

# TRUST AND CONTROL IN THE EARLY PHASES OF TARGET COST CONTRACTS

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Target cost contracts entail the use of open book accounting, giving the client full access to project costs. Since comprehensive cost control is expensive, other less costly control mechanisms might be better for the client. Moreover, the ambiguous connection between control and trust and the negative impact of control on the collaboration climate is well known. The purpose of this paper is to investigate the variety of control mechanisms used by the client in the early phases of a target cost contract and give a deeper understanding of the complex relationship between trust and control. A case study approach is adopted, which demonstrates the control mechanisms used by the client in a construction project in order to guarantee that the contractor behaves in a trustworthy way. The case is a large laboratory project with a target cost contract, where the empirical data were gathered through interviews and non-participant observations. Based on previous experiences the client considered the contractor as reliable and believed that a rigorous control of project costs might hurt the relationship. However, the client's opinion was that trust is fragile and must be continuously preserved. Therefore the client analyses the contractor's response to project changes as a measure of contractor reliability. For instance, if there are any strange features in the contractor's response, or if the contractor behaves in a suspicious way, the client might find it necessary to expand control, even if it might impact negatively on the collaboration climate.

Keywords: control, open book accounting, target cost contract, trust,.

## INTRODUCTION

Based on the principle that shared risks unify motives, target cost contracts are believed to serve as a method for building trust in collaborative contractor-client relationships, by putting focus on mutual project goals like cost and performance (Bower *et al.* 2002). However, since lack of information transparency may weaken trust (Kulmala 2000), the visualization of project costs is considered crucial in these types of contractual arrangements. As a consequence target cost contracts often entail the use of open book accounting, giving the client access to project costs. However, since comprehensive output based cost control usually is expensive (Das and Teng 1998), other less costly control mechanisms may be considered as more attractive for the client.

Beyond the observation that trust is essential when the client has poor control over the contractor, Das and Teng (1998) found the literature to be unclear and inconsistent about the relationship between trust and control. Additionally, Langfield-Smith and Smith (2003) perceived that researchers have not always considered how specific forms of trust and specific types of controls relate or interact. Hence, the purpose of this paper is to investigate in-depth the variety of control mechanisms used by the client in the early phases of a target cost contract for testing the trustworthiness of the

contractor. This gives a deeper understanding of the complex relationship between trust and control. By empirically studying the client's choice of control mechanisms in a Swedish construction contract the answers to the following research questions will be investigated:

1. What control mechanisms are used by the client for testing the trustworthiness of the contractor and maintaining trust in the early phases of a target cost contract?
2. What types of actions are carried out by the contractor organization for maintaining the level of trust?

To answer these questions a case of a construction project with a target cost contract, and an expressed collaboration intention, will be examined. This paper is structured as follows: first the theoretical framework involving the basic elements of collaboration, trust and control theories. Then the empirical findings from the case study will be presented. Subsequently the research questions are discussed in relation to the theoretical framework chosen.

## **THEORETICAL FRAMEWORK**

Uncertainties about the project environment and the risk of opportunistic behaviour make the relationship between trust and control particularly important in cooperative relationships (Lui and Ngo 2004). In this setting, control mechanisms are referred to as a wrap up of various policies and procedures that contracting parties use to mitigate different types of risk such as relational risk and competence risk (Coletti *et al.* 2005).

Although control mechanisms have been categorized and conceptualized in various ways, there is some agreement that the main two control categories are formal, explicitly designed control mechanisms, and informal implicit control mechanisms (Langfield-Smith and Smith 2003). To the more formal control mechanisms belong different types of behaviour control and output control mechanisms. Measuring behaviour is to ensure that the process is appropriate and this is achieved through a variety of processes, such as the establishment of policies and procedures, reporting structures, staffing and training. These are all ingredients in interorganizational agreements and specify through a contract what should be done and how it should rely on an assessment of members' performance and are achieved through the establishment of precise and measurable goals (Das and Teng 2001). However, there is also a social control mechanism that focuses on how to influence the behaviour of the contracting party by creating shared values and a clan like environment. This control mechanism aims to increase the contracting parties' commitment by reducing goal and preference incongruence (Das and Teng 2001).

### **Trust and control**

The concept of trust has turned out to be hard to determine and has lent itself to many interpretations. However, Woolthuis *et al.* (2005) came up with a useful framework applicable for studies involving the interplay between trust and control. They divided trust into both competence trust, concerning the contracting party's ability to perform in accordance with the goals of the project, and intentional trust, focusing on the contracting party's intention not to behave opportunistically. However, since people can be passive or actively opportunistic, intentional trust can be divided into trust in dedication and trust in benevolence/goodwill. While lack of dedication refers to a person's lack of enthusiasm in performing to the best of one's competence, the lack of

goodwill entails lying, cheating and stealing to expropriate advantage from a partner. Further, by maintaining a high level of goodwill trust it is possible to minimize the perceived relational risk, whereas competence mitigates the perceived competence risk. Consequently, the selection of control mechanisms depends upon the perceived level of risk and type of trust (Das and Teng 2001).

Additionally, trust between contracting parties can be high due to earlier experiences of working together, hence a high level of initial trust can replace the design and implementation of control mechanisms and practices (Vosselman and Van der Meer-Kooistra 2006). Then again, another common understanding is that trust is not static. Once trust is given to others it can increase or decrease, depending on the nature of the ongoing relationship. For instance, if an individual fails to live up to expectations of beneficial behaviour, trust will instinctively decrease (Bijlsma-Frankema and Costa 2005). To make the relationship between trust and control even more complex, there are scholars who argue that the mere presence of a control mechanism changes the way decision makers think, causing them to perceive other collaborators as less trustworthy (Coletti *et al.* 2005). Consequently, since a low level of trust often leads partners to view each other with suspicion, the working relationship may be damaged (Das and Teng 1998). Further, Kamminga and Van der Meer-Kooistra (2007) found that control can be exercised in direct as well as in subtle or indirect ways, hence not always visible on the surface. As long as things go well, client involvement may be very limited whereas in fact the control exercised may be described as tight.

### **Control mechanisms within construction projects**

With the awareness that there is a variety of output, behaviour and social control mechanisms applicable in construction projects, such as the selection and negotiation of the contract and the tendering process, the control mechanisms in focus in this study are the ones in question after the contractor has been selected and the contract has been negotiated and signed.

Although the project budget often is set before the contractor is selected it works as an important formal output-based control mechanism during the whole project life cycle. This process is commonly referred to as budgeting in the literature of accounting and it is one of the output-based control mechanisms that integrate the whole range of project activities into a single coherent summary. The benefit of the budgetary control process is that it provides a single set of financial accounts against which actual outcomes can be monitored (Otley 1999). However, according to Otley the downside of the narrowness of this control mechanism has been compared to driving a motor car solely by looking through the rear view mirror, a mirror that provides only an imperfect reflection of reality.

Moreover, various kinds of profit sharing agreements, such as the target cost contract in focus in this study, increase the need for reliable cost information. Therefore, cost accounting is here interpreted as an important output-based control mechanism in a target cost contract, especially since it reveals important knowledge to management at both a strategic and operational level. According to Mouritzen *et al.* (2001) open book accounting means that information that previously was kept secret is now made available for contracting organizations. Unfortunately, since many of today's accounting systems fail to provide accurate cost information in interorganizational projects, data are too distorted and aggregated (Kulmala, 2000).

As it has been argued that shared values are an example of a social control mechanism (Eisenhardt 1985; Das and Teng 1998), a partnering arrangement may be considered

as a strategy to obtain such control. Partnering was introduced in the early 1990s as a way to foster trust and mitigate costly disputes between the clients and contractors by developing a project culture of shared values. Even though the concept has been expressed in numerous ways, the most commonly cited definition is that of the Construction Industry Institute (Humphreys *et al.* 2003) that states as follows: “*a long-term commitment between two or more organizations for the purpose of achieving specific business objectives by maximizing the effectiveness of each participant’s resources. This requires changing traditional relationships to a shared culture without regard to organizational boundaries. The relationship is based on trust, dedication to common goals, and an understanding of each other’s individual expectations and values. Expected benefits include improved efficiency and cost effectiveness, increased opportunity for innovation, and the continuous improvement of quality products and services*” (CII, 1991).

However, Bresnen (2007) found that these more cooperative arrangements do not necessarily reduce the use of formal control; instead they might even encourage the use of more sophisticated and powerful control mechanisms such as surveillance through audit, implying that more sophisticated formal control mechanisms may actually exist within a collaborative trust based setting. As Bresnen (2007) expresses it, “*‘having your cake and eating it’ is traditionally taken to be a sign of gluttony*”. Moreover, Humphreys *et al.* (2003) found that a partnering process actually made it much easier to control time and cost performance levels and achieve higher quality levels due to the close co-operation and openness between the contracting parties, thus facilitating earlier anticipation and minimization of potential problems.

Further, in many contractual relationships clients cannot totally rely on control mechanisms for balancing up the business transaction (Braynov and Sandholm 2002). For instance, when contracts are considered risky, the client and contractor organizations usually have their own estimates of the trustworthiness of the other party. However, maintaining such estimates of trustworthiness is a matter of strategic planning, where each contracting party has to decide how to go about to maintain the level of trust (Braynov and Sandholm 2002).

## **METHOD**

Justified by this study’s explorative character, an in-depth case study approach (Yin 1994) was adopted for demonstrating the variety of control mechanisms used by the client in a construction project with a target cost arrangement. Data were collected from contract documents and non-participant observation at project meetings held on the building site. Further, data were also collected through frequent interviews with key informants, two representing the client and two representing the contractors, all directly involved in the contract negotiation and execution process. To avoid misinterpretation of data, the interviews were transcribed, reviewed and sent to the interviewees for corrections. Moreover, there was a possibility that my presence in itself may be considered as a control mechanism, increasing the possibility that the respondents might withhold critical information or distort the truth. To avoid this, two separate relationships have been built, one with the client and one with the contractor based on a mutual interest to understand these types of issues, and the respondents’ confidence in that collected empirical data would be handled with discretion.

## **EMPIRICAL FINDINGS**

In this section, findings from the investigation are organized in five sections addressing:

- The construction project
- The open book accounting system
- Budgeting
- Client views on trust and control
- Contractor views on trust and control

### **The construction project**

The construction project that was the focus of the case study involved the erection of a large laboratory for a high technology company in Sweden. The total construction costs were about MSEK 300 (corresponding to about MEUR 40). The client organization had long experience with similar projects, and had an in-house project team composed of project managers, estimators, project planners and external consultants who had many years of experience in planning and conducting design work for this specific client. The selected contractor was one of the three largest construction firms in Sweden and the specific contractor team had worked with the client in previous projects.

### **Budgeting**

Most of the design work was completed before the relationship with the building contractor was established, leaving the contractor little scope to come up with other solutions in the course of construction. Moreover, at an early phase, before the client invited tenders and as a way to establish a feasible project budget, the client engaged an extern cost accounting firm that calculated cost per unit, based on the detailed design plan. The client was of the opinion that the comprehensive and detailed building and design plan in combination with initial cost estimation would enable them to easily calculate a reasonable target cost and thus identify an unrealistic tender. The final target cost contract was designed to give the contractor organization 30% of any savings under the target cost and 30% of any cost overruns. However the client had put in a ceiling in the contract and above that amount the contractor would get nothing. Further, the client presented also a decision model as to when the target might be changed. It laid down that any decisions that affected quantity would be valid reasons for a target cost change, but that changes in quality would not.

### **The open book accounting system**

The open book accounting system in use in the case study is provided by the contractor. In this computerized financial information system the contractor organization reports the required cost information by recording the incoming invoices numbered consecutively. This system, provided by the contractor, is only three years old and before its existence the invoices were collected in loose-leaf binders. According to the contractor project manager it is much easier to create clear and traceable cost accounting through this computerized system. Noteworthy is that this particular system does not have any built-in controls, such as checking against the initial detailed cost estimation of material quantities.

### **Client views on trust and control**

The client emphasized that the contractor, besides having proposed the most attractive incentive arrangement, was selected since they were considered to have an incredibly good organization. As expressed by the client: " *We have worked with this contractor before and know we can trust them. So I can only see advantages with this arrangement.*" Further, the client was of the opinion that regular formal invoice control entails unnecessary costs and has a negative influence on the collaboration climate: " *One cannot assume that the contractor cheats. If we did, we would not enter into this relationship*". Hence, the client did turn down the offer to get direct access to the cost information through the contractor's computerized financial information system. However, there are progress meetings every six weeks, where the contractor has to give further details about the status of the project's financial position. The client opinion is that if the project budget is not at risk to be exceeded there is no need for a more rigorous invoice control. During these progress meetings they also discuss differences and conflicts of opinion regarding target cost changes. Notably, in order to avoid the Swedish term *stymöte*, which is associated with rigorous control, the client has chosen *avstämningsmöte*, which is close to being a progress meeting.

Moreover, in order to create an open and communicative environment for cross-cultural exchange of information and ideas, the client expressed that they aim to foster a partnering spirit in this project. Also, the client's opinion was that trust is fragile and must be continuously preserved. Therefore the client analyses the contractor's response to project changes as a measure of contractor reliability. Furthermore, the project consultant hired by the client makes his own calculations that he uses as a control mechanism when evaluating the contractor's response to project changes. For instance, if there are any strange features in the contractor's response, or if the contractor behaves in a suspicious way, the client might find it necessary to expand control, even if it might impact negatively on the collaboration climate: " *If a contractor starts to behave suspiciously, we can always go back and check the company's books*".

Further, there are the weekly project meetings, held on the building site, where the client and contractor discuss the timetable and resources as well as a description of possible changes that might affect the target cost. Also, even if the client can review the weekly printed-out and updated time schedule, the project management consultant hired by the client organization usually asks the contractors if they have had, or suspect to run up against, any problems that may prevent them from delivering on time. It is also the project management consultant who keeps the record of the project meetings.

The project management consultant has worked for this client for nearly 15 years, and has long experience of evaluating the quality of contractor performance. He makes daily inspections of performance and usually comments as soon as he finds something of poor quality. There is also a web camera that takes pictures three times a day of the building site. However, the client expresses that the camera is put there to keep a record of the construction process and not for control of the contractor's performance. Another finding related to control is the following client quotation: " *even if I have a full view from my office over the building site, that's none of my business to make a phone call to tell you that you need to clean up*".

However, when talking with the contractors about this matter they said that it happens quite often that they receive such phone calls: " *for example X called yesterday just to*

*say that he could see a pile of dirt in one of the corners. They seem to forget that this is a building site, not their office that some one else cleans for them everyday”.*

### **Contractor views on trust and control**

Further, the contractor involved in the case study emphasized that they have a long-term mindset as well as an awareness of the value of a good reputation: if they start to act opportunistically or cheat they will soon be out of business. This was especially emphasized by the contractor project manager: *“I usually explain to the project participants that you may destroy in a minute the credibility it takes years to build”*. Also, the contractor emphasizes the importance to be open and share information with the client about circumstances that may impact on the outcome of the project.

However, as one of the contractors expressed, in front of the client representatives during a building meeting: *“it has happened in other projects that a contractor had been instructed by head officials not to be to honest, since this may be held against them later on in the building process”*. Another illustrative contractor quotation: *“It lies in the nature of buyer-seller relationships that this is a game, where we as contractors always try to get as much as we can out of the client”*. So, even if this contractor said that he always tries to be as honest as possible, he explained further that one must not forget that a project is an ongoing negotiation, mentioning discussions about target cost changes as an example.

To conclude, through observation and interviews a range of control mechanisms used for testing the contractor’s trustworthiness and maintaining trust were identified.

The more formal output-based mechanisms are as follows:

- The project budget that running project expenses are compared against.
- The continuously updated cost reports and time schedules.
- The client organization’s parallel cost estimating model.

The more formal behavioural based are:

- Decision model as to when the target might be changed.
- The project management consultant engaged by the client organization to supervise the construction project and look after the interests of the client.
- Different types of meetings, such as project and progress meetings.
- Inspection and supervision of the order and tidiness of the building site.
- Web camera.

Finally, the informal control mechanisms are:

- The contractor’s response to project changes.
- Client frequently asking questions about project status.
- Evaluation of management attitudes.
- Negotiations of target cost changes.
- Elements of partnering arrangements.

Identified actions carried out by the contractor organization for maintaining the level of trust are as follows:

- Offering the client direct access to their cost accounting system.
- Sharing project information that otherwise would remain hidden to the client.
- Expressing their intention to get repeat business and build a long-term relationship with the client.
- Contractor upper management communicating to their staff the importance of behaving trustworthily.

## **DISCUSSION**

The aim of this study was to give answers to the research questions: (a) What control mechanisms may be used by the client in the early phases of a target cost contract for testing the trustworthiness of the contractor and maintaining trust? and (b) What types of actions are carried out by the contractor organization for maintaining the level of trust?

Although the client organization expressed that they did not need any rigorous cost control and that they felt that the contractor could be trusted, they in fact had a variety of other control mechanisms in use. One of the evident control mechanisms found was the budget that may be used as a measuring instrument during the whole project. Other control mechanisms are the cost reports and time tables regularly provided by the contractor. Additionally, with the help of the theoretical framework, other more formal control mechanisms used by the client for measuring and maintaining trust could be identified, although they previously had not been analysed in the construction management literature, such as the decision model for when the target might be changed. This model may here be interpreted as a way for the client to initially test the contractor's level of goodwill trust. There is also the role of the project management consultant engaged by the client organization to supervise the construction project, in this study interpreted as a behavioural control mechanism. In the case study the project management consultant was involved in a whole range of formal and informal control activities, such as regular controls of the reliability of the contractor's cost estimates of project changes, writing notes at project meetings, evaluating the quality of work done and discussing time schedules and construction solutions with the contractor.

Further, though the client expressed their intention to work in a partnering inspired way in order to minimize the effects of asymmetric information, there was not much else than the use of the gainshare/painshare arrangement (i.e. target cost contract) that could be said to bear a resemblance to a traditional partnering arrangement. Hence, it is not obvious that the positive effect of social control will occur in this contractual relationship. However, some informal social control seems to take place during the different types of project meetings, where attitudes are expressed, hazy information clarified and disputes are ventilated.

There is also the inspection and supervision of site tidiness, as well as the web camera that takes pictures three times a day of the building site. Although not outspoken, these types of actions may here be interpreted as a subtle way for the client to use his power over the contractor as well as a way to maintain the level of trust. The distinctive trait of these more subtle actions is that they involve a way for the client to prevent the contractor from acting opportunistically by showing off their power over the contractor. It is natural to wonder what the true effect is of the web camera. By letting the contractors indirectly or directly know that their actions in fact might be

observed all the time, it is quite possible that the contractor's behaviour will be affected by the camera. The contractor on the other hand, due to his lack of power, has to rely on social skills to convince the client that they can be trusted. The contractor may also convince the client that they aim to build and maintain a long-term relationship and that they treasure their reputation, so that they cannot afford to behave dishonestly.

## CONCLUSION

In this paper, combinations of control mechanisms used in the early phases of a target cost contract to validate and maintain the level of trust have been studied and accounted for. One finding worth to emphasize is the client's and contractor's awareness that project trust is fragile and must be continuously preserved. This became highlighted by how the client analyses the contractor's response to project changes as a test of contractor reliability; if there are any strange features in the contractor's response, or if the contractor behaves in a suspicious way, the client might find it necessary to expand control, even if it might impact negatively on the collaboration climate, increasing the relational risk. Notably, this action is in line with the common theoretical understanding that trust is not static (Bijlsma-Frankema and Costa 2005). Further, the present study elucidates that it is in the nature of high risk business relationships, such as construction projects, to implement and use control mechanisms, although not always visible for the one being controlled.

Contracting parties conscious of this phenomenon are probably aware that they may be controlled in a variety of formal as well as informal ways. Also, this study emphasizes that while clients try to maintain the level of trust by letting the contractor be aware that they are knowledgeable and difficult to mislead, the contractors try to communicate that they cherish the existence of a long-term relationship and a good reputation. Consequently, since trust does not seem to be static, it ought to be hard to find any type of business relationship that builds solely on trust, especially goodwill trust which implies that people always behave with the project's best in mind. Consequently the present study confirms that the relationship between trust and control is hard to capture and does not easily lend itself to quantitative measurement.

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