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Fixing the contract after the contract is fixed: A study of incomplete contracts in IT and construction projects

Ulrika Badenfelt

Chalmers University of Technology, Technology Management and Economics, Vera Sandbergs allé 8, Göteborg, SE-41296 Sweden

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Abstract

This paper aims to increase our understanding of collective outcomes by exploring both micro- and macro-level strategies for dealing with problems arising from incomplete contracts. By combining theories dealing with risk-sharing under various degrees of uncertainty (financial incentives and long-term relationships) with respect to social influence tactics involved in negotiations concerning additional work and changes, a useful framework was created. Case data regarding Swedish interorganizational development projects from both the construction and IT industries are used to illustrate the theoretical arguments. Findings indicate that social norms and the work-related values and attitudes of key negotiators significantly affect project outcomes. Efforts to increase the sophistication of financial incentives and long-term arrangements (e.g., standardized routines concerning risk-sharing and collaborative initiatives) do not seem to pay-off.

Keywords: Interorganizational projects; Incomplete contracts; Financial incentives; Influence tactics

1. Introduction

Given that future aspects of work can never be fully predicted or described, the starting point of this paper is the assumption that contracts for development projects, irrespective of their complexity or sophistication, are by nature incomplete (Hart and Moore, 1988, 1999; Turner, 2004). Such incompleteness stems from the reality of transaction costs, bounded rationality, and information asymmetries that makes it impossible for contracting parties to design a complete contract (Spier, 1992). In other words, a contract is considered "incomplete" if it is not as fully contingent on the "state of the world" as the contracting parties might like it to be (Maskin, 2002). In such projects, parties must negotiate contracts, prepare for future renegotiations, and shape awareness to accommodate problems that have not yet arisen (Tirole, 2009). Furthermore, tensions are frequent and serious in interorganizational projects in which the contracting parties share uncertainty about many important changes that occur after the contract is signed and production begins, for example, changes relating to design failures, unanticipated site and environmental conditions, and changes in regulatory requirements (Tirole, 2009; Bajari and Tadelis, 2001). Unforeseen contingencies such as late changes and design variations are a major source of claims and disputes in contractual relationships (Bajari and Tadelis, 2001). Accordingly, a contract strategy must not only provide incentives to deal with risks, but also must be flexible enough to accommodate unforeseen circumstances as they arise (Turner, 2004).

The complexity described above has attracted researchers worldwide, resulting in an abundance of studies of various types of collaborative efforts, for example, relational contracts (e.g., Dyer and Singh, 1998; Oliver, 1990; Ring and van de Ven, 1992; Goldberg, 1980; Macneil, 1978; Macaulay, 1963, 1985) and financial incentives (e.g., Holmstrom, 1979). These studies have mainly focused on the organizational (i.e., macro) level of analysis, and little empirical research has examined the performance implications of ongoing relational influence between contracting partners (Muthusamy and White, 2006). While Doz (1996) identified a lack of research linking individual behaviours and organizational processes, Felin and Foss (2005) declared that an elementary truth – there is no

E-mail address: ulrika.badenfelt@chalmers.se.

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organization without individuals – seems to have been lost sight of in recent strategic research. This argument was also made by Abell et al. (2008), who stated that strategic management should be fundamentally concerned with how intentional human action and interaction produce strategic phenomena. Evidently, more research ought to address the micro-level origins of individual action and (strategic) interactions of various types (Felin and Hesterly, 2006). This would preferably be done by investigating how people actually behave and interact in ongoing projects, by examining the collaboration process itself. In addition, Artz and Brush (2000), who studied relationships governed by relational contracts, claim that future research would benefit from collecting data from both the client and contractor perspectives, since different results may be obtained if both views are integrated in the analysis.

This paper aims to explore the *routines* and *social processes* involved in projects with incomplete contracts at both the macro- and the micro-levels (i.e., individual–organization linkages). It will do so from both the client and contractor perspectives, through a case study of Swedish interorganizational development projects in both the construction and IT industries. Specifically, it will answer the following question: *What strategies are evident in dealing with problems that arise from incomplete contracts in interorganizational projects?*

"Strategy" is one of the most overused words, having vastly different meanings in different contexts. Here, the word refers to standardized procedures and individual safeguards that, more or less consciously, are used by contracting parties in interorganizational projects to protect their interests in incomplete contracts.

The paper is structured as follows. The next section presents the theoretical background of the study. Thereafter follows the section on method, which provides details about the interview questions, data analysis method, and selected cases. Next, the empirical analysis is presented, followed by a discussion of the results. Finally, conclusions from the findings are presented, along with the study's limitations and some practical implications for further research.

2. Theoretical framework

Research attempts such as this, inspired by Nelson and Winter's (1982) *evolutionary economics*, challenge inductive or deductive methods that treat looking into the future as a form of conservative projecting of past and present probabilities onto the course of future development (Patokorpi and Ahvenainen, 2009). According to Dew (2007, p. 44) the message is clear: "Much of the practice of strategic decision making, rather like detective work, is less about 'knowing' and more about 'guessing'. Learning how to guess well – abductive thinking – is core to good designing". What could be a better place to apply and develop such efforts than research like this, which focuses on strategies for dealing with problems arising from incomplete contracts, i.e., the reality of project changes? Accordingly, I have developed the theoretical themes using an iterative approach (Dubois and Gadde, 2002) in which I alternate between empirical data and theory. This has resulted in a theoretical discussion that first pays attention to financial incentives under the impact of contract variations. Then I describe the effects of information asymmetries and the logic underlying the use of relational contracts. Finally, a framework is presented that accounts for the influence tactics used by contracting parties in negotiations concerning contract contingencies (i.e., late project changes and additional work) in interorganizational projects.

2.1. Financial incentives under the impact of contract variations

The degree of contract completeness is particularly important when seeking to determine what type of financial incentive is appropriate (Crocker and Reynolds, 1993). Fixed-price contracts have traditionally been restricted to projects involving relatively few technological and economic uncertainties. Nevertheless, due to information asymmetries, even a risk-neutral contractor is often reluctant to sign a fixed-price contract without obtaining a higher price. Furthermore, and as stated by Crocker and Reynolds (1993), in practice the costs of identifying unforeseen events increase rapidly in complex or uncertain environments, placing economic limits on the ability of contracting parties to draft and implement elaborate contractual agreements. According to Reichelstein (1992), cost-plus contracts avoid the problem of overpayment, but, as is well documented, the client exposes itself to the problem of cost padding. To limit the negative effects of cost-plus contracts, it has become common practice to replace standard cost-plus contracts with target-cost contracts (i.e., cost-plus-incentive-fee contracts), which are believed to reinforce collaboration between client and contractor by letting them share economic gains and losses (Bresnen and Marshall, 2000). Hence, in the end, the chosen financial incentive represents the outcome of negotiations between both contracting parties, heavily influenced by project type, complexity level, and perceived risk level (Badenfelt, 2008).

Since financial incentives are usually set at the start of the contract, any changes arising from design failure, buyer priorities, goals, or other factors beyond contractor control (i.e., the reality of incomplete contracts) require the renegotiation of incentive provisions and cost targets. Consequently, the buyer–contractor working relationship can be spoiled and desirable project outcomes may not be attained (Bajari and Tadelis, 2001). Fortunately for the contractor, the courts have established that contractors are entitled to fair compensation for additional work and late changes. Thus, in fixed-price and target-cost contracts, the general contractor will be unwilling to perform duties beyond those to which he is contractually bound without additional compensation directives (Bajari and Tadelis, 2001). One type of contractual procedure used to adjust compensation in fixed-price contracts is called a change order, a written amendment to the contract that describes the additional work the contractor must undertake and the compensation he will receive for this (Bajari and Tadelis, 2001).

It seems reasonable to assume that the contractor has superior information about the costs and methods of implementing changes (Bajari and Tadelis, 2001). When only one party has critical information about some aspect of a contract,