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Issues and Challenges in Global IT Outsourcing

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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 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

PARTICIPANTS	JOB TITLE	RESPONSIBILITY
Person 1	Senior Manager, IT	Responsible for identification of outsourcing opportunities
Person 2	E-Business Director	Responsible for vendor selection, budget management, and monitoring of delivery of applications to requirements
Person 3	Project Manager	Vendor Management, Execution and delivery of the projects

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.

Figure 1. Benefits of IT Outsourcing (FIRM-1)

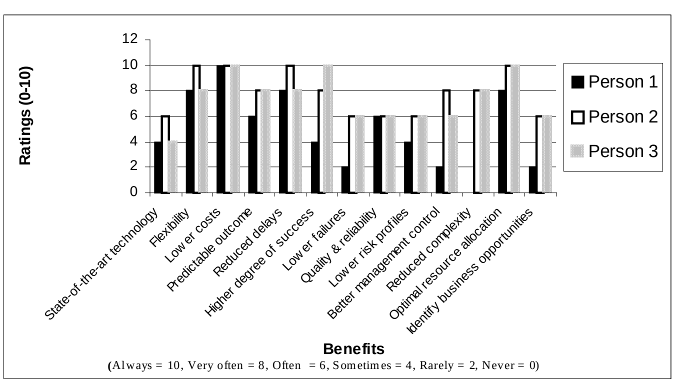


Figure 2. Risk Factors of IT Outsourcing IT (FIRM-1)

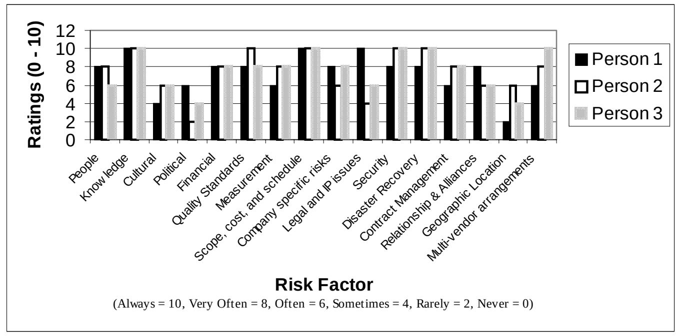
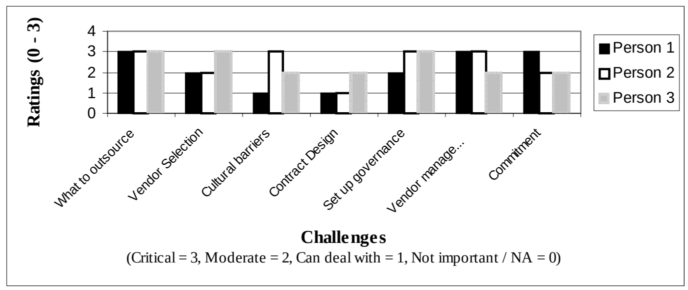


Figure 3. Challenges of IT Outsourcing (FIRM-1)



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 world wide, 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 again change. Hence, FIRM-1 does not have any preference for any geographical location. It is also worth mentioning that FIRM-1 does not worry about contractual amendments costs as it is well taken care of by its very efficient legal department. It has never experienced loss due to outsourcer's opportunism because of the type of business it is in. It believes such risks are mostly applicable to smaller companies, start-ups, and software companies. The participants pointed out that if the partnering relationship is not win-win or satisfactory to both the parties, FIRM-1 does not continue with the relation. Hence, FIRM-1 evaluates its vendors quite meticulously because primarily if there is no trust between them, FIRM-1 does not do business with those vendors. To summarize, high competency and low cost, non-core business functions are the key drivers of the outsourcing deals.

CASE STUDY: FIRM-2

Background

FIRM-2 is a major, multi-national networking company with annual revenues over US $15 billion. It provides the broadest line of networking solutions to most of the corporate, education, and government centers. It conducts most of its business over the Internet, and is recognized as the leader in this area.

FIRM-2 outsources much of its production. Customers visit the website to configure, price, and place orders directly to FIRM-2. More than half of the orders are directly transmitted to the suppliers. Once the product is manufactured, it is shipped directly to the customer. As a result the order-to delivery cycle time is reduced from approximately eight weeks to less than three weeks. Moreover, this helped FIRM-2 and its suppliers to manufacture based on actual orders and not on projection, lowering inventory costs for both FIRM-2 and its suppliers, while making customers happy with the speed of fulfillment of the orders.

Additionally, 85% of customer queries are handled through FIRM-2's website. It has established a business-to-business supply chain extranet for its manufacturers and suppliers. With the help of this common forum, it has been possible for both FIRM-2 and its suppliers to reduce inventories by 45 percent.

Introduction

Five individuals, from various divisions at FIRM-2, were interviewed. Table 2 below shows their role and responsibilities.

Outsourcing Decision

FIRM-2 outsources many supply chain activities like manufacturing, product design, product development, engineering, and shipping and handling activities to various partners. With the growth in information technology, enabled by the Internet, it is possible for all the partners in the chain to work together more closely and effectively than before, making the whole supply chain more effective.

FIRM-2 has outsourced its IT functions for the last 5 years. It has outsourced only portions of IT such as design, development, bug fixes, 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.

Table 2. FIRM-2 Participants

PARTICIPANTS	JOB TITLE / ROLE	RESPONSIBILITY
Person 1	Lower Management	Manage day-to-day IT activities with the regression facility at the outsourcing partner's facility; ensure that process is followed and reset / redesign process, if needed.
Person 2	IT Manager (Middle management)	Responsible for managing team of IT professionals
Person 3	Manager	Part of the group responsible for setting up the relationship with offshore outsourcing companies
Person 4	Senior Manager	Responsible for outsourcing Order-to-cash processes and systems, and for making outsourcing decisions.
Person 5	Senior Manager	Responsible for defining business requirements, and prioritizing the outsourced tasks.

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:

a) Knowledge/expertise
b) Quality standards,
c) Scope, cost and time estimates
d) Measurement of performance.

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)

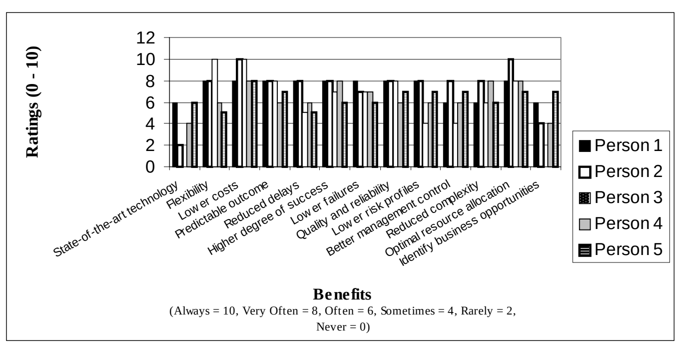


Figure 5. Risk Factors in IT Outsourcing (FIRM-2)

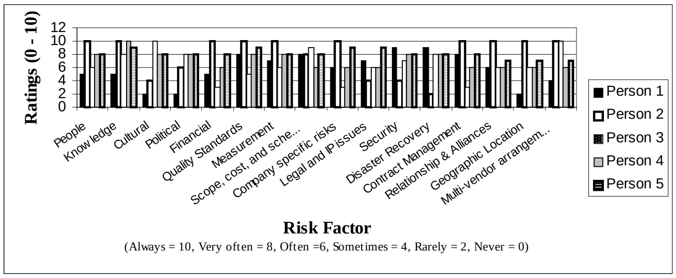
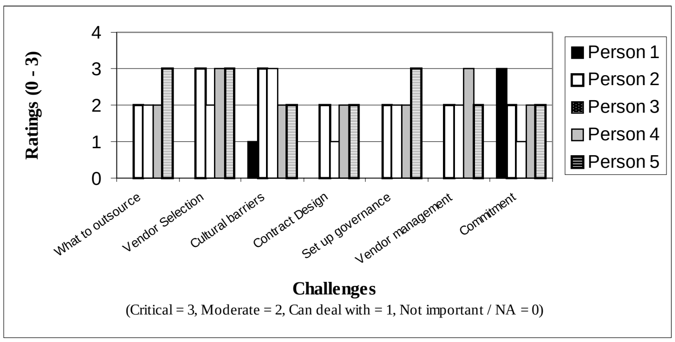


Figure 6. Challenges of IT Outsourcing (FIRM-2)



Challenges

All the challenges asked in the questionnaire were important for FIRM-2. But cultural barriers and selecting the right vendor are the most critical challenges for FIRM-2 in outsourcing IT projects. Deciding what jobs to keep in-house and what to outsource, setting up a governance model, ongoing vendor management, and continuous commitment to the spirit of partnership are also some important challenges for FIRM-2. Designing a contract was well taken care by the FIRM-2 PMO.

Case Conclusion

By outsourcing its IT, FIRM-2 is able to better manage the available resources to focus on core activities. Some other measures that FIRM-2 has taken to ensure its supply chain success are the following:

- Establish standards, governance, and guidelines for working with offshore outsource vendors.
- Manage projects locally, but distribute the work globally.
- Measure the performance and optimize the process.

The management is making all efforts to educate the employees in the concept of core and support activities. Building the 'one team' atmosphere is very helpful in this area. Both the onsite and offshore teams work collaboratively as a single team to help achieve the overall success. Also providing training, job rotation, and new career opportunities are some important steps towards dealing with the backlash against outsourcing.

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.

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