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A Model for Determining Optimal Governance Structure in DoD Acquisition Projects in a Performance-Based Environment

David Berkowitz

Introduction

Product acquisition and sustainment have traditionally been separate and not necessarily equal concerns in defense acquisition. To reconcile this deficiency, the 2001 *Quadrennial Defense Review (QDR)* proposed a modernization of the defense acquisition process that resulted in the adoption of Performance-Based Logistics (PBL), which integrates a performance-based environment for both acquisition and sustainment. The basic tenets of PBL suggest that the governance structure used must address the potential long-term nature of the relationship between the government and suppliers by integrating more collaboration and adaptability into the contractual mechanism. Knowing this, the ultimate challenge for a contractor is being able to understand the relationship they have with the government and be able to evaluate whether the governance structure chosen permits, inhibits, or prohibits the government and contractor from achieving desired outcomes.

The purpose of this paper is to present a conceptual model that describes the conditions under which defense acquisitions should be structured as either being more short-term, transactional exchanges; long-term relational exchanges; or plural form (which recognizes the complementary nature of contracts and cooperative norms). Using this conceptual model coupled with the logic provided by Transaction Cost Theory (TCE), we should be able to better explain whether the government-contractor relationship has a significant impact on the outcome of the contract. For those contracts that fail as a result of endogenous conditions, we realign those programs with alternative contract types and alternative governance structures that are more suitable for the conditions of those programs. We conclude this study with a discussion of how managers should match contract type with optimal governance structure and a preliminary empirical examination of the conceptual model.

Background and Concepts

Performance-Based Contracts

Geary and Vitasek (2008) argue that longer term contracts encourage long-term investments to improve product or process inefficiencies. Their logic is that long-term (greater than one year) contracts justify higher up-front investments on the part of the contractor, while short-term (one year or less) contracts generally discourage up-front investment on the part of the contractor and are therefore less effective at obtaining a higher degree of performance. Keeping this in mind, we recognize that because the preferred PBL contracting approach is long-term contracts (USD/ATL Policy Memo, 2005), the DoD is not only choosing to invest in the acquisition of a technology or system, it is also investing in a relationship with that contractor.

Formal Contracts

There are different schools of thought concerning the impact of formal contracts on the relationship between the parties involved. Ghoshal and Moran (1996) and Fehr and Gachter (2000) argue that formal contracts may signal distrust which could encourage one or all of the parties to exhibit opportunistic behavior. Poppo and Zenger (2002) argue that when relational governance exists, formal contracts are an unnecessary expense and could potentially be counter-productive. Other scholars seem to think that because transactional uncertainty is inherent in long-term contracts, having formal agreements are necessary for combating market dynamism (Aldrich, 1979; Child, 1972), which is a result of evolving technology, shifting prices, or variance in product availability (Cannon et al., 2000).

Cooperative Norms

We define the term cooperative norms as being the relational norms that exist outside of the formal contract. In other words, if a formal contract establishes a set of legal conditions, in theory, the relational norms that exist between the parties involved are the means by which those conditions are satisfied. Williamson (1993) argues that contractual incompleteness notwithstanding, an ex post maladaptation problem will not arise if (1) the parties promise to disclose all relevant information and behave cooperatively during contract execution and renewals, and (2) these promises are self-enforcing. We view cooperative norms as being complementary to formal contracts, which agrees with Gundlach, 1999; Gulati, 1995; Ring and Van De Ven, 1994; Allen and Lueck, 1992.

Transaction Cost Theory

When it comes to understanding how managers construct governance arrangements, transaction cost theory has become a common supposition for explaining the rationale behind these arrangements. Understanding the impact of transaction costs will allow contractors in the defense industry to better articulate and account for the hazards associated with multi-party, multi-year procurement and sustainment contracts.

The theory of Transaction Cost Economics (TCE) is centered on two basic principles: (1) human beings are *bounded rationally*, and (2), as a result of being rationally bound, will always choose to further their own self-interest (i.e., *opportunism*) (Williamson, 1985). Within the context of TCE, scholars define three categories of exchange hazards that require contractual safeguards: (1) asset specificity, (2) difficulty of measurement, and (3) uncertainty. *Asset specificity* arises as sourcing relationships require significant relationship-specific investments in physical and/or human assets (Poppo & Zenger, 2002). *Difficulty of measurement* arises when the rewards given to a contractor cannot be objectively linked to a set of performance parameters. Lastly, *uncertainty* arises because of one’s inability to know and account for all hazards that occur as a result of seen and/or unforeseen changes.

Several variables give rise to transaction cost issues in the defense industry. Some of the most commonly recognized are the defense budget cycle, rapidly evolving technology, a bimodal distribution in the age of government employees, and a giant gap between first and third-tier suppliers (Chao, 2005). Although the degree of significance may vary greatly amid these and other variables, we assume that their collective impact on the government-contractor relationship is significant. As a result of their collective significance, we believe that both the government and the contractor construct contractual agreements that: (a) reduce the level of risk assumed by the contractor, and (b) provide a product or service that meets the government's needs at a reasonable price.

Governance. Over the past 30-40 years, several scholars have contended that interorganizational exchanges are driven by variables outside of the formal contract. Governance emerges from the values agreed-upon processes found in social relationships (Macneil, 1978; 1980; Noordewier et al., 1990; Heide & John, 1992; Poppo & Zenger, 2002). Tubig and Abetti (1990) found that both exogenous (external) and endogenous (internal) variables influence contractual performance. Their research found that endogenous variables such as type of R&D, type of solicitation, and type of contract, all had an effect on contractual performance.

When we think about specific types of governance structures we see governance as existing along a spectrum that moves from transactional to relational (see Conceptual Model). Transactional governance implies that there are fewer *hazards to exchange* (i.e., environmental uncertainty, transaction-specific investments, or difficulty in measurement); therefore, continual interaction between the government and the contractor may be unnecessary. Relational governance, on the other hand, implies that there are *greater* hazards to exchange; therefore, continual interaction would be needed between the government and the contractor to ensure that both players are acting in ways that reflect their mutual interests and not in ways that exhibit opportunism.

We hypothesize that for a large majority of Major Defense Acquisition Programs (MDAPs), contractual success is permitted when there is a strong mix of both legal and social conventions. This plural form governance structure, however, does have both pros and cons. According to Dyer (1996) and Dyer and Singh (1998), social governance may lead to a reduction in transaction costs when compared to formal contracts. Gundlach (2000), however, takes the view that the institution of social norms requires a history of interaction and reinforcement, whereas the absence of such a history could lead to conflict, distrust, and opportunism.

Conceptual Model

In government contracting, formal contracts serve as the primary governing mechanism for acquiring and supplying organizations. Yet studies consistently report that performance is typically higher among organizations that use non-legal principles to govern the relationship among the buyers and suppliers. Our conceptual model aligns the alternative governance structures derived from transaction cost economics, normative structures derived from relational exchange theory, and plural forms derived from the joining of these two frameworks to explain the three possible mechanisms for governing DoD contractual relationships. The model also describes the hazards of exchange and moderating variables that suggest a shift from more traditional transactional exchanges to more relational exchanges. Finally, the model provides a framework for aligning alternative contract mechanisms with the optimal governance structures and accessing the impact of alternative contacting arrangements on the DoD's perception of performance.

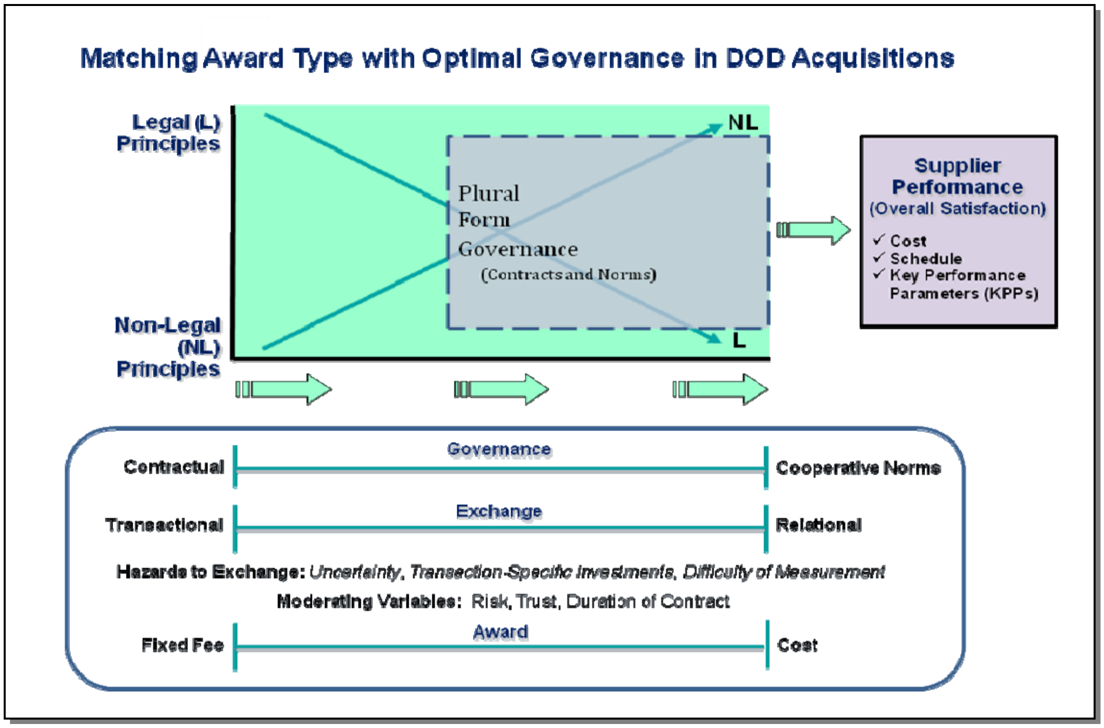

Figure 1. Matching Award Type with Optimal Governance in DoD Acquisitions

Type of Contract

FAR 16.101(b) states the following: “contract types are grouped into two broad categories: fixed-price contracts and cost-reimbursement contracts.” On one end of the contractual spectrum you have the *Firm-Fixed-Price* (FFP) contract where there is no mitigation of the cost risk associated with producing an end item by the government; therefore, the contractor assumes all of the cost risk associated with that end item. On the other end of that spectrum you have the *Cost-Plus-Award-Fee* (CPAF) contract where objective incentive targets are not feasible for critical aspects of performance; therefore, the government’s objectives are more broad, giving the contractor flexibility to interpret how to achieve those objectives. As a result of those broad objectives, the government chooses to share in the risk associated with creating that end item.

The contractual spectrum reveals certain proclivities about the types of relationships one would find given certain types of contracts. As an example for major weapon systems (MWS), under an FFP contract, the government is not investing in any of the current developmental risk associated with that product; therefore, the type of relationship the government has with the contractor may not be a critical issue. On the other hand, under a CPAF contract, the government is investing in the development of a product that may be currently immature, or perhaps, does not even exist; therefore, we assume that the success of that contract will be dependent upon the type of relationship that the government has with that contractor.

Preliminary Analysis

Using contract data housed by the Federal Procurement Data System (FPDS) coupled with performance data found in the Selected Acquisition Reports (SAR) housed by the Defense Acquisition Management Information Retrieval (DAMIR) system, we evaluated 16 Major Defense Acquisition Programs (MDAPs) that spanned across the different service branches. Three programs were selected from the US Army, 3 from the US Air Force, 5 from the US Navy, and 5 programs were classified as Joint Service Products (see Appendix A). The programs selected were based upon a predetermined set of criteria that allowed the analysis done to be well-balanced.

Matching Contract Type with the Appropriate Governance Structure

When one considers the type of contractual mechanism and governing structure that should be applied to a particular program or project, it is important to first evaluate the types of variables that would, or could potentially, have the most significant impact on the overall success of the project. In the defense industry, some of the variables to consider would be relational history (contractor-government and/or contractor-contractor), duration of the contract, level of investment risk, wartime verses peacetime, state of the economy, rate of technological change for the item being procured, and complexity of development.

As a contractor, it is vital to understand the role the firm plays in the defense industry. This will allow the firm to better predict which variables could have the greatest impact on the firm’s ability to achieve desired outcomes. Once those variables have been identified and a suitable governance structure has been selected for dealing with those potential hazards, ceteris paribus, there should be greater degrees of contractual success.

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