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# Relational Mechanisms in Complex Contracting: Factors Associated with Private Managers' Satisfaction with and Commitment to the Contract Relationship

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## Abstract

The complexity of human service delivery means that contracts are often incomplete or contingent. When contracted services or products are complex, relational contracting can function as a critical informal accountability mechanism. This study introduces and tests a conceptual framework of relational processes and organizational factors hypothesized to inform private human service contract outcomes. Data from a 2015 survey of private nonprofit and for-profit human service organizations in five counties are used to examine factors associated with two proximal indicators of success in human service contracting: commitment to and satisfaction with the contract relationship. Findings provide support for our conceptual framework, highlight the multidimensional nature of trust and commitment, and identify key differences in the relational processes associated with commitment and satisfaction to the contract relationship. Communication quality, trust, and flexibility were associated with satisfaction, whereas interdependence, flexibility, and asset specificity were associated with longer-term commitment to the contract relationship. For-profit ownership was associated with lower commitment and satisfaction. Implications for research and practice are discussed.

## Introduction

In the United States, publicly funded human services are commonly provided through purchase-of-service contracts with private agencies (Kettl 2015; Laforest and Smith 2017). In 2012, an estimated ~\$81 billion in publicly funded and contracted services were provided across major human service domains, for example, child welfare, public assistance, adult and aging, and employment and training (Pettijohn and Boris 2014). Challenges facing public administrators in managing these contractual

relationships include the need to ensure accountability of contractors and integration of services that may be provided across separate contracts (Campbell and Lambright 2017; Mosley and Smith 2018).

Extant research has drawn on different theoretical models (e.g., principal-agent theory, stewardship theory) to identify contract mechanisms used by public organizations to promote positive contracting outcomes and inform the development of strategies for improving complex contract outcomes (Heinrich et al. 2010; Van Slyke 2007). In particular, research suggests

that efforts to ensure accountability of contractors and promote inter-organizational collaboration can include both formal contract mechanisms and relational contracts, that is, informal agreements or expectations sustained by the value of future relationships (Gazley 2008; Romzek et al. 2013). Relational contracts are particularly important in the human services, where the complexity and indeterminacy of service delivery and associated challenges with performance measurement mean that formal contracts are often “incomplete,” that is, cannot address all contracting contingencies that may occur (Brown et al. 2006; Lambright 2009; Macneil 1978). For example, the complexity and diversity of client service needs can make it difficult to reliably estimate programmatic costs in advance (McBeath and Meezan 2010). Holistic treatment of client needs may also require provision of multiple services jointly produced by the public organization and private contractor(s), necessitating close collaboration and informal accountability that cannot be readily specified or enforced in a formal contract (Romzek et al. 2013). In these situations, relational contracts function as a critical informal accountability mechanism, substituting for or enhancing formal contractual agreements that cannot be readily enforced (Bertelli and Smith 2010; Poppo and Zenger 2002).

A growing literature suggests that the effect of relational contracts on human services contracting performance can equal that of formal contract mechanisms (Barton et al. 2006; Fernandez 2007; Van Slyke 2009). However, the effectiveness of relational contracts depends on the quality and consistency of the relationship between participants, requiring “recognition of interdependence in pursuit of shared goals” and “mutual commitment over and above that applied in any contract” (Mohr and Spekman 1994; Romzek et al. 2012). Acknowledging this growing evidence base, scholars have encouraged public and private organizations to engage in “facilitating behaviors” to foster development of mutually beneficial contracting relationships, for example, willingness to acknowledge contract errors, share information, and ensure frequent and sustained communication (Brown et al. 2016; Romzek, LeRoux, and Blackmar 2012).

However, there is limited evidence regarding the specific linkages connecting relational processes to contracting outcomes, particularly from the perspective of private providers (Boyer et al. 2016). The extant literature, which is primarily based on qualitative studies of collaborating public organizations, confirms the importance of cultivating strong cross-sector relationships and highlights the critical importance of communication processes and trust to relationship development (Hill 1990; Romzek, LeRoux and Blackmar 2012; Romzek et al. 2013). Little research

has empirically examined effects of communication, trust, or other relational processes on contracting outcomes, either more proximal outcomes such as public or private organizations’ commitment to the contract relationship, or more distal outcomes such as concrete improvements in client satisfaction or well-being. Research has also not assessed whether the effects of these relational processes may differ based on private agency characteristics such as nonprofit versus for-profit ownership.

Our study contributes to the literature in two ways: First, we introduce a conceptual framework of relational mechanisms hypothesized to affect contract outcomes and discuss its relevance to complex contracting. Second, we empirically test this framework using quantitative managerial data from a survey of private human service organizations (HSOs) in five counties. Specifically, we examine relational processes and organizational characteristics associated with two proximal indicators of success in complex human service contracts: private HSOs’ commitment to and satisfaction with the contract relationship.

### Relational Mechanisms in Human Services Contracting

The complexity of human service delivery means that formal contract mechanisms such as specification of contract terms and performance measures are necessary but typically not sufficient for ensuring accountability and outcome achievement. The relational contracting literature suggests that relational processes, that is, the ways in which public and private HSOs interact over time and the informal shared norms that arise as a result, serve as a powerful informal accountability mechanism that can complement or even substitute for rigidly codified contract terms and conditions (Lamothe and Lamothe 2012). Trust and communication are influential in the development of inter-organizational prosocial norms and expectations (Romzek, LeRoux, and Blackmar 2012; Uzzi 1997); research has also emphasized the importance of relationship management in the collaborative “work” of public and private managers (Steijn et al. 2011; Van Slyke 2007). However, quantitative research has not fully examined the relational processes influencing complex contracting.

This study advances research on relational mechanisms within complex human service contracts by examining a set of factors hypothesized to affect contracting outcomes. Specifically, informed by social capital theory, management literature on strategic contract procurement, and public administration scholarship on relational contracting in human service delivery, we propose that contract outcomes are influenced by relational processes such as public and private HSOs’ social capital, interdependence, and flexibility/adaptability as

well as by organizational characteristics such as private agency ownership and asset specificity. Proximal contracting outcomes examined in this study include private organizations' commitment to and satisfaction with the contract relationship. The conceptual framework guiding our study is shown in figure 1.

### Commitment to and Satisfaction With the Contract Relationship

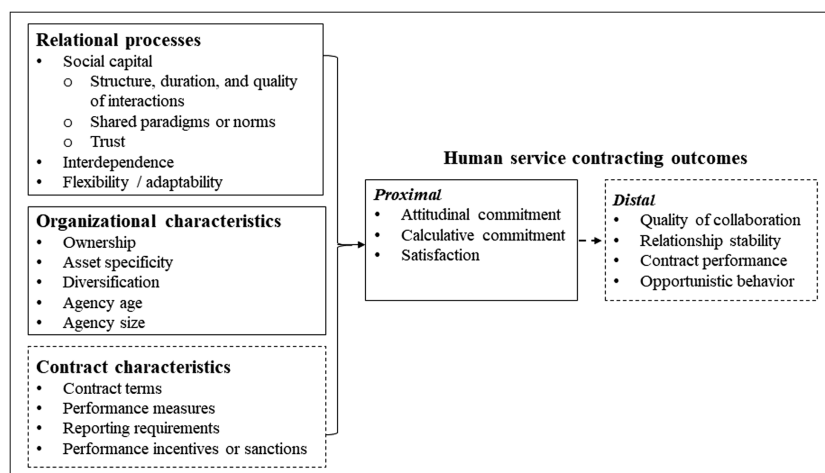
Whereas prior literature has tended to conceptualize contract outcomes more distally (e.g., in terms of service delivery or client outcomes), we focus on two more proximal outcomes in complex human service contracting: private HSOs' commitment to and satisfaction with the contract relationship. Evidence from other sectors suggests that commitment and satisfaction with the contract relationship can predict subsequent conflict, propensity to leave, and overall performance (Cullen et al. 2000; Geyskens et al. 1996); commitment and satisfaction have also been linked to more distal and difficult-to-measure outcomes such as efficiency and equity (Loewenstein et al. 1989; Ring and Van de Ven 1994). These outcomes are highly impactful in human services, where public HSOs often depend on private providers to extend their service capacity and negative contract relationships and/or other contracting outcomes affect not only agencies but clients and communities being served (Heinrich, Lynn, and Milward 2010; McBeath et al. 2017; Van Slyke 2007).

#### Commitment

Commitment is a multidimensional construct representing the intention to develop and maintain a stable long-term relationship (Gundlach et al. 1995). Evidence from the for-profit business sector has shown that commitment is critical to continuity of

inter-organizational relationships and can enhance performance and profitability of inter-organizational relationships (Ganesan et al. 2010; Morgan and Hunt 1994). Acknowledging that organizations' motivations for maintaining long-term relationships can vary, commitment is typically further divided into the sub-dimensions of calculative and affective commitment. Calculative commitment focuses on "rational concern" for the costs and benefits associated with maintaining the inter-organizational relationship, for example, financial risks associated with severing the relationship (Gilliland and Bello 2002), whereas affective commitment is based on social and emotional sentiment, for example, feelings of identification, shared values, and/or loyalty (Gustaffsson et al. 2006; Liu et al. 2010).

The distinction between affective and calculative commitment is particularly relevant in the human services, where contractual challenges associated with limited competition are well-documented (Brown and Potoski 2006; Lamothe 2015; Milward and Provan 2003), and where private HSOs are often heavily reliant on public funding and thus may commit to a long-term relationship with the public organization only due to lack of a viable alternative source of revenue (Pettijohn and Boris 2014). In the for-profit business sector, both types of commitment have been linked to reduced inter-organizational conflict and propensity to leave the relationship, as well as improved performance (Cullen, Johnson, and Sakano 2000; Mohr and Spekman 1994); however, only affective commitment is consistently associated with a reduction in opportunistic behavior (Liu et al. 2010). Understanding how different relational processes are related to each type of commitment may be of utility to public managers seeking to foster specific types of relationships with private providers.



\* Variables and hypothesized relationships identified with dashed lines are not directly tested in the current study.

Figure 1. Conceptual framework of factors affecting complex human service contract outcomes\*.

### Satisfaction

Whereas commitment addresses long-term intentions, satisfaction is more focused on current attitudes towards the inter-organizational relationship. In the literature on inter-organizational exchange relationships, satisfaction is typically defined as a “positive state” resulting from the appraisal of all aspects (economic and non-economic) of an organization’s working relationship with another organization (Frazier 1989; Gaski and Nevin 1985; Seggie et al. 2013). Like commitment, satisfaction has been shown to influence subsequent inter-organizational outcomes. In particular, satisfaction has been identified as an important indicator of relationship performance and continuity (Anderson and Narus 1990; Mohr and Spekman 1994).

### Relational Processes Hypothesized to Affect Commitment and Satisfaction

Relational processes hypothesized to influence private HSOs’ commitment to and satisfaction with the contract relationship include social capital, interdependence, and flexibility/adaptability of the public HSO. Below, we briefly describe each of these constructs, their relevance to human services contracting, and the hypothesized relationship to private HSOs’ commitment and satisfaction to the contract relationship.

### Social Capital

Social capital theory conceptualizes social ties as a valuable resource (or source of “capital”) that can yield significant benefits for individuals and organizations (Nahapiet 2008; Tsai and Ghoshal 1998). Social capital is typically conceptualized as a multidimensional construct, comprised of *structural*, *cognitive*, and *relational* dimensions that collectively characterize the nature of interactions between two entities. The structural dimension of social capital represents the formal patterns of social exchange between organizations, and can be conceptualized either in terms of organizations’ formal roles and position within a social network *or* in terms of the multiplexity and quality of interactions between organizations (Granovetter 1992; Nahapiet and Ghoshal 1998). Multiplexity occurs when organizations are connected through more than one behavior (Wasserman and Faust 1994). Evidence suggests that organizations behave differently in multiplex relationships than in relationships where organizations are connected in only one way (Bae and Feiock 2012). For example, risks from contractual arrangements in one service area may be mitigated if contracts are embedded in denser service relationships (Shrestha 2010). The quality of interactions (e.g., duration, frequency) have also been identified as critical to the development and maintenance of strong, collaborative relationships (Mattessich et al. 2001) and ultimately,

to contract success (Mohr and Spekman 1994). In human services, contractual relationships between public and private organizations are often nested within the broader context of organizations’ positions within one or more broad service delivery networks. The complexity of human services delivery also introduces a certain level of ambiguity to the contractual relationship (Carson et al. 2006), including potential for differing perceptions of the same environment and subsequent decisions regarding how to act (Daft and Macintosh 1981), that make the structural dimension of social capital critical for fully understanding organizations’ attitudes and behaviors towards one another.

The cognitive dimension of social capital refers to shared beliefs or norms (e.g., culture, goals, identity) between organizations that facilitate a common understanding of the proper ways of acting within the contract relationship (Coleman 1990; Tsai and Ghoshal 1998) and can serve as an informal governing mechanism that mitigates opportunistic behavior (Jap 2001; Jensen and Meckling 1976). This dimension of social capital most closely mirrors current conceptualizations of the primary informal accountability mechanism within the relational contract in the human services.

Finally, the relational dimension of social capital refers to other attributes of the exchange relationship that influence behavior, particularly trust, or the willingness to be vulnerable to the actions of another entity, irrespective of the ability to monitor or control that entity’s behavior (Nahapiet 2008; Whipple et al. 2013). Trust has been identified in multiple literatures as a critical informal governing mechanism, and one central not only to the formation and maintenance of the relational contract but to increased inter-organizational learning, relationship satisfaction, reduced governance costs, reduced relational conflict, and improved cooperation (Day et al. 2013; Doney and Cannon 1997). Organizational trust is also a multidimensional construct, reflecting both *credibility* and *benevolence* (Mayer et al. 1995). Credibility refers to belief in an organization’s intention and ability to keep promises; embedded within it are task-specific competencies, reliability, and predictability of behavior. In contrast, benevolence is based on qualities, intentions, and characteristics indicative of genuine care and concern for another organization that exceeds a purely self-serving motive.

Prior studies from other sectors have found that in buyer–seller relationships, organizational benevolence is more strongly associated with organizational commitment than credibility (Ganesan and Hess 1997). In contrast, the literature on human services contracting has emphasized the importance of trust in relational contracts (Brown, Potoski, and Van Slyke 2016; Romzek, LeRoux, and Blackmar 2012), yet has not

distinguished between different types of trust or examined how they may differentially affect contracting outcomes. In the current study, we hypothesize that social capital will be significantly associated with private agency affective commitment and satisfaction with their contract relationships.

### *Interdependence*

Interdependence reflects the extent to which organizations are dependent on one another. In theory, four types of interdependence are possible between a given set of organizations involved in a contract relationship: (1) no perceived interdependence; (2) contractor more dependent on contracted agency; (3) contracted agency more dependent on contractor; and (4) equal dependence (Buchanan 1992; Jap and Ganesan 2000; Kumar et al. 1995). Mutual interdependence has been shown to serve as an informal governing mechanism that can enhance inter-organizational cooperation and collaboration and reduce opportunistic behavior (Levine and White 1961; Van de Ven and Walker 1984). Research has also emphasized the importance of interdependence, goal congruence, and trust for inter-organizational cooperation, collaboration, and/or joint action (Lundin 2007). In particular, research suggests that: the effects of trust and goal congruence on contract outcomes may vary depending on the degree of interdependence (Jambulingam et al. 2011; Kim and Hsieh 2003); and trust can be particularly challenging to cultivate in relationships with asymmetric dependence (Kumar et al. 1995).

Accounting for interdependence is of critical importance in the human services, where heavy reliance of private HSOs on government contracting has been associated with goal displacement and loss of administrative autonomy (Froelich 1999). Conversely, reduced dependence of private organizations on public funds has been associated with decreased collaboration with other public and private community providers (Jang and Feiock 2007), which can also negatively affect contracting outcomes. In the current study, we hypothesize that (holding other factors equal) mutual dependence will be positively associated with affective commitment and satisfaction. We also hypothesize that greater dependence on the public organization will be associated with higher calculative commitment.

### *Flexibility/Adaptability*

Finally, flexibility or “adaptability” refers to an organization’s openness to different ways of organizing and accomplishing their work as well as their ability to adapt to changing conditions (Mattessich, Murray-Close, and Monsey 2001). The relational contracting literature suggests that for organizations operating in volatile environments, relational contracts

can be more effective than formal contracts because of the potential for increased flexibility in responding to local contingencies (Carson, Madhok, and Wu 2006). Evidence in the public management literature suggests that some human service managers may develop “incomplete” contracts to allow for flexibility in contract implementation (McBeath et al. 2017). In practice, however, flexibility can be difficult to achieve and inflexible contract terms may negatively affect HSOs’ ability to effectively adapt to changing conditions even in situations where social capital is strong and organizations are mutually dependent. In the current study, we hypothesize that flexibility will be associated with higher affective commitment and satisfaction with the contract relationship.

### **Organizational Characteristics Hypothesized to Affect Commitment and Satisfaction**

Private agency characteristics hypothesized to influence private HSOs’ commitment to and satisfaction with the contract relationship include agency ownership, asset specificity, and service diversification. Robust evidence suggests that *private agency ownership* may significantly influence contracting outcomes (Eggleston and Zekchauser 2002). In addition, because private nonprofit organizations share the same non-distributive legal constraint as public organizations, they are often perceived by public agencies as more “trustworthy,” as compared to for-profit firms, due to greater perceived alignment in mission and in likelihood of investing in the contract relationship (Lamothe and Lamothe 2011; Stark 2011).

*Asset specificity* refers to the degree to which an organizational asset can be put to alternative uses (Williamson 1981). Assets (e.g., program- and service-based knowledge and/or expertise) developed for the contract relationship that cannot be used for other purposes qualify as assets specific to that relationship. Research has demonstrated that asset specificity can increase cooperative behavior and enhance contract performance (Lui et al. 2009), although effects may vary based on trust and interdependence of participating organizations (Artz and Brush 2000). In this study, we hypothesize that asset specificity will be associated with calculative commitment.

Finally, *service diversification* refers to the number and type of services offered by an agency within the potential continuum of care (Bazzoli et al. 1999; Blau 1970). Controlled diversification in related service areas can improve financial stability and serve as a source of competitive advantage, for example, via opportunities to share knowledge across service areas and/or simultaneously take action against competitors in multiple markets to secure contracts or clients (Hitt et al. 2001; Knudsen et al. 2005; Nayyar 1993). However, service

diversification can also generate internal coordination costs that can strain management resources and limit agencies' ability to quickly identify and respond to external pressures (Grant et al. 1988; Ocasio 1997). In the current study, we hypothesize that service diversification will be negatively associated with commitment to the contract relationship.

## Methods

### Data

Data for this study were drawn from a survey of private HSO managers in five counties. The survey was conducted in 2015 as part of a larger study of public-private contractual relationships carried out by the authors in partnership with two regional consortia of county and nonprofit HSOs in the San Francisco Bay Area. Briefly, five county HSOs were selected for participation in the study using a purposive sampling strategy designed to maximize variation across counties with respect to organizational size and underlying county demographic characteristics. Additional information on participating counties is available in [Supplementary Appendix 1](#).

Eligible private organizations within these counties included those with at least 1 service contract with a participating county HSO during fiscal year (FY) 2013–2014. To help with identifying these private organizations, participating county HSOs provided copies of all contracts with private organizations for the 2013–2014 FY as well as contact information for each organization. Contracts were reviewed and refined to ensure only private nonprofit or for-profit organizations with purchase-of-service contracts were included in the final sample; excluded were contracts or memorandums of agreement for services with other government entities, administrative contracts for leases, building security, or technology, and contracts for services with individual providers such as individual therapists. The total value of these contracts was ~\$712 million.

Invitations to participate in a web-based survey were distributed to a designated primary contact within each private organization, along with a worksheet capturing basic organizational demographics (e.g., year the agency was established, number of full-time staff equivalents, etc.). Initial drafts of the survey were pilot tested with a panel of private human service managers from different counties in the San Francisco Bay Area and revised to reflect their input. The final survey contained 116 questions. Survey questions were informed by case studies of public-private contracting relationships conducted in three counties in 2014 as well as the extant literature on human service contracting relationships, and addressed the following domains: (1) contract-based communication and interactions, (2)

perceptions of accountability systems; (3) managerial attitudes and organizational norms; and (4) contract performance. Designated liaisons within each private organization were contacted a maximum of three times by email and once by telephone. Additional information regarding study procedures is available elsewhere (Carnochan et al. 2019; McBeath et al. 2019).

### Sample

Review of service contracts identified a total of 329 unique private HSOs across the five participating counties. The majority of agencies (89%) were nonprofit. On average, an agency's contracts with a county HSO accounted for a mean of 1.7% and a median of <1% of that county HSO's total contract expenditures. Almost all agencies (96%) only had contracts with 1 participating county HSO; however, the mean number of contracts with a given county HSO was 2.75 (SD 3.08). Agencies reporting contracts with >1 participating county HSO were asked to respond only for the county HSO with which they had the most contracts. Agencies were not asked about contracts with other types of public organizations (e.g., county health, public health, or behavioral health departments).

We received completed surveys and worksheets from 206 private organizations, resulting in an organization-level response rate of 63%. To test for the possibility of survey response bias, we compiled 2014 IRS 990 data for nonprofit agencies in our sampling frame; these data were available for 268 of 293 nonprofit agencies in our sample. Nonprofit agencies for which 2014 IRS 990 data were unavailable tended to be either very small (i.e., gross receipts <\$25,000) or religious organizations exempt from filing. *T*-test comparisons of agencies that did and did not complete the survey revealed no significant differences in agency age, total staff employed, or total revenue. The majority of respondents (85%) were senior executives or administrators; the remainder were managers working in specific programmatic areas. Missing data for self-reported annual revenue and funding sources was extremely high (28%); however, on average, private organizations reported receiving a median of 14% and a mean of ~25% of their revenue from the participating county HSO.

### Measures

#### Dependent Variables: Commitment to and Satisfaction With the Contract Relationship

Respondents were asked about their organization's commitment to and satisfaction with their relationship with the county HSO. *Affective* and *calculative commitment* were examined separately using measures adapted from prior work on interfirm exchange relationships in the management literature (Geyskens

et al. 1996; Gilliland and Bello 2002; Liu et al. 2010). Specifically, affective commitment was a single-item measure based on responses to the following: “We would not want to terminate our relationship with the county HSO even if other contracts provided better conditions.” Calculative commitment was a two-item measure ( $\alpha = 0.77$ ) based on mean responses to the following: “We intend to continue working with the county HSO because it is a major source of our revenue and/or client base” and “We need to maintain our relationship with the county because terminating would be too costly to our organization.” *Satisfaction* was a single-item measure assessing respondents’ satisfaction with their organization’s current relationship with the county HSO. Responses to all items were on a 1–5 Likert scale, with 1 indicating “Strongly Disagree” and 5 indicating “Strongly Agree.”

#### Independent Variable: Social Capital

We included five measures reflective of the structural, cognitive, and relational dimensions of social capital. The structural dimension of social capital was operationalized using two variables that collectively assessed the length and quality of communication between partners; specifically, *relationship duration* captured the number of years the private organization had been in a contract relationship with the county HSO, whereas *communication quality* was a three-item measure ( $\alpha = 0.81$ ) reflecting the frequency, timeliness, and accuracy of communication between the private organization and the county HSO. The cognitive dimension of social capital was assessed using a single-item measure of *goal congruence*, that is, the extent to which the respondents’ primary counterpart at the county HSO was perceived as sharing his/her goals (Schmidt and Kochan 1977).

Finally, the relational dimension of social capital was operationalized using both the credibility and benevolence dimensions of trust (Ganesan 1994; Mayer, Davis and Schoorman 1995). *Credibility trust* was a four-item measure ( $\alpha = 0.95$ ) based on responses to the following: “Promises made by the county HSO are reliable,” “If problems in the contracts arise, the county HSO is honest about the problems,” “The county HSO is consistent in terms of its policies,” “We are confident in the information the county HSO provides to us.” *Benevolence trust* was a three-item measure ( $\alpha = 0.89$ ) based on responses to the following “The county HSO is genuinely concerned that our agency achieve its goals,” “The county HSO considers our interests when problems arise,” “The county HSO has gone out of its way to help us.” All measures except relationship duration were on a 1–5 Likert scale, with 1 indicating “Strongly Disagree” and 5 indicating “Strongly Agree.”

#### Independent Variable: Interdependence

Evidence suggests that managers’ perceptions of the external environment, including the nature and quality of inter-organizational relationships, are more important for explaining strategic decision-making than more “objective” measures of the environment (Miles et al. 1978; Schneider and DeMeyer 1991). Therefore, consistent with prior research on the role of interdependence in inter-organizational relationships (Jambulingam, Kathuria, and Nevin 2011; Jap and Ganesan 2000), *interdependence* was operationalized as a categorical variable set = 1 (no dependence) if private agency respondents indicated that “Our organization is not dependent on the county HSO and the county HSO is not dependent on our organization”, set = 2 (private agency more dependent) if respondents indicated that “Our organization is more dependent on the county HSO,” set = 3 (county HSO more dependent) if “County HSO is more dependent on our organization,” and set = 4 (mutual dependence) if respondents indicated that “The county HSO and our organization are equally dependent on each other.”

#### Independent Variable: Partner Flexibility/Adaptability

*Partner flexibility/adaptability* was operationalized as a three-item measure ( $\alpha = 0.88$ ) based on responses to the following items adapted from the corresponding domains in the Wilder Collaboration Factors Inventory (Mattessich and Monsey 2001): “There is a lot of flexibility when decisions are made that affect our contracts,” “The county HSO is open to different approaches to how we can do our work,” and “It is easy to adapt the contract to changing conditions such as fewer funds than expected, changing political climate, or change in leadership.” All items were on a 1–5 Likert scale, with 1 = “Strongly Disagree” and 5 = “Strongly Agree.”

#### Other Independent Variables: Agency Characteristics

We also controlled for agency ownership, asset specificity, service diversification, and two other organizational factors (agency age and size) that could affect contractual relationships as well as more distal human service contracting outcomes. *Agency ownership* was operationalized as a dichotomous variable set = 1 if the agency was for-profit and set = 0 if nonprofit. *Asset specificity* was assessed using a single 1–5 Likert measure reflecting the extent to which private HSO managers reported that agency programs and services were tailored to specific contract requirements from the county HSO. *Service diversification* was operationalized as a count of five types of services that reflected the range of services contracted for by participating county HSOs, for example, services for seniors and/or people with disabilities; services for children and

families; employment and training services; public assistance services; and services in other sectors (e.g., health care, education, etc.). Finally, *agency age* captured the number of years the private organization had been operation, whereas *agency size* was operationalized as the number of full-time employees within the private organization in the last fiscal year, reported per 100 staff. A detailed description of all measures is provided in [Supplementary Appendix 2](#).

### Analyses

Listwise deletion for item missingness reduced the final analytic samples from 206 to 165–173 private organizations, depending on the model being tested. Levels of item nonresponse were generally low and did not exceed 6% for any single item. However, *t*-test comparisons of the means of all variables used in the analyses indicated that for the model examining affective commitment, organizations in the final analytic sample differed from those excluded due to listwise deletion in other model variables in one area: agency size (mean of 77.22 full-time staff in the final analytic sample for that model versus mean of 116.57 full-time staff in the excluded cases,  $p = .04$ ). Similarly, for the model examining satisfaction, organizations in the final analytic sample differed from those excluded due to listwise deletion in terms of ownership (mean of 4% for-profit in the final analytic sample for that model versus mean of 9% for-profit in the excluded cases,  $p = .05$ ).

When data may not be missing completely at random (MCAR), multiple imputation can yield results that are less biased than complete case analysis ([Allison 2002](#)). Therefore, for the model examining affective commitment we also conducted multiple imputation using the multivariate normal imputation method within the Stata MI module ([StataCorp 2015](#)). A total of 20 imputations were used to reduce sampling error ([Bodner 2008](#)). To preserve the relationship between dependent and independent variables, the dependent variable was included in the imputation procedure ([Von Hippel 2007](#)). However, cases with imputed values for the dependent variable were excluded from the final analysis. *T*-tests did not reveal statistically significant differences between imputed and unimputed variables in our sample (not shown but available from authors upon request), and regression results also did not differ significantly. Therefore, only unimputed results are reported.

Descriptive statistics are provided in [table 1](#). Bivariate correlations between independent variables were assessed using Spearman correlation coefficients. Correlations between several independent variables (e.g., credibility and benevolence trust) were between 0.60 and 0.80; however, variance inflation factors for the regression models were all  $<2.2$ , below the

threshold at which multicollinearity may be a concern. Kruskal–Wallis tests, a nonparametric form of one-way analysis of variance (ANOVA), were used to identify statistically significant differences between independent variables and dependent variables.

Brant tests indicated that multiple regression models did not meet the parallel lines assumption, that is, that effects of independent variables are consistent across different values of the dependent variable, necessitating a different analytic approach than ordinal logistic regression. Partial proportional odds regression models relax the parallel lines constraint for the subset of variables that do not meet this assumption, while still preserving information about the relative ordering of responses ([Peterson and Harrell 1990](#); [Williams 2006](#)); however, these models can be difficult to interpret and are most appropriate when a minimal number of variables violate the parallel lines assumption ([Williams 2016](#)). Wald test results identified multiple variables that violated the parallel lines assumption for each dependent variable. Therefore, we instead chose to conduct separate multinomial logit models to examine associations between relational processes and private HSO commitment to and satisfaction with their contract relationship with the county HSO.

The distribution of responses within each dependent variable was skewed left, with sparse data in the “Strongly Disagree,” “Disagree,” and “Neither Agree or Disagree” categories resulting in insufficient power to model these categories separately. Given this distribution and our study’s focus on identifying factors associated with high levels of commitment and satisfaction, we conducted LR tests to determine whether negative (i.e., “Strongly Disagree” and “Disagree”) and/or neutral (i.e., “Neither Disagree or Disagree”) response categories for our dependent variables could be combined. LR tests confirmed the acceptability of collapsing negative and neutral responses into a single category in multinomial logit regression models for affective commitment and calculative commitment (i.e., none of the independent variables significantly affected odds of selecting “Strongly Disagree” versus “Disagree” versus “Neither Agree or Disagree” responses on our dependent variables) but only supported combining negative response options (i.e., “Strongly Disagree” or “Disagree”) in the multinomial logit regression examining *satisfaction*. Based on these results, we initially re-coded affective commitment and calculative commitment as three-category response variables, where 1 = negative or neutral responses (i.e., “Strongly Disagree,” “Disagree,” or “Neither Agree or Disagree”), 2 = positive responses (i.e., “Agree”), and 3 = very positive responses (i.e., “Strongly Agree”) and satisfaction as a four-category variable to differentiate negative, neutral, positive, and very positive responses.



**Table 1.** Descriptive Statistics

	<i>n</i>	%/ Mean (SD)	Range
Dependent variables			
Commitment			
Affective	182	3.84 (1.14)	1–5
Calculative	192	4.34 (1.01)	1–5
Satisfaction	197	3.84 (1.10)	1–5
Relationship characteristics			
Relationship duration	197	20.37 (13.01)	1–71
Communication quality	188	3.89 (0.86)	1–5
Goal congruence	181	4.21 (0.97)	1–5
Trust			
Credibility	197	3.75 (1.08)	1–5
Benevolence	194	3.77 (1.09)	1–5
Interdependence			
No dependence	197	15.74%	0–1
Agency more dependent	197	10.34%	0–1
County HSO more dependent	197	7.42%	0–1
Mutual dependence	197	66.5%	0–1
Flexibility/ adaptability	189	3.20 (1.12)	1–5
Private agency characteristics			
For-profit ownership	197	0.11	0–1
Asset specificity	196	4.14 (0.99)	1–5
Diversification	196	2.22 (1.32)	1–5
Agency age	197	38.86 (27.07)	3–164
Agency size	197	0.82 (1.51)	0.01–15.69

However, review of final model results indicated that in practice, none of the independent variables significantly affected odds of selecting “Strongly Disagree/Disagree” versus “Neither Agree or Disagree” response options ( $p < .05$ ). We, therefore, reported results of the three-category satisfaction variable for consistency with the other two dependent variables.

To test the stability of model results given alternative model specifications, we also conducted sensitivity analyses comparing multinomial logit results to logistic regression results. Specifically, we ran three separate sets of logistic regression models. In the first set of logistic regression models, all dependent variables were re-coded using a “top-box” scoring approach, that is, set = 1 only if respondents reported “Strongly Agree” and otherwise set = 0. A second set of logistic regression models was conducted to compare differences in results when the dependent variables were expanded to include any positive commitment or satisfaction (i.e., set = 1 if respondents reported “Strongly Agree” or “Agree” and otherwise set = 0). The final set of logistic regression models included dichotomous dependent variables set = 1 if respondents indicated negative commitment or satisfaction (i.e., “Strongly Disagree” or “Disagree”) and otherwise set = 0. Briefly, results of these models (not shown but available upon request) were largely consistent with multinomial logit regression results and also supported the argument

that conceptually, factors associated with positive and strongly positive commitment and satisfaction differed from those associated with negative or neutral commitment and satisfaction.

Last but not least, in the final models, we identified low numbers of organizations reporting any type of asymmetric dependence (e.g., only 38 respondents indicated greater private agency dependence and only 26 respondents indicated greater county dependence), raising concerns about statistical power and/or separation issues. Based on prior research suggesting that the presence of asymmetric dependence is more important for explaining differences in inter-organizational relationship outcomes than the direction of the asymmetry (Gulati and Sytch 2007; Hillman et al. 2009), we reduced our measure of interdependence from four to three categories: no dependence; asymmetric dependence; or mutual dependence. This change improved fit of models examining calculative and affective commitment without affecting statistical significance of any key independent variables in our models (Supplementary Appendix 3).

Multinomial logit model results were adjusted to control for clustering of respondents within counties, and all analyses were conducted using Stata 14.0 (StataCorp 2015). This study was approved by the Institutional Review Boards at the authors’ home institutions.

## Results

### Descriptive Statistics

As shown in [table 1](#), on average, participating organizations had been in operation for ~39 years and had approximately 82 full-time employees. Approximately 11% of agencies were for-profit and the remainder were nonprofit. Private organizations reported providing an average of 2.22 of the five types of services assessed, with 45% of organizations offering services for seniors and/or persons with disabilities; 57% delivering services for children and families; 34% providing employment services; 28% providing public assistance services; and 38% providing services in other sectors such as health care, behavioral health, and/or education.

In terms of characteristics of the contract relationship with the county HSO, average relationship duration was ~20 years. Ratings of relational processes such as communication quality, goal congruence, trust, and flexibility/adaptability were generally quite high (average ratings between 3.2 and 4.21 out of 5). Close to two-thirds (67%) of private organizations reported mutual dependence with the county HSO; approximately 10% reported being more dependent on the county HSO, 7% indicated the county HSO was more dependent on their organization, and 16% reported no dependence. Commitment to the county HSO and satisfaction with the current contract relationship were also generally high (average ratings of 3.84–4.34 out of 5).

### Kruskal–Wallis Test Results

Kruskal–Wallis test results (see [table 2](#)) identified statistically significant differences in affective commitment to the county HSO based on their ratings of communication quality, goal congruence, benevolence trust, interdependence (no dependence and mutual dependence), flexibility/adaptability, and asset specificity. Calculative commitment to the county HSO differed based on private organizations' ratings of relationship duration, goal congruence, benevolence trust, interdependence (all categories except greater county HSO dependence on the private organization), flexibility/adaptability, asset specificity, agency age, agency size, and for-profit ownership. Finally, Kruskal–Wallis tests indicated significant differences in satisfaction with the current contract relationship based on communication quality, goal congruence, credibility and benevolence trust, interdependence (mutual dependence only), flexibility, asset specificity, and agency age.

### Multinomial Logit Results

[Table 3](#) provides multinomial logit results identifying factors associated with private HSOs' affective commitment, calculative commitment, and satisfaction with the contract relationship. To facilitate interpretation of results, [table 4](#) presents discrete changes in commitment and satisfaction given different values of ordinal independent variables identified as significant in [table 3](#).

**Table 2.** Kruskal–Wallis Test Results ( $\chi^2$ ): Commitment to and Satisfaction with the Contract Relationship

	Affective Commitment	Calculative Commitment	Satisfaction
Relationship characteristics			
Relationship duration	46.48	58.91*	48.31
Communication quality	27.58*	19.64	83.61**
Goal congruence	17.27**	14.91**	65.12**
Trust			
Credibility	28.86	31.52	204.70**
Benevolence	42.18**	27.60*	173.28**
Interdependence			
No dependence	6.47*	39.81**	3.25
Agency more dependent	0.38	6.07*	0.82
County HSO more dependent	1.16	0.72	2.92
Mutual dependence	9.45**	16.77**	9.03**
Flexibility/ adaptability	48.69**	37.85**	132.64**
Private agency characteristics			
For-profit ownership	1.65	7.21**	0.03
Asset specificity	16.72**	30.43**	14.13*
Diversification	2.03	2.25	9.50
Agency age	61.61	104.47**	90.45*
Agency size	100.89	150.17**	113.99

Note: \* $p < .05$ ; \*\* $p < .01$ .

**Table 3.** Multinomial Logit Regression Results: Commitment and Satisfaction

	Positive Versus Negative/Neutral	Strongly Positive Versus Negative/Neutral	Strongly Positive Versus Positive
	RRR (SE)	RRR (SE)	RRR (SE)
Calculative commitment ( <i>n</i> = 172)			
Relationship duration	1.02 (0.01)	1.03 (0.04)	1.01 (0.03)
Communication quality	1.51 (0.43)	1.51 (0.39)	1.00 (0.15)
Goal congruence	1.10 (0.32)	1.43 (0.32)	1.31** (0.13)
Trust: Credibility	1.45 (0.52)	0.75 (0.19)	0.52* (0.15)
Trust: Benevolence	0.57 (0.40)	0.89 (0.52)	1.58 (0.45)
Interdependence: Asymmetric	17.22** (6.84)	19.63** (10.01)	1.14 (0.61)
Interdependence: Mutual	7.39* (6.05)	12.98** (8.34)	1.76 (0.73)
Flexibility/ adaptability	1.06 (0.62)	1.58 (0.88)	1.49 (0.46)
For-profit ownership	0.40 (0.26)	0.14** (0.05)	0.36* (0.17)
Asset specificity	1.33* (0.18)	1.81** (0.24)	1.36** (0.16)
Diversification	0.91 (0.25)	0.98 (0.09)	1.08 (0.20)
Agency age	1.01* (0.01)	1.00 (0.01)	0.99* (0.00)
Agency size	0.97 (0.10)	1.18 (0.21)	1.23 (0.14)
Likelihood ratio $\chi^2$	243.589		
McFadden's $R^2$	0.18		
ML (Cox-Snell) $R^2$	0.26		
Cragg-Uhler's (Nagelkerke) $R^2$	0.32		
Akaike information criteria	255.59		
Bayesian information criteria	274.47		
Affective commitment ( <i>n</i> = 165)			
Relationship duration	1.01 (0.02)	1.01 (0.02)	0.99 (0.02)
Communication quality	1.38 (0.30)	1.64** (0.16)	1.19 (0.20)
Goal congruence	0.85 (0.31)	0.67 (0.18)	0.79 (0.27)
Trust: Credibility	0.99 (0.38)	1.01 (0.22)	1.01 (0.38)
Trust: Benevolence	1.00 (0.42)	1.26 (0.24)	1.26 (0.32)
Interdependence: Asymmetric	0.53 (0.26)	2.12 (1.62)	3.97 (3.30)
Interdependence: Mutual	2.10* (0.68)	4.62** (2.34)	2.20 (1.13)
Flexibility/ adaptability	1.69 (0.63)	2.48** (0.84)	1.47* (0.27)
For-profit ownership	1.80 (1.35)	0.15* (0.12)	0.09** (0.04)
Asset specificity	1.10 (0.20)	1.44 (0.29)	1.31 (0.25)
Diversification	1.22 (0.21)	1.06 (0.17)	0.87 (0.13)
Agency age	0.99 (0.00)	0.99* (0.00)	0.99 (0.00)
Agency size	1.35 (0.27)	1.51* (0.26)	1.12* (0.06)
Likelihood ratio $\chi^2$	300.78		
McFadden's $R^2$	0.16		
ML (Cox-Snell) $R^2$	0.30		
Cragg-Uhler's (Nagelkerke) $R^2$	0.33		
Akaike information criteria	312.78		
Bayesian information criteria	331.41		
Satisfaction ( <i>n</i> = 173)			
Relationship duration	1.02 (0.02)	1.05 (0.05)	1.02 (0.02)
Communication quality	4.20** (0.97)	6.33** (2.85)	1.35 (0.28)
Goal congruence	0.69 (0.38)	1.08 (0.98)	1.24 (0.46)
Trust: Credibility	3.10** (1.17)	11.88** (7.01)	4.10** (1.59)
Trust: Benevolence	4.42** (2.24)	6.87** (2.58)	1.33 (0.59)
Interdependence: Asymmetric	0.60 (0.53)	1.69 (2.84)	2.16 (0.90)
Interdependence: Mutual	2.75 (1.58)	1.99 (1.51)	0.83 (0.39)
Flexibility/ adaptability	1.15 (0.32)	2.53** (0.72)	2.16 (0.90)
For-profit ownership	1.94 (1.15)	0.27 (0.26)	0.17** (0.09)
Asset specificity	0.70 (0.15)	0.63 (0.28)	0.97 (0.32)
Diversification	1.44 (0.42)	0.90 (0.20)	0.68 (0.22)

**Table 3.** Continued

	Positive Versus Negative/Neutral	Strongly Positive Versus Negative/Neutral	Strongly Positive Versus Positive
	RRR (SE)	RRR (SE)	RRR (SE)
Agency age	0.99 (0.01)	1.01 (0.01)	1.01 (0.01)
Agency size	1.29 (0.36)	0.98 (0.24)	0.82 (0.13)
Likelihood ratio $\chi^2$	190.55		
McFadden's $R^2$	0.49		
ML (Cox-Snell) $R^2$	0.66		
Cragg-Uhler's (Nagelkerke) $R^2$	0.74		
Akaike information criteria	202.55		
Bayesian information criteria	221.36		

Note: RRR = relative risk ratio.

\* $p < .05$ ; \*\* $p < .01$ .

### Social Capital

Several indicators of social capital were significantly associated with private HSOs' commitment to the county HSO and satisfaction with the contract relationship. Consistent with hypotheses, communication quality, an indicator of structural social capital, was significantly associated with positive affective commitment and satisfaction with the contract relationship. Notably, as shown in table 4, the predicted probability of very high affective commitment was 0.29 higher for those reporting highest level of communication quality ("Strongly Agree") than those reporting lowest level of communication quality ("Strongly Disagree."). Similarly, the predicted probability of very high satisfaction with the contract relationship was 0.31 higher among private organizations that experienced the highest levels of communication quality than those reporting the lowest level of communication quality.

Goal congruence, an indicator of cognitive social capital, was not significantly associated with affective commitment or satisfaction with the contract relationship, but was significantly associated with higher odds of reporting very positive calculative commitment (compared to only positive). Organizational trust, an indicator of relational social capital, was significantly associated with calculative commitment and satisfaction with the contract relationship, but not with affective commitment. Specifically, credibility trust was associated with lower odds of reporting very positive (versus positive) calculative commitment, higher odds of reporting positive satisfaction (versus negative or neutral response), and higher odds of reporting very positive (versus positive) satisfaction. In particular, we found that the predicted probability of reporting very high satisfaction with the contract relationship was 0.62 higher among private organizations with the highest levels of credibility trust ("Strongly Agree") in the county HSO than those with the lowest levels of credibility trust ("Strongly Disagree"). By contrast,

benevolence trust was only associated with satisfaction with the contract relationship and only differentiated positive from neutral or negative responses.

### Interdependence

Contrary to hypothesis, interdependence was not significantly associated with satisfaction with the contract relationship. However, asymmetric dependence was significantly associated with high calculative commitment ("Strongly Agree" or "Agree"), whereas mutual dependence was significantly associated with both affective and calculative commitment (relative to the referent group of negative or neutral commitment). As shown in table 4, all other factors equal, the predicted probabilities of very high affective and calculative commitment were 0.25 and 0.30 higher, respectively, among private organizations reporting mutual dependence than those reporting another type of interdependence.

### Flexibility/Adaptability

Flexibility/adaptability of the county HSO was associated with very positive affective commitment and satisfaction with the contract relationship, relative to positive, neutral, or negative responses. The predicted probability of very high affective commitment ("Strongly Agree") was 0.52 higher among private organizations that reported very high county flexibility/adaptability than for those indicating low flexibility/adaptability. Similarly, the predicted probability of indicating very high satisfaction with the contract relationship was 0.49 higher among private organizations reporting very high county flexibility/adaptability than among those that experienced the lowest level of flexibility/adaptability.

### Agency Characteristics

For-profit ownership was associated with lower odds of reporting very positive calculative and affective

**Table 4.** Discrete Change in Commitment and Satisfaction Given High Versus Low Values of Social Capital, Flexibility, and Asset Specificity\*

	$\Delta$ Pr (Negative or Neutral Outcome)	$\Delta$ Pr (Positive Outcome)	$\Delta$ Pr (Very Positive Outcome)
Calculative commitment ( $n = 172$ )			
Goal congruence	-0.12	-0.14	0.27
Trust: Credibility	0.05	0.29	-0.33
Interdependence: Asymmetric	-0.12	0.00	0.12
Interdependence: Mutual	-0.28	-0.02	0.30
Asset specificity	-0.26	-0.13	0.38
Affective commitment ( $n = 165$ )			
Communication quality	-0.35	0.06	0.29
Interdependence: Mutual	-0.24	-0.02	0.25
Flexibility / adaptability	-0.54	0.02	0.52
Satisfaction ( $n = 173$ )			
Communication quality	-0.90	0.59	0.31
Trust: Credibility	-0.86	0.24	0.62
Trust: Benevolence	-0.91	0.60	0.32
Flexibility/ adaptability	-0.19	-0.29	0.49

Note: \*Discrete change in predicted probability of an outcome when ordinal independent variable = 5 (SA “Strongly Agree”) versus = 1 (SD “Strongly Disagree”); values for all other variables held at mean. Only ordinal variables significantly associated with commitment or satisfaction in [table 3](#) are included.

commitment and with lower odds of reporting very positive (versus positive) satisfaction with the contract relationship. As hypothesized, asset specificity was significantly associated with calculative commitment but not with affective commitment or satisfaction. Service diversification was not significantly associated with private organizations’ commitment or satisfaction with the contract relationship. However, agency age was negatively associated with affective commitment to the county HSO, whereas agency size was positively associated with very high affective commitment.

### Post hoc Sensitivity Analyses

We also conducted a number of sensitivity analyses. First, given prior research suggesting that trust develops over time, we examined potential moderating and mediating effects of relationship duration and trust on private organizations’ commitment to and satisfaction with the contract relationship. Mediation analyses conducted using the Karlson-Holm-Breen method ([Kohler et al. 2011](#)) found that, all other factors held equal, there was no evidence of trust mediating the relationship between relationship duration and either commitment or satisfaction. Interaction terms of relationship duration and credibility trust and benevolence trust were also nonsignificant.

Based on prior research suggesting that shared paradigms or norms may be necessary for trust ([Brown et al. 2018](#)), we also tested for potential mediating effects of trust on the relationship between goal congruence and private organizations’ commitment and satisfaction with the contract relationship. Results indicated that trust did not mediate the relationship

between goal congruence and commitment (calculative or affective). However, benevolence and credibility trust strongly mediated the relationship between goal congruence and satisfaction with the contract relationship, collectively accounting for 87% of the total effect of goal congruence on very positive satisfaction (relative to negative or neutral satisfaction).

We also tested the stability of model results to an alternative measure of interdependence constructed using data on private agency revenue and county HSO contract expenditures ([Supplementary Appendix 3](#) provides a detailed overview of this measure and associated multinomial logit model results). Key findings for models examining calculative and affective commitment were unaffected by this change. In the model examining private agency satisfaction with the contract relationship, the only change was that flexibility/adaptability was no longer significantly associated with satisfaction but interdependence (asymmetric or mutual) was associated with positive satisfaction.

Finally, we also conducted additional analyses to determine whether provision of specific types of services (e.g., services for seniors and/or people with disabilities; services for children and families) was associated with commitment and satisfaction with the contract relationship. Results did not indicate significant effects of service type on these outcomes.

### Discussion

The complexity of human services delivery means that purchase-of-service contracts are often “incomplete” ([Brown, Potoski, and Van Slyke 2016](#); [McBeath et al.](#)

2017). Robust literature suggests that instead, public and private HSOs typically rely on a combination of formal and informal accountability mechanisms to ensure that contractual expectations are met (Van Slyke 2007). Despite consensus on the importance of relational mechanisms such as trust and communication quality and on common challenges to developing and maintaining strong contract relationships (e.g., competition, staff turnover, limited resources), little research has empirically examined how different relational mechanisms are associated with specific human service contracting outcomes.

In this study, we proposed a conceptual framework of different relational processes and organizational factors hypothesized to affect both proximal (e.g., private HSO attitudes towards the county HSO) and distal contract outcomes (e.g., contract continuity and performance). We also examined how these relational processes were associated with key proximal indicators of contract performance, specifically commitment to and satisfaction with the contract relationship.

Study results provide mixed support for the conceptual framework in figure 1. As hypothesized, communication quality was associated with affective commitment and satisfaction with the contract relationship, but not calculative commitment. This finding is consistent with prior research suggesting the importance of communication in facilitating the relational contract (Carnochan et al. 2019; Romzek et al. 2013). Relational contracts can serve as an informal accountability mechanism but are vulnerable to ambiguity resulting from lack of information or differing perceptions regarding the anticipated effects of different contracting strategies (Carson, Madhok, and Wu 2006; Daft and Macintosh 1981). Frequent, timely, and accurate contract communication may help bridge contract-based uncertainty and facilitate mutual understanding, thereby reducing conflict and increasing satisfaction and affective commitment.

By contrast, duration of the contract relationship was not associated with private organizations' commitment or satisfaction. To some extent, the lack of association may reflect the limitations of this measure as an indicator of social capital rather than a problem with the conceptual framework. Prior literature suggests that relational processes are only effective as an informal accountability mechanism if the possibility for future interaction exists (Romzek, LeRoux, and Blackmar 2012). Yet the longevity of the contract relationship is not sufficient in and of itself for ensuring desired contracting outcomes are achieved. For example, in certain markets, contract relationships could persist over time due to a lack of viable alternatives rather than because public and private HSOs have developed strong, consistent inter-organizational contract relationships.

Also, contrary to hypothesis, we found that goal congruence was not associated with organizational commitment but did indirectly affect satisfaction via effects of goal congruence on trust. One possible explanation for the lack of association between goal congruence and commitment is that even when distal goals (e.g., ensuring client well-being or outcomes) are aligned, there is still potential for conflict in more proximal goals and in motivations for action that can negatively affect the decision to maintain the contract relationship over time (Meyers et al. 2001). Alternatively, it is possible that findings are indicative of genuine differences in the relational processes associated with private HSO attitudes towards the public HSO (satisfaction) and those that foster longer-term intentions to maintain the contract relationship (commitment).

Consistent with the latter possibility, we found that organizational trust was associated with private organizations' satisfaction with the contract relationship, but not necessarily with commitment. Specifically, credibility trust grounded in a belief in a counterpart's ability to keep promises and be reliable was associated with increased satisfaction with the contract relationship and a reduction in the type of commitment associated with opportunistic behavior. However, benevolence trust resulting from private HSOs' belief that the public agency was genuinely invested in the relationship (e.g., viewed them as more than a "low-cost bidder") was associated with satisfaction but not commitment. In the for-profit business sector, both affective and calculative commitment have been shown to predict firms' actual commitment to maintaining a contract relationship over time; yet only affective commitment has been associated with reductions in opportunistic behavior and a willingness to go "above and beyond" for the relationship (Liu et al. 2010). Given the complexity of human service delivery, where organizations may benefit from repeated cooperation in structuring service delivery and resolving common client issues (McBeath et al. 2019), affective commitment may be necessary for achieving distal outcomes such as client well-being.

Instead, findings point to the importance of contract flexibility/adaptability for fostering private organizations' satisfaction with and affective commitment to the contract relationship. The complexity of human services delivery means that it is often challenging to fully and accurately specify contract terms during program planning and contract implementation. Local conditions and client needs can also change over time. Public and private HSOs can thus vary in the "completeness" of their contracts, thereby allowing for flexibility in contract implementation to support private HSO engagement in structuring new contract opportunities (McBeath et al. 2017). Research in other

sectors suggests that increased flexibility in contract procurement, funding, and implementation can improve efficiency and/or promote integration of services being provided across separate contracts (DiFrancesco and Alford 2016; Tadelis 2012). However, even when contracts are “incomplete,” public managers may vary in their ability and willingness to work with private agencies to find solutions to problems resulting from changes in local contingencies. For example, federal, state, and/or local regulations may limit flexibility in contract terms. In these situations, public managers could support flexibility in contract implementation by remaining open to waivers or other approved local exceptions and/or by working with private managers to ensure local operational adjustments required to ensure local service integration can be reconciled with established reporting procedures within a given contract (Campbell 2012). Frustration over inflexible contract terms has been identified as a potential source of conflict in complex contracting. Findings from the current study reinforce the importance of flexibility/adaptability on the part of public organizations for fostering positive perceptions (satisfaction) and longer-term intentions to maintain the contract relationship (commitment).

Study findings also reiterate the need for greater attention to interdependence in future research on relational contracts in the human services. In our study, interdependence was strongly associated with commitment to the public HSO but not satisfaction. Specifically, perception of any interdependence (asymmetric or mutual) was associated with positive calculative commitment; however, only mutual dependence was associated with positive affective commitment. Available revenue data suggest that for most private HSOs in our sample, contracts with the participating county HSO did not constitute the only or even primary source of revenue; thus, perceptions of interdependence were likely guided by more than just financial considerations. Findings reinforce the importance of mutual dependence for facilitating strong inter-organizational relationships, but also suggest the need for additional research on strategies for fostering a sense of mutual dependence *or* otherwise effectively managing inter-organizational relationships that may initially be perceived as asymmetric or “disconnected.”

Finally, findings suggest that organizational characteristics such as ownership and asset specificity can also influence contracting relationship. For-profit ownership was negatively associated with commitment and satisfaction, whereas asset specificity was positively associated with calculative commitment but not with affective commitment or satisfaction. Findings related to asset specificity are fairly intuitive in that private agencies whose services and programs are highly tailored

to contract requirements are significantly more vulnerable to financial risks associated with termination of the contract relationship. In the contracting literature, asset specificity has been associated with increased opportunistic behavior but also with cooperative behavior and partnership performance (Lui, Wong, and Liu 2009; Williamson 1981). Much of this literature, however, has been conducted in the context of for-profit buyer-seller relationships. In the human services, the complexity and associated uncertainty of service delivery has been described as fostering asset specificity as well as incomplete contracts (Brown, Potoski, and Van Slyke 2016). Current study findings suggest that relational mechanisms may differ based on agency ownership, and public managers contracting primarily with nonprofit agencies may not wish to rely on asset specificity alone for ensuring the most positive contracting outcomes. Our findings thus provide a closer inspection of relational contracting mechanisms vis-à-vis the non-distribution constraint. Further research is needed to test for effects of commitment and satisfaction on more distal partnership outcomes in the human services, and to examine whether such effects may vary by ownership.

### Limitations

Several limitations should be taken into consideration in interpreting results of this study. First, this study was conducted in a region with longstanding consortia of public and private agencies interested in working together to improve contracting relationships and agency performance. Thus, private agencies in our sample are likely to report higher levels of goal congruence, social capital, commitment, and satisfaction with contract than may be present nationally. Second, the current study utilized cross-sectional data from a survey of private agencies; data reflect only the private agency's perspective and not the full dyadic relationship between the public and private agency. Our measures of structural social capital were also limited and did not include indicators of the multiplexity of private agencies' ties with the county human services organization or of their position within the overall social network within the county. Modest sample sizes and associated concerns about statistical power also precluded full use of linear mean scoring to analyze our dependent variables and limited our ability to examine effects of different types of asymmetric dependence in multinomial regression models. Although we ran numerous sensitivity analyses to test model specification, effects of these approaches on model reliability should still be considered in interpreting model results. Use of cross-sectional data also precluded testing of longitudinal relationships or feedback loops. Our analyses also may not reflect possible combinatorial effects of

different relational processes on partnership outcomes. Finally, this study only assessed proximal human service contracting outcomes based on self-reported data. Future research could address these limitations and extend the current work by testing whether findings differ over time or in differing contexts and whether these relational mechanisms are associated with more distal and more objectively measured human service contracting outcomes.

### Conclusion

Public HSOs increasingly rely on contracts with private providers to deliver publicly funded services to vulnerable clients (Kettl 2015). The complex, often interconnected nature of service delivery means that contracts are regularly incomplete and contract expectations can be loosely tethered to performance measurement. As a result, public managers often must supplement formal contract terms with the relational contract, that is, informal accountability mechanisms for ensuring contract expectations are met. Public managers' relational skills are necessary but may not be sufficient for the successful development and maintenance of diverse human service contracts (Campbell and Lambright 2016; Gooden 1998). Extant literature on human services contracting suggests that communication and trust may support desirable shared norms of behavior that are central to the relational contract. However, to the best of our knowledge, our study is the first to examine how these and other relational processes are associated with human service contracting outcomes. Study findings suggest that human service contracting outcomes may be affected by different relational processes: In our study, we found that communication quality, trust, and flexibility improved private HSOs' attitudes towards the contract relationship; but factors such as interdependence, flexibility, and asset specificity were better indicators of longer-term commitment to maintaining the contract relationship. The importance of flexibility for both satisfaction and affective commitment to the contract relationship has important implications for public managers seeking to foster better relationships with private providers. Finally, study findings also confirm the need for greater attention to the multidimensional nature of constructs such as trust and commitment, better understanding of how relational mechanisms may differ based on agency ownership, and for research linking these relational mechanisms to more distal human service contracting outcomes.

### Supplementary material

Supplementary material is available at the *Journal of Public Administration Research and Theory* online ([www.jpart.oxfordjournals.org](http://www.jpart.oxfordjournals.org)).

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