approximately, 57% of respondents had a council-manager form of government, 16% a mayor-council form of government, and 27% had other forms of government. Finally, approximately, 45% of respondents were from local governments with populations of less than 25,000, 35% were from local governments with populations between 25,000 and 99,999, 12% were from local governments with populations between 100,000 and 249,999, and less than 8% were from local governments with populations of 250,000 or greater.

3. Contracts for public works/transportation and for cultural and arts programs were slightly overrepresented and underrepresented, respectively, among survey respondents.

4. Principal components factor analysis is a statistical technique that allows researchers to analyze and summarize the interrelationships among a set of variables to reduce these variables down to a smaller number of underlying factors. Observations (or cases) are assigned a score on each factor derived from the analysis. This factor score represents the weighted combination of scores of different variables on that observation; the weights assigned to each variable depend on the factor loading of that variable (i.e., on the variable's contribution to the meaning of the factor or the variable's correlation with the factor). When using factor analysis to create a new measure of a concept from multiple variables, therefore, the new measure (i.e., the factor) takes into account all of the variables that were included in the factor analysis, but it weights them based on their correlation with, or contribution to, the factor.

5. A reliability test of these eight indicators yielded a Cronbach's coefficient of .90.

6. None of the independent variables had a tolerance statistic of less than 0.526 and none had a variance inflation factor (VIF) of greater than 1.900.

7. There were eight observations with a leverage value greater than the $2p/N$ threshold (.114 for the model), where p is the number of independent/control variables and N is the number of observations (Norusis, 1993). A leverage value that is greater than $2p/N$ is indicative

of an observation that is exerting a great deal of influence on the path of the fitted equation. To test the sensitivity of the model to these eight leverage points, OLS regression was run dropping each of the leverage points from the analysis. Dropping each of the leverage points fails to cause any meaningful change in the regression coefficients, t -scores, R^2 , or the F value. The eight leverage points are therefore included in the analysis.

8. Jeffries and Reed (2000), who have acknowledged that trust often has a positive effect on the outcomes of a contractual relationship or partnership, have argued that there is a downside associated with too much trust. According to them, very high levels of interpersonal trust can have a negative impact on the outcomes of a contractual relationship, thus suggesting the possibility of a curvilinear relationship between trust and performance. As they explain, parties that trust each other too much tend to economize on time (and overlook sound alternatives) to reach the first mutually acceptable solution, even though this solution is unlikely to be the optimal one. The survey data offered no indication of a nonlinear relationship between trust and contracting performance; the bivariate plot of trust and the dependent variable exhibited a linear relationship. Moreover, various nonlinear transformations of trust (including inverse, quadratic, and cubic) were tried, but none of them yielded a better fit for the bivariate equation.

9. The positive and statistically significant correlation between trust and joint problem solving ($r = .29$) adds support to this line of reasoning.

10. The first-stage equation that predicts trust includes all of the exogenous variables in the OLS model as well as the following instrumental variables: a dummy variable for whether the contractor had provided the service in the past, a dummy variable for whether the contract could be renewed indefinitely, the number of years the contracted was awarded for; the yearly dollar amount paid to the contractor; and a measure of the amount of discretion afforded to the contractor. A good instrument meets two conditions: It is correlated with the included endogenous variable, and it is orthogonal to the error process (i.e., it is not correlated with the error process; Baum, Schaffer, & Stillman, 2003). The instrument created for trust in this 2SLS regression appears to meet the first condition. The regression equation in which the five instrumental variables listed above are regressed on trust exhibited an R -square of .11. In addition, the F test for the joint significance of these same five instrumental variables in the first-stage regression yielded a p value of .05 (see Baum, Schaffer, & Stillman, 2003). The instrument created for trust is also orthogonal to the error process. Using the J statistic of Hansen, the null hypothesis was rejected at the $p = .32$ level. In short, this is a reasonably good instrument for trust.

11. Bivariate correlations between trust and the two measures of contract monitoring used in this study show that the extent of contract monitoring is not significantly related to the level of trust.

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