Risk of Contract Growth and Opportunistic Behavior: A Comparison of Two Megaprojects

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ABSTRACT

This paper explores the risk associated with contract growth and opportunistic behavior in contractors with a special focus on the management of changes and interfaces. The study compares two successful megaprojects, the Gudrun oil platform by Statoil in the North Sea and the ATLAS detector at CERN. The empirical data were obtained using in-depth interviews with key personnel at Statoil and CERN. The study makes three significant contributions to knowledge: (1) megaprojects can benefit from having a high level of staffing since management costs are relatively small compared to construction costs; (2) when part of the end design is left to contractors, the contractors are given an opening to act in an opportunistic manner, which can cause contract growth; and (3) when a high level of integration is performed in-house, companies can take an extreme cost-driven approach to contracting.

Keywords: Case Study, Contract Growth, Megaprojects, Opportunism, Risk

INTRODUCTION

In the shrinking international business context of the 21st century it is common to find that large ‘megaprojects’ with budgets over $10,000,000 are being initiated (Crosby, 2012). Geography is not really an issue anymore, and as companies specialize more on their key strengths, they ‘shop around’ for solutions or products that would be more costly to develop in-house (Prahalad & Hamel, 1990). Gone are the in-house developed systems - instead the cheapest best-of-breed supplier in the world can be selected regardless of location.

Let’s look at an oil platform as an example. The oil platform can be divided into different key supplier contracts. When building the platform, the deck can be built in Thailand, the living quarters in Norway, and the jacket in Singapore. The only worry is which contractor to choose. Twenty years ago, that same platform would most likely have been built in one location. The solution that fits best, in terms of both performance and cost, can be selected. Even the integration of the various aspects of building

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the platform is not a problem anymore, since contractors also do this.

By using the “old” approach of building all components in one place, companies had an advantage when it came to putting everything together, simply because they had all the knowledge in-house. This is not the case anymore in many projects (Merrow, 2011). As a result of companies focusing on their core capabilities, integrating suddenly becomes a risk and a challenge. And before anything can start being built, the different parties have to agree on who is responsible for making sure that all the different pieces of the puzzle fit together. Several contractors may share the responsibility for integration, but it is important to have this in place before startup of the contract. Contractors will need information from each other. Managing the interfaces between contractors is one of the special risks and challenges that megaprojects face (Merrow, 2011), and a successful interface management system could prove to be pivotal for successful project management in the implementation stage.

Another aspect to consider is how changes in specification will affect the contract set-up and execution. When building that oil platform, or any other complex construction, a high probability exists that something will change at some point during the project. It could be that the specifications were not clear at project startup, or that something is not working as planned or expected. When dealing with these changes, it is important to realize that a small change in the deck could have an impact on the living quarters function, or in a worst-case scenario, making the integration of the two very costly or impossible. While it is not possible to know the exact nature of these changes, contingencies should be in place when they do arise. Changes should be addressed as early in the project life cycle as possible to avoid large risks and additional costs in the later stages of the project.

However, there is the risk that suppliers may use blurred interfaces and changes in an opportunistic manner to increase contract growth. Hence, the purpose of this article is to study how change and interface management affects contract growth and opportunistic behavior from contractors. In a study of megaprojects, Jergeas (2008) identified improper change management as an important reason for cost overruns. Because megaprojects are often fast-tracked, the scope might not be 100% completed which results in scope changes. This is also in line with the thinking of Merrow (2011) who has identified interface management as one of the special risks and challenges for megaproject teams, an area that can be a source of many conflicts and misunderstandings.

While a large number of articles have been previously written about project management, few of these have used complex megaprojects as cases (Merrow, 2011). In general, very little literature about megaproject implementation exists, and the literature that exists mostly deals with the conceptualization and estimation of costs (Brockmann, 2009). We believe this research will contribute information from a successful megaproject that can be very valuable for future megaprojects. The aim is to provide project managers, project owners, practitioners, and researchers with a closer look at the risk of contract growth and opportunistic behavior from contractors with a special focus on change and interface management.

The findings of this case study are based on identified differences and similarities from two megaprojects. The first case consists of the Gudrun project by Statoil, an oil platform under construction with startup targeted for the first quarter of 2014. The second case is the ATLAS detector at CERN, initially targeted for startup in 2004. However, as part of the Large Hadron Collider project, it experienced several schedule delays and was completed in 2008.

LITERATURE REVIEW

Megaprojects and Complexity

There is no universal accepted definition of megaprojects. Fiori and Kovaka (2005) define megaproject using five parameters: magnified cost, extreme complexity, increased risk, lofty ideals, and high visibility. They argue that
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