ABSTRACT

Many large companies are increasingly outsourcing their IT functions. Factors like lower costs, improved productivity, higher quality, higher customer satisfaction, and ability to focus on core areas are some of the benefits of outsourcing. However, there are many challenges and risks associated with IT outsourcing. In this paper, we identify the main risk factors and best practices in global IT outsourcing. In addition, we delve into some important issues on IT outsourcing, particularly the challenges along with benefits. Finally, we present case studies of two Global 200 companies and validate some of the claims made by previous researchers on IT outsourcing. This study will help the management to identify the risk factors and take the necessary remedial steps.

INTRODUCTION

In today’s global economy, outsourcing has become a very common phenomenon. Many large companies have outsourced their IT functions. Factors like lower costs, improved productivity, higher quality, higher customer satisfaction, time to market, and ability to focus on core areas are some of the benefits of outsourcing. However, there are many challenges and risks associated with IT outsourcing (Alvares et al., 1995; Beamish et al., 1995; Feeny et al., 1995; Lacity and Willcocks; 1995, Cross, 1995).

Whenever, there is an outsourcing decision, there is an inherent risk associated with it. In addition, in any outsourcing deal, there are some hidden costs, unexpected outcomes, diminishing service levels, to name a few (Clark et al., 1995; Jurison, 1995; Earl 1996; Antonucci et al., 1998; King et al., 2000; Aubert et al., 2001).

This paper presents case studies of two Global 200 companies and validates some of the claims made by previous research on IT outsourcing. Our main contribution in this paper is to analyze two companies who are currently outsourcing their IT functions and identify benefits, important risk factors, challenges and best practices.

CASE STUDY

In order to understand the benefits, risks, challenges and best practices of outsourcing, case studies were done for two Global 200 companies. All the participants that joined the discussions were all involved in outsourcing projects and helped developing the case studies. Anonymity was deemed necessary to protect the identities of all the participants as well as the name of the company and their outsourcing partners. Both the companies are referred to as ‘FIRM-1’ and ‘FIRM-2’.

CASE STUDY: FIRM-1

Background

FIRM-1 is a large multi-national company, and wants to be the leading provider of semiconductor-based solutions for consumer and communications applications. It has annual revenue of approximately US $5-10 billion. It is one of the world’s top semiconductor suppliers, with manufacturing facilities and partners in diverse geographic areas. It has 14 manufacturing and assembly sites, 20 design centers, four system labs, and more than 100 offices. The manufacturing facilities are located in the USA, the Far East and Europe serving customers worldwide. It also participates in its customers’ business-to-business supply chain extranet. This enables FIRM-1 to get a visibility of demand for the customer’s products, which in turn drives FIRM-1’s production plan.

Introduction

Three individuals from FIRM-1 were interviewed. Due to anonymity reasons, their names are not disclosed; they are referred to as ‘Person 1’, ‘Person 2’ and ‘Person 3’. The names of the outsourcing partners are also kept confidential.

Outsourcing Decision

FIRM-1’s management believes that if a business function is not its core competency, and better value is found externally, it is an ideal candidate for outsourcing. The core competency of FIRM-1 is semiconductor technology, and related R&D activities, which are kept in-house. Also it believes that the knowledge of knowing the customers’ needs and providing those solutions faster to the customers is another key to their success.

Many ERP and supply chain functions like manufacturing, fabrication, packaging, warehousing, are outsourced. For more than 10 years, FIRM-1 has outsourced its IT functions. FIRM-1 has primarily two IT outsourcing vendors and also some niche players. It has divided up the work between the two vendors in order to leverage their strengths. It describes the relationship with the vendors as strategic partners.

The outsourcing partners have their program management personnel on-site, who understand the business processes of FIRM 1. And as such, this helps with the software applications and other services they provide to FIRM-1. It has a dedicated staff to manage the vendor relationship. Also weekly status meetings and monthly progress meetings are held to monitor the performance of the vendors.

IT Outsourcing Practices

FIRM-1 keeps the project management functions in-house. It does not outsource project management responsibilities and complete project management control to its vendors. That was mainly a reaction of a bad experience from one of its earlier outsourced projects. However, there are multiple projects in which the roles and responsibilities are generally shared but control of responsibilities of projects itself is never delegated.

Table 1. FIRM-1 Participants

<table>
<thead>
<tr>
<th>PARTICIPANTS</th>
<th>JOB TITLE</th>
<th>RESPONSIBILITY</th>
</tr>
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<tbody>
<tr>
<td>Person 1</td>
<td>Senior Manager, IT</td>
<td>Responsible for identification of outsourcing opportunities</td>
</tr>
<tr>
<td>Person 2</td>
<td>E-Business Director</td>
<td>Responsible for vendor selection, budget management, and monitoring of delivery of applications to requirements</td>
</tr>
<tr>
<td>Person 3</td>
<td>Project Manager</td>
<td>Vendor Management, execution and delivery of the projects</td>
</tr>
</tbody>
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User acceptance and timeline are always controlled in-house, and never outsourced.

There has been a participative association with vendors in formulating design specifications. FIRM-1 partners with some key vendors to develop design specifications. These vendors are more of key suppliers of software solutions and not pure ‘IT outsourcing partners’. It also evaluates their vendors from time-to-time and if there are any value-added services or products that the IT outsourcing vendors have to offer, and if that product or service is beneficial, FIRM-1 definitely takes a close look at it.

FIRM-1 tries to outsource its ‘non-critical’ jobs to vendors. With the help of pilot projects, FIRM-1 has identified couple of IT competencies, which it has in-house. The demand for these competencies is quite variable. So instead of maintaining it in-house, FIRM-1 decided to acquire those competencies through outsourcing partners. Moreover, these jobs are non-critical and are not related to FIRM-1’s core business, its business creation initiatives or its ERP and supply chain management initiatives.

Benefits
FIRM-1 participants emphasized that the main benefits achieved by outsourcing IT are reduction in costs, and optimal allocation and utilization of internal resources. FIRM-1 outsourced its IT function to low-cost and competent vendors in different countries, thus saving money. By outsourcing some functions of its IT, the management could identify and allocate its key resources, and utilize them efficiently to build a competitive advantage. Reduced time to market/reduced delays, improved flexibility to respond to the changing demand and business environment, predictable outcome, and higher degree of success are some other benefits that FIRM-1 realized by IT outsourcing projects. Quality and reliability was also one of the benefits achieved by FIRM-1.

Risk Factors
Knowledge being the core competency for FIRM-1, it is the main risk factor for the firm. A careful planning of what knowledge to keep in-house and what to outsource is required. Formulating scope and deciding the budget and schedule estimates is another critical risk factor. In the past FIRM-1 missed some schedule and the cost exceeded the budget. Also the vendor did not provide the optimal service, because the scope was not clear. Apart from these, quality standards, financial stability of the vendor, its disaster recovery plans, and security are some of the important risk factors to FIRM-1.

People, contract management, and performance measurement are some other important risk factors for FIRM-1. Legal contract and intellectual property protection is another risk factor for FIRM-1. Though FIRM-1 has a very efficient legal department to take care of the penalties and other legal issues of the contract, it believes that brand protection and intellectual property rights protection are key risk factors.

Challenges
The main challenges for FIRM-1 in outsourcing IT projects are: a) deciding what jobs to keep in-house and what to outsource, b) ongoing vendor relation management and c) setting up a governance model.

Selecting the right vendor is very challenging for FIRM-1. But since it has a cross divisional strategy, it has the option of partnering with alternative vendors. And that makes the ongoing management vendor relationship as one of the biggest challenges. Another challenge for FIRM-1 is the continuous commitment to the spirit of partnership.

Cultural barriers and designing a contract do not pose a challenge for FIRM-1. Since FIRM-1 has a global presence, and has operations in many countries worldwide, one of its strategies is to provide training, from time-to-time, to all its employees to deal with various cultures. Also designing a contract, especially the legal issues are well taken care by its legal department.

Case Conclusion
By outsourcing some portion of IT, FIRM-1 is able to efficiently manage its information systems. Some other measures that FIRM-1 has taken to tightly integrate its supply chain management with information systems are partnering with multiple vendors, penalties for non-performance, and well defined and dedicated management roles.

FIRM-1 believes that there will be 50% cost reduction if all but management and control are outsourced; 25% if only part of the activity is outsourced.

From the analysis, it is observed that cost reduction is the main driving factor behind IT outsourcing decision. Focus on core activities; professional services, and reduced time to market are some other motivations and benefits.

The participants also mentioned that geographical location is not a big risk factor for FIRM 1 to outsource their projects. Currently the trend is to move to Asia-Pacific region, especially India, for outsourcing jobs. This is mainly because low cost and competent service. But participants were of the opinion that in another 5-7 years China may also become one of the choices; it may also offer similar services. So the trend would
enhancements and customer support. FIRM-2 first identified those activities which could be sent outside to finish faster. The core activities were kept in-house and the mature and context activities were given out. Overall for the FIRM-2, there is a central Program Office, which manages the relationship with the vendors and all the rates are negotiated centrally. FIRM-2 outsources its IT activities with five outsourcing vendors. It describes its relation with the vendors as very collaborative, focused on the success of business client. IT managers meet with Offshore Development Center (ODC) managers on a regular basis. On site managers ensure that critical issues are handled appropriately and provide oversight of the entire operation.

**IT Outsourcing Practices**

FIRM-2 keeps complete project management control within, when the vendor supplies project expertise, technical knowledge, and manpower. Some other IT outsourcing practices that are followed by FIRM-2 are as follows:

- Management of outsourcing vendors has become a core competency. So a centrally managed ODC Project Management Office (PMO) is established that ensures common standards, governance policies and operating procedures across all vendors.
- Quarterly reviews are conducted to evaluate performance and to optimize business processes. By optimizing the business processes, FIRM-2 is able to optimize its overall supply chain. It also reviews areas of improvements, changes, and defects periodically.

**Benefits**

The major benefits for FIRM-2, in outsourcing its IT, are lower costs, optimal allocation and utilization of internal resources, and flexibility to respond quickly to changing demands and business environments. Predictable outcome, higher degree of success, and higher quality and reliability are some other benefits that FIRM-2 realized by IT outsourcing projects.

**Risk Factors**

Most important risk factors for FIRM-2 are:

- Knowledge/expertise
- Quality standards,
- Scope, cost and time estimates

FIRM-2 believes that scope/requirements of the outsourced projects must be finalized, properly documented and stick to the specifications. Otherwise, if the requirements change continuously it would be difficult for both FIRM-2 and its vendors to do the job. This would then result in budget over run, and schedule slip, along with performance. A multi-vendor arrangement is another risk factor as it involves more coordination efforts and demands a closely-knit governance model. People are another risk factor faced by FIRM-2.

**Figure 4. Benefits of IT Outsourcing (FIRM-2)**

![Figure 4. Benefits of IT Outsourcing (FIRM-2)](image-url)
decisions. Loss of critical skills are the most important risks associated with IT outsourcing. It is evident that cost reduction is one of the main motivations behind IT outsourcing. A rough estimate is more than 50% cost savings on a per person basis.

FIRM-2 did not disclose its actual cost savings. However, an approximate estimate is more than 50% cost savings on a per person basis.

It is evident that cost reduction is one of the main motivations behind IT outsourcing decision in FIRM-2. Focus on core activities, and professional services are some other motivations and benefits. Cost and loss of critical skills are the most important risks associated with IT outsourcing decision for FIRM-2. Cultural barriers and selecting the right vendors are most challenging for FIRM-2 in making the IT outsourcing decisions.

CONCLUSION
In many large organizations, IT outsourcing is being considered as a viable cost reduction alternative. Cost reduction was the main driving factor for outsourcing their IT activities. Other than cost reduction, short-term requirement of highly skilled resources is another objective for the firms to outsource IT. The top management of both the firms was convinced of the benefits of outsourcing and supported the outsourcing decisions. More than anything, support of the top management was the key towards the success of IT outsourcing for both firms.

First, risks in outsourcing can be managed through proper contractual agreement and quality standards. This has been also described in the work of McFarlan and others (McFarlan, et al., 1995). In addition, continuous monitoring of projects can also reduce risks. Both the companies have risk contingency plans. The metrics to measure the effectiveness of an outsourcing arrangement are checked frequently, and are brought up during the quarterly review meetings. If a risk is time bound, risk mitigation plan is created and executed. If there are repeated and multiple failures to meet the SLA goals, then alternative vendors may be identified for a part or rest of the work. If the business processes and the QA methodology are very robust and well thought of, risks will be reduced in global outsourcing.

Both the companies described their relation with the IT outsourcing partners as very collaborative and healthy. The outsourcing partner is managed using a combination of metrics, periodic discussions regarding delivery performance to budget and schedule. Also the high-end IT jobs that involve a lot of innovation are not being outsourced.

Other than this, selecting the right outsourcing partner is an important factor in a successful outsourcing project. Another interesting observation is that the company and the outsourcing vendor are forming partnerships, which is based on mutual trust and long term commitment.

This trend has also been observed in the work of Lee and other researchers (Lee at al., 2003). We also identified the key risk factors that commonly arise in IT outsourcing.

REFERENCES
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