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Closer Than “Arms Length”: Understanding the Factors Associated with Collaborative Contracting

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This article focuses on collaborative relationships between contractors and government agencies and explores which contract characteristics, contractor traits, and environmental factors are associated with the development of such relationships. The study uses data from the Partnership Impact Research Project, a three-round longitudinal survey of over one hundred child care centers and Head Start agencies in Ohio. Our findings suggest that stronger collaborative contracting relationships are associated with greater contract specificity, better contractor service quality, and contractor affiliation with a larger organization. On the other hand, a contractor’s financial autonomy and nonprofit status are negatively related to collaborative relationship strength. We also find that a contractor’s internal management capacity is positively associated with the development of shared procedures governing contractual relationships.

Introduction

Holding contractors accountable for the services they deliver is a key challenge facing public managers involved in overseeing federal, state, and local contracts with nonprofit and for-profit organizations (Blasi, 2002; Breaux, Duncan, & Keller, 2002; Coats, 2002; Dicke, 2002; Johnston & Romzek, 1999; Klingner, Nalbandian, & Romzek, 2002; Ott & Dicke, 2000; Romzek & Johnston, 2005). Public managers use a variety of different strategies while designing their relationships with contractors in an effort to ensure that services meet the government’s expectations and to minimize the likelihood of contractors’ behaving opportunistically. One such strategy involves fostering strong, collaborative relationships with private partners (Beinecke & DeFillippi, 1999; DeHoog, 1990; Sclar, 2000). Indicative of this, there is a growing recognition of trust and cooperation playing a key role in many public contracts (Beinecke & DeFillippi, 1999; DeHoog, 1990; Johnston & Romzek, 2008; Lambright, 2009; Romzek & Johnston, 2005; Smith, 1996; Van Slyke, 2007). In the contracting literature, these types of contracts are often referred to as “relational.”

As governments continue to rely on nonprofit and for-profit organizations in the delivery of public services, concerns about public managers’ capacity to effectively monitor performance still persist, and the “black box” of accountability mechanisms designed to ensure effective implementation of public services needs to be better understood. In particular, little is known about the determinants of collaborative contract governance. Scholars have detailed the *service characteristics* that are likely to be associated with the adoption of collaborative contractual arrangements (Amirkhanyan, 2009; Beinecke & DeFillippi, 1999; Kim, 2005; Sclar, 2000). However, less evidence is available on the *organizational* and *environmental factors* that facilitate the development of these types of contracting relationships (Van Slyke, 2009). By focusing

on one service area, this article looks beyond service characteristics as explanations for collaborative contractual arrangements. Instead, we focus on contract characteristics, contractor traits, and environmental factors and provide insights into how these variables are related to the development of strong collaborative relationships between the contractor and government. As a part of our analysis, we examine an important debate in the contracting literature and empirically test whether an inverse or complementary relationship exists between collaboration and the degree of contract specification.

The data for this study are from the Partnership Impact Research Project, a three-round longitudinal survey of more than 100 child care centers and Head Start agencies in Ohio. This service area is particularly well-suited for the research questions examined in this study. First, the lack of competition in the social service field often translates into long-term relationships forming between government agencies and their contractors (Johnston & Romzek, 2008; Lambright, 2009; Romzek & Johnston, 2005; Smith, 1996; Smith & Smyth, 1996). Second, in comparison to the so-called “hard” services, such as construction, maintenance, or waste removal, outcomes in the social services field are harder to measure. This commonly precludes government agencies from specifying all of their expectations in advance of contract implementation and forces them to rely on cooperation and trust instead.

We begin this article by discussing contract relationships as a means for minimizing opportunistic behavior of contractors. We identify several contract characteristics, contractor traits, and environmental factors that may be associated with the development of strong collaborative relationships between the government and the contractor. Following this, we detail our methodology and findings. This article concludes by exploring the theoretical and practical implications of our study for public managers pursuing collaborative approaches to contracting.

Strategies for Minimizing Contractor Opportunism

Situations in which a government agency contracts with another organization to deliver a public good or service are often conceptualized as a principal-agent relationship. In contracting relationships, the contractor, viewed as an “agent,” typically has more information about operations and its own capacities than the government, who is the “principal.” This situation is fertile ground for opportunism, a concept central to transaction cost economics (Williamson, 1975). Defined by Williamson as “a lack of candor or honesty in transaction, to include self-interest with guile” (1975, p. 9), opportunistic behavior by contractors creates two key problems in principal-agent relationships: adverse selection and moral hazard. The former is a concern at the onset of contracting relationships and is what Arrow (1984) refers to as “hidden information.” It involves an agent’s propensity to misrepresent its ability to meet its contractual obligations (Eisenhardt, 1989; Van Slyke, 2007). Moral hazard, on the other hand, is a concern during contract implementation and is what Arrow (1984) refers to as “hidden action.” Moral hazard occurs when an agent exploits its informational advantage over the principal and does not fulfill its contractual responsibilities (Eisenhardt, 1989; Sclar, 2000; Van Slyke, 2007). Governments are more vulnerable to contractors behaving opportunistically when the services being contracted have a high level of asset-specificity¹ and it is difficult to measure the quality and/or quantity of services being delivered (Brown, Potoski, & Van Slyke, 2006).

One response to the possibility of opportunistic behavior by contractors involves carefully detailing the terms and the procedures governing service delivery (Beinecke & DeFillippi, 1999; Brown et al., 2006; Sclar, 2000). However, the nature of some services and the administrative costs often make complete contract specification challenging (Milgrom &

Roberts, 1992; Tirole, 1999). Besides, creating elaborate contracts without at the same time fostering trust may simply motivate individuals to come up with creative ways to game the system and avoid fulfilling their contractual obligations (Granovetter, 1985).

An alternative strategy designed to minimize the possibility of contractor opportunism is for the government to focus on developing strong relationships by building trust and pursuing cooperative approaches to contract management problems (Beinecke & DeFillippi, 1999; DeHoog, 1990; Sclar, 2000). As Arrow points out, “It saves a lot of trouble to have a fair degree of reliance in other people’s word (1974, p. 23).” Inter- and intraorganizational behavior theorists argue that transaction cost economics largely overstate the role of self-interested or *rationaly controlled* behavior (Ghoshal & Insead, 1996). Organizations are not markets and often benefit more from cultivating shared purposes rather than by behaving opportunistically. Thus organizations use *social control*—informal strategies to create commitment and to motivate participants through integration of norms and by internalizing each other’s values (Ghoshal & Insead, 1996).

Rather than having a principal and an agent, the government and the contractor in these trust-based contracting relationships are conceptualized as equal partners involved in program management as well as contract renewal (DeHoog, 1990). The contracting parties are willing to make short-term sacrifices for the partnership because they recognize that it is in their long-term interest to sustain the relationship (Smith, 1996). There is considerable decentralization and flexibility in trust-based models of contracting. The government provides contractors with a great deal of discretion and in many cases defers to the contractor’s expertise (Campbell & Harris, 1993; DeHoog, 1990), relying on common professional standards to limit opportunistic behavior (Bennett & Ferlie, 1996; DeHoog, 1990). Trust-based models of contracting have been used in a broad array of service areas including infectious disease management (Allen et al., 2002), Medicaid managed care (Beinecke & DeFillippi, 1999), HIV/AIDS services (Bennett & Ferlie, 1996), foster care services (Klingner et al., 2002), early childhood programs (Lambright, 2009), social services (Romzek & Johnston, 2005; Smith, 1996), and human waste collection (Kim, 2005).

This article takes a broad approach to the “relational” aspects of contracting. Based on the reviewed literature, strong collaborative relationships between contractors and government agencies involve the following elements: (a) a shared understanding of the programmatic mission, goals, and objectives; (b) coordinated and shared operational and administrative processes; (c) a high level of formal and informal communication; and (d) mutual trust, respect, and cooperation. A system where these aspects are present is likely to provide “social controls” (Ghoshal & Insead, 1996), which may guide organizational behavior.

Factors Influencing Collaborative Relationship Strength

The adoption of collaborative contract management strategies in the field of social services is not well understood. In this section, we develop several hypotheses on a variety of factors likely to be associated with the development of strong collaborative relationships between the government and the contractor. We group these factors into the broader categories of contract characteristics, contractor traits, and environmental conditions.

Contract specificity. To effectively manage contracts, the government must maintain a careful balance between trust and hands-on monitoring (Bouckaert & Peters, 2002).

Opportunism may still be present in strong relationships, particularly in situations where there is

a significant informational asymmetry between the government and contractor (DeHoog, 1990; Entwistle & Martin, 2005). In addition, collaborative relationships can foster a sense of complacency (DeHoog, 1990) and may stifle innovation if partners are unwilling to critique each other for fear of damaging their relationship (Entwistle & Martin, 2005). Therefore, agencies may choose to raise the costs of opportunistic behavior by specifying expectations and defining the associated rewards and sanctions.

In the past, contracts have been conceptualized as lying on a continuum between transactional contracting at one end and relational contracting at the other end (Beinecke & DeFillippi, 1999; MacNeil, 1974). Transactional contracts are short-term, economic exchanges based on carefully detailed contractual agreements and close oversight of the provider's compliance. In contrast, relational contracts are based on open-ended, long-term exchanges in which personal ties and informal communication foster trust and flexible approaches to solving implementation problems. Consistent with this perspective, some scholars have argued that trust and contract specification have an inverse relationship: as trust increases, the need for formal contract specification decreases (Gulati, 1995; Ring & Van de Ven, 1994; Van Slyke, 2009). By carefully detailing contractual terms and the procedures governing the contracting relationship, the government is signaling a lack of trust in the contractor (Van Slyke, 2009). Moreover, the initial investments in formal controls may deter the government from incurring additional transaction costs associated with frequent communication and the development of shared goals and procedures.

Hypothesis 1a: Contract specification is negatively associated with collaborative relationship strength.

In contrast to the argument presented above, other scholars have argued that trust and contract specification play complementary roles (Allen et al., 2002; Deakin, Lane, & Wilkinson, 1994). Working together as part of the contract specification process may build trust (Allen et al., 2002). Contract specification may strengthen the collaborative relationship between the government and the contractor by reducing government concerns that the contractor will behave opportunistically and by reducing contractor concerns that the government will arbitrarily exercise its authority. It may also foster a shared understanding of processes and procedures since contractors have a chance to provide feedback and request clarifications on the government's expectations (Amirkhanyan, 2009). Hence, formal relationships may serve as the foundation for the government and contractor developing stronger informal relationships. The presence of trust and contract specificity in contracting relationships may combine to create both "a carrot and a stick"; the existence of written procedures and sanctions ensures that the basic parameters of the contract are taken seriously, while collaborative ties and discussions may ensure that these procedures are well understood and well received.

Hypothesis 1b: Contract specification is positively associated with collaborative relationship strength.²

Relationship length. Another contract characteristic that may be associated with a collaborative approach to contracting is relationship length. Trust between parties is a learning process (Lorenz, 1999; Vangen & Huxham, 2003) and tends to develop over time (Thomson & Perry, 2006; Van Slyke, 2007, 2009). Reflecting this, government officials may be more likely to

adopt a cooperative model of contracting after several years of having a satisfactory but more formal relationship with a particular contractor (DeHoog, 1990). Given this, we suggest that longer contracting partnerships will result in stronger collaborative relationships compared to shorter partnerships, keeping constant the contractor's performance during this period. Longer contractual relationships allow the parties to develop some familiarity with each other, promoting more frequent and informal communication, and a better understanding of each others' organizational cultures. Longer ties also suggest parties believe that they are benefiting in some way from the sustained collaborative relationships which may prevent contractors from behaving opportunistically.

Hypothesis 2: Relationship length is positively associated with collaborative relationship strength.

Internal management capacity. Contractor traits are also likely to play a role in the development of strong collaborative relationships between the government and the contractor. Contractors must have enough time, staff, and expertise to implement contracts (DeHoog, 1990). Some contractors have skilled managers who invest their time and energy in improving the internal processes and optimizing service quality while other contractors lack such expertise. One might expect that the most skilled managers are often those who can manage not only "within" but also "across" organizations—building lateral communication channels, adjusting organizational structures, and creating common procedures facilitating program implementation. Stronger managers also understand the value of leadership and spend more time articulating the goals, framing the issues, motivating the participants and developing shared understandings with their partners that are essential for effective service implementation (Goerdel, 2006). Based on this, a contractor's capacity to effectively manage internal relationships may translate into the capacity to manage external relationships as well.

Hypothesis 3a: A contractor's internal management capacity is positively associated with collaborative relationship strength.

It is also possible that when a contractor devotes considerable effort to internal management, the contractor will have less time and resources available to manage external relationships. As a result, collaborative relationship strength may actually decrease as internal management capacity increases.

Hypothesis 3b: A contractor's internal management capacity is negatively associated with collaborative relationship strength.

Contractor ownership status. Other contractor traits that may be associated with the development of collaborative contracting relationships include a contractor's status as a nonprofit or faith-based organization. Public managers may perceive nonprofit contractors as more trustworthy than for-profit contractors because nonprofits are required to invest any profits back into their organizations and cannot distribute excess revenues to their shareholders (Hansman, 1987). Thus nonprofit organizations may be less likely to take advantage of clients by raising prices or cutting costs in situations where competition is limited and service quality is hard to

verify such as in the field of social services. Nonprofit managers are also constrained by the “reasonable compensation” requirement, which may result in the government viewing its nonprofit partners as being more mission-oriented, socially conscious, and hence less opportunistic. The high cost of opportunistic behavior that can jeopardize private donations and their tax exempt status may further deter nonprofit organizations from not fulfilling their commitments. Consistent with this, Van Slyke (2009) reports that public managers were initially more trusting of nonprofit service providers compared to for-profit service providers, and Amirkhanyan (2009) finds nonprofit contractors were more likely to collaborate with government agencies on performance measurement activities. Government agencies may also be more likely to trust faith-based organizations compared to their secular counterparts because of faith-based organizations’ emphasis on religious values. One might expect that government agencies will have stronger collaborative relationships with nonprofit and faith-based contractors due to the fact government agencies may be more likely to trust these contractors.

Hypothesis 4a: A contractor’s status as a nonprofit organization is positively associated with collaborative relationship strength.

Hypothesis 5a: A contractor’s status as a faith-based organization is positively associated with collaborative relationship strength.

On the other hand, a contractor’s status as a nonprofit organization or as a faith-based organization may make it more difficult to develop strong collaborative relationships with the government. While the virtues of nonprofit organizations are widely recognized, some researchers point out their many pitfalls. In the absence of financial incentives to guide organizational leadership, nonprofit organization may be poorly managed (Hansmann, 1986; Prager, 1994; Rose-Ackerman, 1986). In addition, numerous accountability pressures can result in dysfunctional managerial behavior (Johnston & Romzek, 1999). Despite the assumptions of the socially responsible nature of nonprofit organizations, they may prioritize different service delivery norms than public organizations: while governments may emphasize equal access to services, nonprofits may prioritize responsiveness to more limited community groups (Amirkhanyan, Kim, & Lambright, 2008; Smith & Lipsky, 1993). Government may be less likely to trust nonprofits based on these considerations. It may also be challenging for faith-based organizations to effectively collaborate with government agencies because of their strong emphasis on religious values. The legal constraints imposed by the government agencies on the way in which public dollars may be spent within a faith-based organization (e.g., the restriction on proselytizing while delivering public programs) can complicate interorganizational ties and discourage a nonprofit from being fully transparent. Thus, if the religious values of a faith-based organization are not fully consistent with the government’s goals, the relationship between the faith-based organization and the government may suffer.

Hypothesis 4b: A contractor’s status as a nonprofit organization is negatively associated with collaborative relationship strength.

Hypothesis 5b: A contractor’s status as a faith-based organization is negatively associated with collaborative relationship strength.

Contractor service quality. Trust results in a relationship when the parties involved have a history of successfully completed transactions (Lambright, Mischen, & Laramee, 2010; Lorenz, 1999; Ring & Van de Ven, 1992; Vangen & Huxham, 2003; Van Slyke, 2007). Poor or

unremarkable performance may naturally be associated with shorter contracts, but in some markets it may not be possible to impose the ultimate sanction—contract termination—for a variety of reasons including lack of contractor competition, lack of funding for service improvement, or poor performance measurement mechanisms. In cases where contract termination is not an option, one may expect the government to be less likely to develop strong informal ties with contractors who have not met the government's service delivery goals. On the other hand, government agencies may be interested in maintaining closer relationships with high performers to sustain good program outcomes and perhaps to collect information on their best practices for dissemination to other contractors. Contractors delivering high quality services may also seek stronger collaborative relationships with the government in an effort to highlight the superior quality of their services compared to other service providers. Hence, we expect there to be a positive association between contractor service quality and collaborative relationship strength.

Hypothesis 6: Contractor service quality is positively associated with collaborative relationship strength.

Contractor size. A final contractor characteristic that may be associated with the adoption of a more collaborative approach to contract management is organizational size. Bigger contractors may benefit from economies of scale and have more institutional capacity to be collaborative with government agencies.

Hypothesis 7a: Contractor size is positively associated with collaborative relationship strength.

It is also possible that contractor size will be negatively related to collaborative relationship strength. Organizations often collaborate to obtain the resources needed to achieve their goals (Bryson, Crosby, & Stone, 2006; Fleishman, 2009; Whetten & Leung, 1979). Smaller contractors are likely to be less financially secure and more reliant on their contracts. Therefore, they may work harder on building collaborative relationships with government agencies. Smaller contractors are also less likely to have formally written, institutionalized procedures pertaining to communication, and hence these organizations may use a more informal communication style.

Hypothesis 7b: Contractor size is negatively associated with collaborative relationship strength.

Financial autonomy from the contracting government agency. In addition to contract characteristics and contractor traits, a contractor's external ties to their environment are likely to be associated with the development of collaborative contractual arrangements. Like smaller organizations, organizations that receive substantial funding from other government sources are likely to be less dependent on their contract as a critical revenue source and may be willing to invest less time and effort into their relationships with the government to ensure they are successful. As a result, we expect that these types of organizations will have weaker collaborative relationships with the contracting government agency. Consistent with this prediction, Amirkhanyan (2009) finds that contractors that were less financially dependent on their contracts were less likely to collaborate with government agencies in the process of performance monitoring.

Hypothesis 8: Financial autonomy from the contracting government agency is negatively associated with collaborative relationship strength.

Affiliation with a larger organization. Another environmental factor that may be associated with collaborative relationship strength is a contractor's affiliation with a larger organization. The government agency may be more likely to presume that the contractors affiliated with larger organizations have the capacity to deliver high quality services because of the benefits they receive from economies of scale. As a result of this confidence, governments may be more willing to make investments in their relationships with these contractors. In addition, contractors that already have ties with a parent institution may have more institutional capacity to be collaborative and hence may be able to work more effectively in partnership with the contracting public agency.

Hypothesis 9a: Contractor affiliation with a larger organization is positively associated with collaborative relationship strength.

It is also possible that contractors not affiliated with larger organizations will have stronger collaborative relationships with government agencies. These contractors may be less financially secure and more reliant on their contracts. As a result, unaffiliated contractors may have more incentive to invest time and energy in their relationships with government agencies.

Hypothesis 9b: Contractor affiliation with a larger organization is negatively associated with collaborative relationship strength.

Influence of client groups. Finally, the presence of influential client groups may be associated with the development of weaker collaborative relationships between the contractor and government. Powerful client groups can serve as another mechanism for monitoring the services that contractors deliver. Brown and Potoski (2006) find that the government may adjust the extent of its monitoring in cases when the contractor is also monitored and evaluated by a third party. Client groups can pressure contractors to improve service quality and be responsive to their needs. Hence, the government agency may be able to reduce the extent of its own monitoring. Under such conditions, the communication between the government and the contractor will also be minimized and that, in turn, can hinder the development of trust-based relationships (Bohnet & Huck, 2003; Edelenbos & Klijn, 2007; Gulati, 1995; Lambright et al., 2010).

Hypothesis 10: The influence of client groups is negatively associated with collaborative relationship strength.

Method

To examine the factors associated with the development of collaborative relationships between contractors and government agencies, this study focuses on partnerships developed by local Head Start agencies in Ohio. Started in 1965 as part of the War on Poverty, Head Start provides comprehensive child development programming to preschool children of low-income families. The overall goal of this initiative is to improve school readiness among low-income children. Head Start programs are located throughout the country and are supported by both federal and state funding. In Ohio, local Head Start agencies have received state Head Start funding to develop partnerships with local child care centers.

Data. This study uses data from the Partnership Impact Research Project.³ This is a three-round survey exploring early education partnerships between local Head Start agencies and child care centers in Ohio. The survey was implemented in the spring and winter of 2002 and in the summer of 2003. The surveys are longitudinal, but the same respondents were not necessarily surveyed during every round. For our analysis, we have used three of the six data sets comprising the Partnership Impact Research Project. They are as follows:

1. The Child Care Center Data Set contains information on nonprofit and for-profit child care centers. The data is provided by the center directors and focuses on the population served, services, funding sources, and other major characteristics of contractors. Some child care centers included in this data set have a partnership with a local Head Start provider in Ohio, while others do not.
2. The Child Care Center Partnership Data Set contains information on the child care centers' contracts with a local Head Start agency in Ohio and focuses on various aspects of these contractual relationships. This partnership-level data set has information on a subsample of the centers included in the Child Care Center Data Set mentioned above.
3. The Parent Data Set includes information collected from parents on the services their children have received and their satisfaction with the service quality. This is parent-level data, and thus it includes responses of several parents whose children attended the centers included in the Child Care Center Data Set.

Each file represents pooled time-series data with up to three survey records for each child care center (or each partnership). First, the Child Care Center Data and the Partnership Data were merged using center ID numbers and wave indicators. At this point, the centers from the Child Care Center Data that were not involved in a Head Start contract were dropped from our analysis. We then modified the parent level data set listed above as No. 3. This data file was used to provide information on parents' assessments of center quality. Thus, using the Parent Data, we computed an average parent-rated quality indicator for each center. Next, we merged this center-level information with the first two data sets, resulting in 163 records. Finally, we used a variety of strategies to deal with the observations with missing values for any of our independent and dependent variables.⁴ The final data set which we used in this analysis contained 96 records, each describing a nonprofit or a for-profit child care center and its partnership with a local Head Start agency.

Employing the combined data set, we tested the proposed model using Ordinary Least Squares regression to estimate the effects of individual independent variables on *collaborative relationship strength* holding all the other independent and control variables constant. Due to the structure of the data—an unbalanced panel data set with several observations for each child care center—an individual child care center can appear multiple times in our data set, and the observations for these types of child care centers will not be independent of each other. To address concerns about potential heteroscedasticity and autocorrelation, we also tested the proposed model using clustered robust standard errors.

Dependent variables. Appendices 1 and 2 provide information on how all variables are operationalized and measured. For our dependent variable, we created a set of variables measuring different aspects of collaborative relationship strength between a government agency and a contractor perceived by the contractor. Specifically, the variable *shared procedures* reflects

the existence of procedures—not necessarily formally recorded—which govern the contractual relationship and are acknowledged by both parties. These include the use of various processes to explain the nature of the Head Start program to staff, to prepare staff for their responsibilities, to ensure staff understands Head Start regulations, and to manage finances. This variable is the mean of eight survey items measured on a 5-point Likert-type scale (see Appendix A). The variable *goal agreement* reflects contractors' perception regarding the extent to which both parties' agree on contract goals. This is the mean of responses for four survey items indicated in Appendix A. Among other things, this variable is intended to represent the extent to which there is a shared philosophy or a vision of the curriculum and educational approaches. The variable *communication quality*—the mean of three survey items listed in Appendix A—measures whether or not the child care center directors believe they have good communication with their public partners. More specifically, this variable reflects the contractors' perception that their voice is heard and that their input will be welcomed by the Head Start agency. Finally, *cooperation in contract implementation* is the mean of five survey items describing cooperative strategies used by the two parties involved in the contract. In particular, it reflects the contractors' perception of being “a full partner” and perceptions of being treated “with respect.”

We tested the reliability of the scales for these four variables using Cronbach alphas. The resulting alpha scores range from .787 to .898, which exceed the minimum acceptable threshold. We further conducted a confirmatory factor analysis of these four variables. The result indicates that they can be combined into a single measure of *collaborative relationship strength*.⁵ We created this aggregate measure by calculating the mean of the four variables described above.

Independent variables. The coding procedures for creating all independent variables are explained in Appendix B. There are two independent variables that represent contract characteristics. The first variable is *contract specificity*. We computed the sum of eight dichotomous survey items to measure whether there is a written legal agreement and other formally recorded documents detailing contract implementation procedures. The other independent variable that represents a contract characteristic is *relationship length*. Some scholars have viewed relationship length and strength as essentially synonymous (Campbell & Harris, 1993; Macneil, 1974; Smith, 1996; Smith & Smyth, 1996). However, we believe that contract length is distinct from its strength—it is a separate factor that *may* or *may not* determine the strength. We measure relationship length as the number of years that a child care center has engaged in a partnership with a particular local Head Start Agency in Ohio.

We operationalize contractor traits using several variables. We measure *internal management capacity* reported by contractors themselves using the sum of seven survey items. This variable is based on the number of times someone in a managerial position performed various administrative functions such as “observing teachers in the classroom to assess their practice” and “meeting with teachers to provide feedback regarding their teaching practices in the classroom.” To reflect organizational ownership, we created two dummy variables: the first variable indicates whether the organization is a *nonprofit* rather than a for-profit organization, and the second variable indicates whether the contractor is a *faith-based* rather than a secular organization. Two variables measure organizational size: *average daily enrollment of preschoolers* at a center and a center's *total annual operating budget*.

As a final contractor trait, we measure *contractor service quality* using three different indicators. As our first measure of child care service quality, we include an objective measure of agency performance in our data analysis. The Partnership Impact Research Project data set includes data on the number of regulatory violations documented during the latest state licensing

inspection conducted by government quality inspectors. This is a negative measure of service quality: lower values suggest better quality. In our sample, the values of this interval-ratio variable range from 0 to 49.

Similar to performance measures used in several recent studies (e.g., Brewer & Coleman, 2000; Chun & Rainey, 2005; Moynihan & Pandey, 2005; Selden & Sowa, 2004), our two other measures of service quality are subjective. In the survey, respondents—child care center directors—were first asked to provide detailed background information on various aspects of their centers' performance and then were asked to share their overall satisfaction with the quality of their center. Specifically, the following survey question was used: "How satisfied are you with the overall quality of your center?" There were five possible response categories: *very satisfied* (5), *somewhat satisfied* (4), *neither satisfied nor dissatisfied* (3), *not very satisfied* (2), or *not satisfied at all* (1). We also included a measure of child care center quality based on data collected from parents. We created an ordinal variable based on the following question: "In general are you satisfied with the quality of these services you get? (1 = *not at all*, 2 = *not very*, 3 = *somewhat*, 4 = *very*)." Parents were asked this question after discussing the specific services that their family received. We computed an average center-level rating for this question using the parent-level data for each center and included this in our center level analysis.

Due to their subjective nature, director and parent satisfaction with a child care center may vary as much by the personality, education, and experience of the respondent as by the center's actual performance. This concern is minimized considerably for the parent-rated satisfaction measure because it is an average based on data collected from multiple clients of each center. While our subjective measures of service quality have their limitations, scholars agree that it is possible to develop valid, reliable, and sensitive subjective measures of organizational performance (Brewer, 2006). An advantage of using employee and parent self-reports to measure performance in addition to the data on "violations" is that the reports provide a global measure of performance and are able to capture both output and outcome-based criteria (Moynihan & Pandey, 2005).

A contractor's external ties to the environment are measured in three different ways. We measure *financial autonomy* by the total number of funding sources received by an organization. We summed the number of positive responses to the questions regarding whether a contractor receives funding from eight different sources (federal Head Start, state Head Start, state pre-school subsidies, parent tuition/fees, United Way funding, the U.S. Department of Agriculture's Child and Adult Care Food Program, private foundation funding, and other funding). Having a greater number of funding sources indicates that the contractor is more autonomous from the local Head Start agency. In addition, we created a dichotomous variable referred to as *affiliation with a larger agency* to indicate whether a center is part of a larger agency or an umbrella organization. Finally, we measure the *influence of client groups* using a dummy variable to indicate whether a child care center provides opportunities for parents to participate in an advisory group.

Besides the independent variables, we include seven control variables in our model. To measure *teacher quality* at each center, we use the proportion of teachers with a bachelor's or master's degree. We also measure the supply of teachers in a child care center using the *student-teacher ratio* reported by each center. Furthermore, we include the *percentage of each center's preschool teachers receiving training annually*. To control the effect of geographical location, we include a dichotomous variable indicating whether a contractor is located in a *rural* area. In addition, we control for the characteristics of a center's client population by including the *percentage of White preschoolers* in our regression analysis. Finally, since the data set was collected from three survey waves, we added two dummy variables indicating each survey wave.

Limitations. There are some limitations with this study’s data and research design. First, the data describing the relationships between the government agencies and the contractors, our dependent variables, were provided by the contractors rather than by the government agency or both parties. Thus these variables reflect the contractors’ perceptions and are subjective.⁶ While there is a possibility of a positive bias in the contractors’ reports, this bias is likely to be systematic and should not compromise the analysis (Moynihan & Pandey, 2005). Another limitation of this study is that the sample size for our analysis is 96 child care centers. As a result, our models may have low statistical power. Finally, our data is based on child care partnerships in a single state. This limits the generalizability of this study because of the multiple factors that vary across states and are not captured in this analysis such as cost of living differences and child care policies.⁷ Furthermore, we focus on a single service area with outcomes that are difficult to measure. The findings of this analysis will therefore be more applicable to similar social services such as elderly care where customers are typically unable to judge quality and less generalizable to other types of services. Replications of this study in other locations and service areas can help verify our findings.

Findings

Table 1 reports descriptive statistics for our variables both from the full data set with 163 observations as well as from the reduced data set with 96 observations after dropping those records with missing values. We tested whether there is a statistically significant difference in the means of the variables between the full sample and the reduced sample. The two-tailed test results show that there is no statistically significant difference between sample means except for parent-rated quality. In our reduced sample, 45 centers are nonprofit contractors (47%) and 12 centers are faith-based organizations (13%). The breakdown of the centers by wave is as follows: 37 centers appeared in Wave 1 (39%), 34 centers participated in Wave 2 (35%), and 25 centers are included in Wave 3 (26%).

Table 1. Descriptive Statistics

Variables	<i>N</i>	<i>M</i>	<i>SD</i>	Min.	Max.	<i>t</i> statistic
Dependent variables						
Collaborative relationship strength	158	3.667	0.832	1.400	5.000	-0.291
	96	3.700	0.900	1.400	5.000	
Shared procedures	158	3.187	0.946	1.000	5.000	-0.102
	96	3.200	1.002	1.000	5.000	
Goal agreement	158	3.878	0.919	1.000	5.000	-0.358
	96	3.922	0.966	1.000	5.000	
Communication quality	158	3.789	0.970	1.000	5.000	-0.427
	96	3.844	1.010	1.000	5.000	
Cooperation in contract implementation	158	3.815	0.981	1.400	5.000	-0.151
	96	3.835	1.051	1.400	5.000	
Independent variables						
Contract characteristics						
Contract specificity	163	6.399	1.648	0.000	8.000	-0.355
	96	6.473	1.602	0.000	8.000	
Relationship length	163	3.051	1.660	0.063	9.087	-0.274
	96	3.112	1.770	0.063	9.087	
Contractor traits						
	163	29.808	31.744	0.000	185	-1.261

Internal management capacity	96	35.392	35.883	3.900	185	
Nonprofit	163	0.466	0.500	0	1	-0.047
	96	0.469	0.502	0	1	
Faith-based	163	0.172	0.378	0	1	1.045
	96	0.125	0.332	0	1	
Contractor service quality						
Director-rated satisfaction	163	4.239	0.852	1.000	5.000	-1.792
	96	4.417	0.721	2.000	5.000	
Parent-rated quality	125	3.418	0.317	2.429	3.944	3.723 ^a
	96	3.203	0.493	2.000	5.000	
Number of violations	131	8.298	8.213	0	49	0.520
	96	7.729	8.095	0	49	
Contractor size						
Number of students	163	32.938	18.816	6	135	-0.022
	96	32.989	17.234	7	100	
Contractor's budget (natural log)	163	12.704	0.738	8.006	15.654	-0.137
	96	12.718	0.824	8.006	15.654	
Environmental conditions						
Financial autonomy from the contracting agency	163	4.503	1.288	1.000	8.000	0.269
	96	4.458	1.305	1.000	7.000	
Affiliation with a larger organization	163	0.436	0.497	0	1	0.298
	96	0.417	0.496	0	1	
Influence of client groups	163	0.583	0.495	0	1	-0.828
	96	0.635	0.484	0	1	
Control variables						
Human resource capacity						
Teacher quality	163	17.810	23.950	0.000	100	-0.505
	96	19.480	26.659	0.000	100	
Teacher training	163	97.566	12.624	2.000	100	-1.852
	96	99.482	2.988	75.000	100	
Student-teacher ratio	163	9.564	2.574	2.000	15.000	-1.213
	96	9.971	2.627	4.000	15.000	
Contractor in rural area	163	0.172	0.378	0	1	0.103
	96	0.167	0.375	0	1	
% of White preschoolers	163	53.036	36.632	0	100	-0.081
	96	53.422	37.081	0	100	
Wave 2	163	0.288	0.454	0	1	-1.089
	96	0.354	0.481	0	1	
Wave 3	163	0.233	0.424	0	1	-0.483
	96	0.260	0.441	0	1	

a. p value = .0008.

We measure the strength of collaborative relationships using five measures as explained in Appendix A. The mean scores of the four subdimensions of collaborative relationship strength in our reduced data set range between 3.200 and 3.922, suggesting that childcare center directors have relatively positive perceptions of their relationships with local Head Start agencies. In particular, *goal agreement* had the highest rated mean score and *shared procedures* had the lowest. *Communication quality* and *cooperation in contract implementation* show similar levels of strength: their mean scores are 3.844 and 3.835, respectively, which is considerably higher than the mean score of *shared procedures*, 3.200. This result may suggest that the contractors and the

government agencies often agree on the vision, goals, and philosophy of child care provision and have the capacity to effectively communicate and promote partnership-oriented behavior. However, developing specific, mutually understood procedures to ensure that everyone is involved in the contract management may be less prevalent.

Applying the five different measures of the dependent variable, we tested the proposed hypotheses. The first model utilizes our aggregate measure of *collaborative relationship strength* as the dependent variable, while the remaining four models investigate the relative impact of independent variables on the four specific dimensions of collaborative relationship strength: *goal agreement*, *communication quality*, *cooperation in contract implementation*, and *shared procedures*. Table 2 shows the estimation results for our OLS and clustered robust standard errors models.⁸

Providing support for Hypothesis 1b, contract specificity is significant in all 10 regression models. Contrary to the arguments by some scholars, the degree of formalization in contract implementation is not negatively associated with the formation a good relationship between the contractor and the government agency. Specification of contract parameters occurs in tandem with the development of shared procedures, establishment of common goals, effective communication, and cooperation in contract implementation. Thus well-specified contracts and perhaps the efforts devoted to developing them seem to foster strong collaborative relationships between the contracting parties.⁹

Another important contract characteristic—relationship length—is positively associated with cooperation in contract implementation in our clustered errors model. This finding suggests that contractors are more likely to cooperate in the implementation of long-term contracts. However, relationship length is not statistically significant in any of the other models, suggesting that there is only limited support for Hypothesis 2.

Table 2. Regression Analysis Results for Collaborative Relationship Strength

Variables	Collaborative relationship strength		Shared procedures		Goal agreement		Communication quality		Cooperation in contract implementation	
	OLS (b)	Clustered errors (b)	OLS (b)	Clustered errors (b)	OLS (b)	Clustered errors (b)	OLS (b)	Clustered errors (b)	OLS (b)	Clustered errors (b)
Contract characteristics										
Contract specificity	0.194***	0.194**	0.186*	0.186*	0.191**	0.191*	0.234***	0.234**	0.163*	0.163*
Relationship length	0.095	0.095	0.136	0.136	0.001	0.001	0.096	0.096	0.148	0.148*

Contractor traits										
Internal management capacity	0.002	0.002	0.006*	0.006*	0.0002	0.0002	0.002	0.002	0.002	0.002
Nonprofit	- 0.851**	-0.851*	- 1.058*	- 1.058*	- 1.107**	- 1.107*	- 0.191	-0.191	- 1.047**	- 1.047**
Faith-based	0.200	0.200	0.102	0.102	0.652	0.652	- 0.423	-0.423	0.471	0.471
Contractor service quality										
Director-rated satisfaction	0.326*	0.326*	0.296*	0.296	0.294*	0.294*	0.379*	0.379*	0.334*	0.334*
Parent-rated quality	0.725***	0.725***	0.798*	0.798*	0.786**	0.786*	0.690**	0.690*	0.623*	0.623*
Number of violation	0.006	0.006	0.007	0.007	0.002	0.002	0.007	0.007	0.006	0.006
Contractor size										
Number of students	- 0.001	-0.001	0.002	0.002	- 0.008	-0.008	- 0.001	-0.001	-0.004	-0.004
Contractor's budget	0.019	0.019	-0.008	-0.008	0.018	0.018	- 0.008	-0.008	0.072	0.072
Environmental conditions										
Financial autonomy	- 0.317***	- 0.317***	- 0.291*	- 0.291*	- 0.255**	- 0.255*	- 0.343***	- 0.343**	- 0.378**	- 0.378**
Organizational affiliation	0.811**	0.811*	0.812*	0.812*	1.201***	1.201*	0.262	0.262	0.969**	0.969**
Influence of client groups	- 0.222	-0.222	0.028	0.028	- 0.193	-0.193	- 0.272	-0.272	-0.451	-0.451
Control variables										
Human resource capacity										
Teacher quality	- 0.009**	-0.009	-0.007	-0.007	- 0.012**	- 0.012*	- 0.011*	-0.011*	-0.008	-0.008
Teacher training	0.049	0.049**	0.01	0.01	0.064	0.064*	0.044	0.044	0.079*	0.079**
Student-teacher ratio	- 0.034	-0.034	-0.036	-0.036	- 0.037	-0.037	- 0.042	-0.042	-0.019	-0.019
Contractor in rural area	0.301	0.301	0.531	0.531	0.445	0.445	0.198	0.198	0.032	0.032
% of White preschoolers	0.005	0.005	0.004	0.004	0.004	0.004	0.008	0.008	0.005	0.005
Wave 2	- 0.031	-0.031	0.002	0.002	0.052	0.052	- 0.223	-0.223	0.048	0.048

Wave 3	-0.429	-0.429*	-0.516	- 0.516*	-0.169	-0.169	- 0.738*	-0.292	-0.292	
Intercept	-4.936	-4.936*	-1.735	3.929	-6.184	6.184*	-3.970	-7.853	-7.853*	
<i>N</i>	96	96	96	96	96	96	96	96	96	
<i>R</i> ²	0.493	0.493	0.436	0.436	0.442	0.442	0.434	0.434	0.437	
<i>F</i> -value	3.64**	9.11***	2.90**	4.17**	2.98**	4.35**	2.87**	4.35***	2.90***	5.78***

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

Two of the three environmental variables play an important role in explaining variation in the dependent variables. Consistent with Hypothesis 8, *financial autonomy* is negatively associated with relationship strength. This result confirms our hypothesis that contractors with diversified funding streams have fewer incentives to invest their resources in developing strong collaborative relationships with government agencies and is consistent with Amirkhanyan (2009). However, these results should be interpreted cautiously. We measure financial autonomy using the number of funding streams a contractor receives. Perhaps, a better measure of the concept, not available for this research, would involve assessing the ratio of the contractor's budget coming from Head Start funding compared to the contractor's total budget. The positive and significant association between *affiliation with a larger organization* and collaborative relationship strength suggests the importance of contractors' external ties in contract implementation and confirms Hypothesis 9a. Contractors affiliated with larger parent organizations develop stronger collaborative relationships with government agencies. In particular, they establish more shared procedures, reach greater agreement on contract goals, and have contracts that involve greater cooperation in their implementation. On the other hand, we fail to find support for Hypothesis 10 as our third environmental variable, the presence of parent advisory groups, is not statistically significant.

Three contractor traits have significant associations with either our aggregate measure of collaborative relationship strength or some of its submeasures. While a contractor's *internal management capacity* does not have a significant association with overall collaborative relationship strength, it has a positive association with the development of shared procedures. This result provides partial support for Hypothesis 3a and suggests that contractors whose leaders are more skilled and active in internal managerial tasks are also more effective in detailing the procedures to manage the contingencies of contract implementation in cooperation with their public counterparts.

Consistent with Hypothesis 4b, nonprofit child care centers are less likely than their for-profit counterparts to develop strong collaborative relationships with local Head Start agencies. Nonprofit status has a negative association with collaborative relationship strength when collaborative relationship strength is measured by our aggregate measure, shared procedures, goal agreement, and cooperation in contract implementation.

We also find partial support for Hypothesis 6. *Service quality*, as evaluated by parents whose children attend the child care centers, has a positive relationship with every aspect of collaborative relationship strength identified in this study. According to our OLS results, a one-unit increase in the average parent satisfaction with the child care center is associated with a .725 unit increase in the center's overall collaborative relationship with the local Head Start agency. In addition, another service quality measure based on data provided by child care center directors is positively associated with all five aspects of collaborative relationship strength (except shared procedures in our clustered errors model). Thus collaboration in contracting increases as client and

contractor satisfaction grows. However, we fail to find support for an association between the number of licensing violations committed by the child care center and collaborative relationship strength. It appears that trust between the contractor and government agency is sensitive to service recipients' satisfaction with the service as well as the contractor's own confidence with the service quality but is not associated with a more objective service quality measure, the frequency of licensing violations.

We do not find any support for Hypothesis 5a, 5b, 7a, or 7b. Neither *faith-based ownership status* nor *contractor size* is significantly associated with any of our measures of collaborative relationship strength. In addition, most of the control variables included in the regression analysis do not have significant associations with collaborative relationship strength. One exception is *teacher quality*. The quality of teachers measured by the percentage of the teachers who hold BA or MA degrees is negatively associated with some of our collaborative relationship strength measures: aggregate collaborative relationship strength (in our ordinary least squares [OLS] model only), goal agreement, and communication quality. We also find that *teacher training* has a positive association with aggregate collaborative relationship strength (in our clustered errors model only), goal agreement (in our clustered errors model only), and cooperation in contract implementation.

Discussion

The objective of this article is to understand the factors associated with the development of collaborative contracting relationships. We view the collaborative or "relational" aspects of contract implementation broadly. Our conceptualization includes joint efforts and practices to ensure that the contractor shares the same vision and philosophy as the government, has a voice and feels respected in the implementation process, and understands all the expectations, regulations, and procedures. The primary finding of this study is that the development of detailed contracts and collaborative contracting arrangements play a complementary role in contracting relationships, rather than having a negative association, as it was often suggested in the past. Our research indicates that collaborative contracting arrangements are often used in tandem with legal agreements and documents that formally prescribe contractor roles, responsibilities, procedures, and actions. Thus what has been viewed as a dichotomy may, in fact, represent two important and parallel practices in contract management.

These results challenge the assertions by some scholars that trust is associated with less formal contract specification (Gulati, 1995; Ring & Van de Ven, 1994). We find that as contract specification increases, contracting relationships actually become stronger as measured by goal agreement, communication quality, cooperation in contract implementation, and the development of shared contracting procedures. If this is the case, there may be greater transaction costs associated with the contract specification process when strong collaborative relationships develop between the government and contractor rather than fewer costs. At the same time, strong collaborative relationships may still be associated with fewer transaction costs during the contract implementation process as a result of greater alignment regarding service delivery goals and expectations. Our results shed light on the process of developing strong interorganizational relationships: they suggest that contract specification may serve as a necessary foundation on which actual relationships are built and improved. Hence, while contract specification requires capacity and effort, this investment appears to have a positive effect on the more intangible aspects of relationships: understanding, shared values, and respect.

We find limited evidence that relationship length is positively associated with the development of collaborative contracting relationships. There is some evidence indicating contractors are more likely to cooperate in a contract's implementation as the length of the contract increases. This result is generally consistent with past research, which suggests that trust develops over time (Thomson & Perry, 2006; Van Slyke, 2007, 2009).

Our findings are particularly interesting in the light of earlier research on the effect of time in contracting relationships. A recent article by Yang, Tzung, and Hsieh (2009) explores the effect of different government capacity measures on various performance indicators. They observe that the impact of some of these capacities is moderated by the passage of time. For instance, the positive effect that agenda-setting and evaluation capacities have on performance declines with time, while the benefits of implementation capacity actually grow over time. If we view our dependent variables, broadly, as indicators of "collaborative capacity" in government contracts—something that may eventually help improve the contractors' performance—our study may contribute to this discussion. Rather than exploring how time can moderate the effect of some governments' capacities on performance, our study helps understand whether these capacities grow or decline over time. In fact, we find that time matters for whether subjects believe they are respected, they are full partners, and their partnerships are fully established (our measures of *cooperation in contract implementation*). Thus time helps build child care center directors' emotional comfort and the feeling of being trusted and respected in these relationships. Time, however, did not contribute to the other aspects of collaborative capacity: goal agreement, communication quality, and share procedures. Our findings confirm the conclusion of Yang and colleagues (2009) that contract managers and researchers should adopt a long-term perspective on government contracting and expect some capacities to be more prevalent and more important for performance in the course of contract implementation.

Another important finding of our study is that parents' and child care center directors' satisfaction with service quality is associated with stronger collaborative contracting relationships.¹⁰ This may suggest that contractors that are effective in their core activities establish closer partnerships with their monitoring agency. Thus past organizational performance may be an important clue for public officials involved in the contractor selection process. On the other hand, we do not find a significant association between our third measure of service quality, the frequency of licensing violations, and any of our measures for strong collaborative relationships. Perhaps, the nature of these violations may explain these findings. The number of licensing violations in our regressions measures child care centers' compliance with health and safety regulations. Some of these violations may be determined by the condition of the facility, equipment, or other similar factors. Such problems may arise irrespective of the partnership strength and, in and of themselves, may not have an effect on relationships. In cooperative relationships, we would expect these problems to be resolved in the spirit of full partnership by openly acknowledging them and establishing a plan of action. In less cooperative relationships, more formal compliance-based tools may have to be used. Our findings suggest that regulatory performance problems not only do not bring partners closer together but also do not draw them apart. In addition, as is frequently the case with objective measures of performance, the number of licensing violations may simply not be comprehensive enough to capture important dimensions of child care center performance (Andrews, Boyne, & Walker, 2006).

In addition, we find that a contractor's internal management capacity is associated with the development of shared procedures in contracting relationships. Some child care center directors in the sample were active in observing their teachers in the classroom, providing feedback, discussing

how the curriculum satisfies the developmental needs of children, and reviewing program data to make improvements and track the attainment of organizational objectives. Regression analysis suggests that these directors were also more likely to work on building strong collaborative relationships with government agencies. Specifically, they were more likely to work on developing procedures to ensure that staff has a good understanding of Head Start, there are processes for resolving conflicts, and staff is involved in all phases of the partnerships. Our findings suggest that the same organizational managers who work effectively within their organizations tend to work effectively across organizational boundaries.

Our study also indicates that nonprofit organizations are less likely to maintain collaborative relationships with government agencies. We suggest two possible explanations. First despite the many virtues ascribed to nonprofit organizations, public managers may be increasingly aware of their problems including financial abuses and unethical behavior (Arenson, 1995; Grimaldi & Trescott, 2008; Reaves, 2001), the lack of management capacity and the absence of factors to “discipline” dysfunctional managers in small noncompetitive markets (Hansmann, 1986; Johnston & Romzek, 1999; Prager, 1994; Rose-Ackerman, 1986), nonprofits’ ability to apply political pressures on local governments for increased service rates (Johnston & Romzek, 1999; Smith & Smyth, 1996), and, in some subsectors, nonprofits’ propensity to limit their service to the more affluent clients (Amirkhanyan et al., 2008). Furthermore, a recent study analyzed contract monitoring practices across nonprofit and for-profit contractors (Amirkhanyan, 2010). This study found that while public managers consider contractors’ ownership status unimportant in their work, managers working with nonprofit contractors in fact used a different set of performance measures, and some respondents reported being especially cautious of the vendors’ nonprofit status. These factors may explain the lower levels of collaborative relationship strength with nonprofit organizations in our study.

A second plausible explanation is that the data on collaborative relationships we used were obtained from the vendors. Thus we find that nonprofit organizations *perceive* their partnerships with the government to be less collaborative than their for-profit counterparts. This may reflect higher expectations of and a propensity toward collaborative activity by the nonprofit providers. The for-profit organizations may be more likely to view their contracts with government agencies as business transactions and not expect to share service delivery philosophies, or be seen as a “full partners” in the relationship.

While we find that contractor size by itself does not matter, financial and organizational autonomy have a significant impact on the development of strong collaborative relationships. In our study, contractor affiliation with a larger institution is positively associated with collaborative relationship strength. Our results also indicate that contractors with fewer funding sources have stronger collaborative relationships with their public partners. Our data preclude us from knowing how the private contractors were formed, which may have helped in the interpretation of this finding. In fact, some contractors could have been formed (or significantly expanded) in response to a specific contract opportunity. Being “the creatures” of government action in the past, these organizations would have stronger informal ties at the onset of the contract and can be expected to invest more time and effort as the relationship progresses. In such cases, it is also reasonable to expect some level of staff transitions across sectors (e.g., cases of government managers transitioning from the public sector to the private sector but still maintaining strong ties with the public agency). On the other hand, the contractors with multiple sources of funding are less likely to have an inherent link to a specific government agency and are therefore more likely to be independent.

Our findings on financial and organizational autonomy have important implications for contractor selection. They suggest that public managers should carefully consider a contractor’s other partnerships when selecting a vendor and strategically evaluate how important the contract is for a specific contractor. In addition, a contractor’s other partnerships should be considered at the contract implementation stage. Public managers who place a high value on establishing collaborative contracting relationships should recognize that they may need to spend more time and effort building partnerships with contractors that are not affiliated with larger umbrella organizations and with contractors that are more financially autonomous.

One important limitation of our analysis suggests a fruitful direction for the future research. Our data allow us to observe *the end result* rather than *the process* of developing strong collaborative or highly formalized relationships. Thus we do not know if more specific contracts were developed jointly or if the Head Start agencies unilaterally set the standards and the processes for the contractors, which eventually improved the contractors’ relationships with their agencies. For instance, we know that some contracts involved “a document that describe[d] procedures for communication,” but we do not know if the document was developed jointly. Past research suggests that some contractors negotiate the rules, regulations, and standards at different points in the course of contracting, while other contractors accept the standards unilaterally developed by the government agency (Amirkhanyan, 2009). Understanding these “process-related” aspects of contracts can have important implications for the practice of contract management.

This study provides insights into the organizational and environmental factors associated with stronger collaborative relationships between governments and their contractors. Contract management and implementation, however, is a complex process. Aside from the quality of contractual relationships, numerous factors may be associated with programmatic outcomes. Such factors include the contractors’ service delivery and management capacity, sufficient resources, characteristics of the client population, market conditions, quality of performance measurement procedures and data, and many others. The ultimate task—pursued by the authors of this research in a follow-up study—is therefore to disentangle the association of relationship design and other factors with organizational performance. Our data set has several interesting and distinct measures of performance that make it possible to separate performance from relationships by utilizing the assessments of multiple independent constituencies. If this future study finds relationships indeed matter, the findings of this current study may provide practitioners with valuable information on the factors that influence their development.

Appendix A

Survey Items for Dependent Variables

Variable	Items used to create each variable
Collaborative relationship strength (aggregate)	Mean of four variables created below: “shared procedures,” “goal agreement,” “communication quality,” and “cooperation in contract implementation”
Shared procedures	Mean of the following survey items measured on a 5-point Likert-type scale (1 = <i>not at all</i> , 2 = <i>not very</i> , 3 = <i>neither satisfied nor dissatisfied</i> , 4 = <i>somewhat</i> , 5 = <i>very much so</i>)

Cronbach α = .898	<p>The partnership between my child care center and Head Start has . . .</p> <ol style="list-style-type: none"> 1. Process for ensuring child care staff have a good understanding of Head Start 2. Process to ensure staff understand Head Start regulations 3. Procedures for resolving conflicts or differences across your Programs 4. Ensured that child care staff are prepared for their new responsibilities 5. Ensured that all staff are involved in all phases of partnerships 6. Procedures to keep children in the program if their parents lose eligibility for child care subsidy 7. Procedures to keep children in the program if their parents lose eligibility for Head Start services <p>Procedures to manage finances as part of the partnership</p>
Goal agreement	Mean of the following survey items measured on a 5-point Likert-type scale
Cronbach α = .874	<ol style="list-style-type: none"> 1. The partnership between my child care center and Head Start has a shared partnership philosophy and vision 2. The partnership between my child care center and Head Start has agreement about curriculum/educational approach 3. The partnership between my child care center and Head Start has agreements or plans that help guide the partnership work 4. My center and Head Start have similar goals for our work together
Communication quality	Mean of the following survey items measured on a 5-point Likert-type scale
Cronbach α = .787	<ol style="list-style-type: none"> 1. The partnership between my child care center and Head Start has good communication within and across your organizations 2. I feel my voice is heard in the Partnership 3. I feel I can pick up the phone and call the Head Start program
Cooperation in contract implementation	Mean of the following survey items measured on a 5-point Likert-type scale
Cronbach α = .825	<ol style="list-style-type: none"> 1. Individuals involved in the partnership between my child care center and Head Start demonstrate mutual respect for one another 2. I feel my program is a full partner with the Head Start program

	<p>3. I feel the Head Start program respects my Program</p> <p>4. I feel Head Start does not really view my center as a partner (reverse coding)</p> <p>5. How would you characterize your partnership with Head Start on a scale of 1 to 5, where 1 = <i>just forming</i> and 5 = <i>fully established</i></p>
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Appendix B

Survey Items for Independent Variables

Variable	Items used to create each variable
Contract characteristics	
Contract specificity	<p>Sum of the following survey items measured as dichotomous nominal variables:</p> <ol style="list-style-type: none"> 1. Currently do you have a written legal agreement or a contract with Head Start? 2. Do you regularly update the document? 3. Does this agreement specify the maximum number of children who can receive Head Start enhanced services at your center? 4. In your partnership with Head Start, do you have a written document that describes roles and responsibilities of Head Start and of people at your center in providing services? 5. Do you have any documents that describe the partnership's goals and specific actions that the partnership plans to take to achieve the goals? 6. In your partnership, do you have any written documents that state what your program needs to do to meet Head Start Program Performance Standards? 7. Do you have documents describing procedures for communicating with your Head Start partner? 8. Do you have a well-defined process for recruiting and enrolling children into your center for Head Start enhanced services?
Relationship length	Number of years that the center has engaged in the partnership
Contractor traits	
Internal management capacity	<p>Sum of seven dichotomous survey items: Please indicate the average number of times someone in an administrative role at your center, such as an education coordinator, administrator, or senior teacher, engages in the following activities during a typical month.</p> <ol style="list-style-type: none"> 1. Observes teachers in the classroom to assess their practice.

	<ol style="list-style-type: none"> 2. Meets with teachers to provide feedback regarding their teaching practices in the classroom. 3. Meets with teachers to discuss how to link the curriculum to children’s developmental needs. 4. Discusses with teachers strategies to ensure teaching practice is developmentally appropriate. 5. Discusses with teachers strategies to ensure a literacy-rich curriculum. 6. Reviews teachers’ teaching. 7. Reviews program data to see how the center is doing compared to specific goals or objectives.
Nonprofit contractor	Is your center a nonprofit or for-profit organization? (coded as 1 for nonprofit organizations and 0 for for-profit organizations)
Faith-based contractor	Is your center a faith-based organization? (coded as 1 for positive answers)
Contractor service quality	
Director’s satisfaction	“How satisfied are you with the overall quality of your center?” 1 = <i>not satisfied at all</i> , 2 = <i>not very satisfied</i> , 3 = <i>neither satisfied nor dissatisfied</i> , 4 = <i>somewhat satisfied</i> , 5 = <i>very satisfied</i>
Parent-rated satisfaction	Mean score of parents’ responses from one center to the following question, “In general, are you satisfied with the quality of these services you get?” (1 = <i>not at all</i> , 2 = <i>not very</i> , 3 = <i>somewhat</i> , 4 = <i>very</i>)

Number of violations	Number of violations documented during state licensing inspections
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Contractor size

Number of students	What is the average daily enrollment of preschoolers? (numeric)
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Contractor’s budget	What is your child care center’s current total annual operating budget? (numeric)
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Environmental conditions

Financial autonomy from the contracting agency	<p>Total number of funding streams</p> <p>Does your center or agency access the following funding sources to provide services to preschoolers and their families at your child care center? (1 = <i>yes</i>, 0 = <i>no</i>)</p> <ol style="list-style-type: none"> 1. Federal Head Start 2. State Head Start 3. State Preschool Subsidies 4. Parent tuition/fees 5. United Way funding 6. USDA CACFP 7. Private foundation funding 8. Other funding
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Affiliation with a larger organization	Is your center part of a larger agency or umbrella organization? (coded as 1 for positive answers)
Influence of client groups	Does your center provide opportunities for parents to participate in an advisory group? (coded as 1 for positive answers)
Control variables	
Human resource capacity	
Teacher quality	Percentage of teachers with a Bachelor's degree or a Master's degree
Teacher training	Percentage of teachers receiving training annually
Student-teacher ratio	What is the ratio of preschoolers to teachers or teaching aides at your center?
Contractor in the rural area	Survey item "urbanicity" (1 = <i>urban</i> , 2 = <i>suburban</i> , 3 = <i>small town</i> , 4 = <i>rural</i> ; coded as 1 for small towns and rural areas and 0 for other responses)
% of White Preschoolers	Percentage of white preschoolers served by a center
Wave 2	Survey wave 2 (0 = <i>no</i> , 1 = <i>yes</i>)
Wave 3	Survey wave 3 (0 = <i>no</i> , 1 = <i>yes</i>)

Note: USDA CACFP = United States Department of Agriculture Child and Adult Care Food Program.

Authors' Note

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Notes

1. Asset specificity refers to the extent to which the physical infrastructure, technology, and knowledge and skills needed to produce a particular service can be used in the production of other services.
2. In addition to trust, contract specification is likely to be related to a variety of other factors including the complexity of the contracted service.
3. . The formal title of the data set is ICPSR04298-v1, 2001-2004.
4. There were less than five missing cases in any of the relational design variables, and we imputed means (the means and the medians had similar values). The variable measuring the number of violations had 32 missing cases, and since this number is substantial we removed all missing cases from our analysis. The variable measuring directors' satisfaction with the center had only one missing case, and we imputed the mode to retain that case in our analysis. The proportion of missing cases among control variables was well below 5%, and we imputed average or mode values.

5. We conducted a factor analysis to confirm the measurement model for *collaborative relationship strength* using the principal component analysis method. Varimax rotation method was applied. Following the Kaiser criterion, we dropped the components with eigenvalues under one (Dunteman, 1989). According to the resulting correlation matrix, there is only one component with eigenvalue greater than one. Those dropped components' eigenvalues range from 0.258 to 0.392. This result confirms that the four measures of *collaborative relationship strength* validate the single factor structure. The produced factor loadings for the four measured variables are “shared procedures” (0.844), “goal agreement” (0.886), “communication quality” (0.881), and “cooperation in contract implementation” (0.878).
6. It would be ideal if the relationship strength variables reflected both the contractors and the Head Start agency perspectives. The Partnership Impact Research Project does include the Head Start Partner Survey that measured Head Start directors' perspectives on their partnerships with contractors. However, matching the responses from the center directors with the responses from the Head Start directors caused a significant loss of data. For the sake of the statistical power of our data set, we decided not to use the Head Start Partner Survey data for this study.
7. Nonetheless, focusing on one state does help us keep constant the state-level variation in such policies, which may reduce concerns regarding spuriousness.
8. Due to potential reverse causality issues with many of our independent variables, we discuss our findings in terms of correlation rather than causation.
9. As a sensitivity analysis, we ran a model exploring whether a reciprocal relationship exists between contract specification and relationship strength. The results of this sensitivity analysis are generally consistent with the estimation results presented in this article.
10. We have conducted a two-stage least squares (2SLS) analysis by using human resource capacity variables (teacher quality, teacher training, and student-teacher ratio) as instruments for parent-rated service quality. We find that contract specificity and affiliation with a larger organization are still significant, but most other variables lose their significance. We also tested a model where we use the same instruments for director-rated service quality. The results show that contract specificity and nonprofit status are still significant.

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