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UNDERSTANDING INFORMATION SYSTEM
OUTSOURCING FAILURE: LESSONS FROM A CASE
STUDY

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Abstract
Despite increased corporate efforts to outsource information systems work, many firms are faced with disappointments and failures. This paper examines the key issues in IS outsourcing failures. Integrating insights from transaction cost economics and social exchange theories, it presents an exploratory framework for understanding the dynamics underlying IS outsourcing failures. It discusses a case study of a failed outsourcing arrangement between a leading North American retailer and a technology vendor, illustrating issues that ultimately led to termination of the multi-year multi-million dollar agreement. Insights from the case study are utilized to frame propositions and to develop an exploratory framework for understanding IS outsourcing failure.

Keywords: Outsourcing, failures, contractual issues, relational capital, partnerships, infrastructure outsourcing, case study.

Introduction
Information systems (IS) outsourcing refers to the practice of turning over part or all of an organization's IS work to external vendors (Grover et al. 1996). The last two decades have witnessed a significant increase in the frequency and magnitude of IS outsourcing. In recent years, many firms are increasingly turning to offshore IS vendors in countries such as India and China to meet their IS needs (Carmel and Agrawal 2002). From peripheral IS activities such as application maintenance and support, firms are increasingly outsourcing more knowledge-intensive and challenging tasks such as software development and IS infrastructure management. This increased trend has been attributed to a firm’s response to environmental changes such as globalization of markets and technological advances that have made globally distributed work more easier to do than ever before.

Despite increased corporate efforts to outsource IS work, many firms are faced with disappointing outcomes and even failures (MacInnis, 2003; Overby, 2005). Faced with problems and challenges in managing client-vendor relationships, many firms tend to revise or terminate their contracts with IS vendors (Overby, 2006). Whereas much has been written on the successful outsourcing endeavors (e.g. Hindle et al., 2003; Keiser and Hawk 2004), there is very little literature on the failed IS outsourcing agreements and even less on the conditions that lead to the termination of such agreements. Our paper addresses this void in IS outsourcing literature.

Earlier studies on IS outsourcing adopted economic perspectives, focusing on issues related to transaction costs, risk mitigation and contractual controls (Dibbern and Goles 2004). Recently, many outsourcing studies have embraced social perspective paying more attention to the relationships between the client and vendor and the dynamics underlying management of inter-firm partnerships (Kern and Willcocks 2002; Goles and Chin 2005). In this paper, we integrate insights from both economic and social perspectives to explore a failed outsourcing arrangement and the conditions that led to the failure. This research presents a case study of a multi-year multi-billion dollar IS outsourcing deal that failed within one year of its inception. We chronologically traced the key milestones, decisions and events from the beginning of the outsourcing deal till its termination. The breakdown of the arrangement came as a surprise to customers and analysts, and was also highly unexpected for many senior executives within the organization. By studying the IS outsourcing arrangement from a process
Researchers have long been interested in the dynamics underlying IS outsourcing arrangements. Over the years, these dynamics have been analyzed through various theoretical lenses. Past research on IS outsourcing suggests two broad imperatives – the “control” imperative and the “partnership” imperative that are salient in IS outsourcing arrangements. The control imperative is rooted in economic perspectives such as transaction cost economics (TCE) (Ang and Straub, 1998; Lacity and Willcocks, 1996), agency and game theories. The control imperative argues for the need to minimize the likelihood of vendor’s opportunistic behavior and influence costs in an outsourcing arrangement. This perspective suggests designing appropriate contractual elements, closer monitoring of vendor performance and tighter control over the outsourcing arrangement. Choudhary and Sabherwal’s (2003) study is illustrative of this imperative, where they argued for framing portfolios of control to oversee and co-ordinate outsourcing arrangements. Scholars such as Ang and Beath (1993), Whang (1992) and Richmond et al (1992) have also argued for designing specific contracts for mitigating the risks in IS outsourcing. More recently, Gopal et al (2003) examined contractual design in offshore outsourcing arrangements.

The partnership imperative focuses on the need to forge collaborative ties with a vendor to achieve outsourcing goals. This imperative is rooted in social exchange theory and relational paradigm that stresses on the non-economic aspects of outsourcing arrangements (Goles and Chin 2005). Studies that focus on this imperative emphasize the importance of nurturing a fruitful partnership with the vendor (Kern and Willcocks, 2000; Willcocks and Choi 1995) and generation of trust between the client and vendor (Sabherwal 1999). However, maintaining a healthy partnership requires investments in communication, coordination, governance mechanisms and inter-firm routines for overseeing the relationship (Currie and Willcocks 1998). Several scholars have argued for fostering closer collaborative relationships with IS vendors, rather than treating them as mere contractors in arms-length arrangements (Kern and Willcocks 2000; Lee and Kim 1999).

In this research, we integrate insights from both control and partnership perspectives to understand the dynamics underlying IS outsourcing failures. Our approach is consistent with the work on Miranda and Kavan (2005) who advocate fusing the economic and social perspectives. The TCE-based control perspective suggests incorporating complex contractual controls to mitigate potential hazards in an inter-firm arrangement. The partnership perspective, rooted in social exchange theory, places emphasis on relational norms such as trust and underlying normative behaviors, suggesting these relational elements to act as self-enforcing safeguards that could be more effective than contractual controls. Building on these theories, we argue that while contractual and control mechanisms are necessary in an outsourcing arrangement, over-emphasis on these elements, especially at the cost of ignoring the partnership elements is likely to lead to failure. We utilize the theoretical notions of contractual flexibility (derived from TCE) and relational capital (derived from social exchange theory) to explore the key elements of a failed outsourcing relationship. Contractual flexibility refers to the degree of pliability and freedom in executing terms of an outsourcing agreement. Lacity et al (1995) argue that contractual flexibility is key to realizing the outsourcing goals and suggests designing contracts with flexibility depending on the specifics of the outsourced project. Tan and Sia (2006) also focus on the issue of flexibility in outsourcing arrangement. Relational capital refers to the mutual trust, respect and friendship that reside at the individual level between two alliance partners (Kale et al., 2000). Relational capital encompasses many aspects of social context in which the outsourcing relationship is formed, including social ties, trusting relationships and value systems. Following Nahapiet and Ghoshal (1998), we utilize three sub-dimensions of relational capital: structure, personal relationships and cognitive. The structural dimension of social capital refers to the overall pattern of connections between key players in client and vendor organizations. The relational dimension focuses on the personal relationships that individuals and managers from client and vendor firms have developed with each other. The relationships at an individual level typically yield trust, mutual norms and sanctions, obligations and expectations. Finally, the cognitive dimension refers to shared representation, interpretations and system of meaning between client and vendor.

Methodology

To explore the dynamics of IS outsourcing failure, we examine the case study of BigBuy (the identity has been disguised for confidentiality purposes), a 50-year old, leading general merchandise retailer in North America. BigBuy operated over 700 mall-based retail stores, selling a range of merchandise from clothing, jewelry to electronics and other home goods. In 2002, BigBuy entered into 8-year $2 billion outsourcing contract with Top-Tech (name of IS vendor disguised for confidentiality purposes) for all of its information technology infrastructure requirements. Top Tech was a leading global IS vendor with several commercial and government clientele worldwide.
We gathered primary data through semi-structured interviews with key IS managers involved with the outsourcing agreements. We also supplemented this data with information obtained from internal company records, published documents and archival data. All the interviewees were selected carefully to ensure the quality of the collected data. Extensive field notes were taken and major parts of the interviews were also tape-recorded and transcribed.

Case Study of BigBuy

In 2002, BigBuy initiated a US$2 billion IS outsourcing arrangement with Top-Tech to take care of its enterprise technology architecture needs. This outsourcing agreement required Top-Tech to provide support services for all of its desktops, servers, voice and data networks, and websites for BigBuy. BigBuy sold several miscellaneous infrastructure assets to Top-Tech for over $15 million and intended to record a $30 million in depreciation related to these assets. As a part of the agreement, over 250 IS employees who were managing the technical infrastructure services at BigBuy were moved to the payroll of Top-Tech. With one month short of the contract’s first anniversary the deal was called off and two companies went to court seeking legal resolution to their dispute.

Information Technology at BigBuy

In 2002, BigBuy’s IT infrastructure was a combination of legacy systems and client-server systems. BigBuy was organized into multiple business units such as retail stores, home services, finance services and supply chain. Each of these units had developed their own IT infrastructure over a period of time, with little common base among them. An IS executive remarked: “We had over 1500 servers, varied desktop applications, six help desks; DOS based cashier registers, lots of mainframe legacy, with much network failures, CPU failures, and extended recovery times and so on. We are an old company and we had developed a very complex, aging, and unreliable technical infrastructure. The whole infrastructure was inflexible and quite brittle.”

Two important systems in any retail setting are inventory management and merchandising system. Neither of these systems in BigBuy was compatible enough to exchange information with one another. These systems were over 30-years old and largely operated using batch processes. The features as well as the complexity of these systems increased over time, and their replacement became a very expensive proposition. BigBuy tried to “glue” its technical architecture by using bridges and other middleware to enable some basic communications across its systems and business unit. The costs of operating and maintaining the infrastructure and associated systems also increased considerably. An IS manager commented: “Our system is very complex. An average day in my department sees approximately 100 problems – minor and major issues concerning the combination of legacy as well as new technology. With the concern of price, our company always preferred off-shelf technology. These tools required a great deal of coding and customization.”

BigBuy’s business units worked independently with several IS vendors to meet some of the unit-level computing requirements. Some portion of the application development and maintenance were outsourced, and many of the technology support tasks were also done through contractors. The corporate IS unit maintained over 900 IS employees with an estimated 30% staff deployed for infrastructure related work.

Decision to Outsource

In order to address the infrastructure problems, the company formed a team of senior IS managers to identify possible solutions. After spending a fair amount of time in assessing its IT infrastructure, the team enlisted the key issues with IT infrastructure and also suggested examining the possibility to outsource considerable portion of the infrastructure activities. BigBuy also approached a consulting firm to do a complete assessment of the infrastructure issues and ways to address the. The consultants spent over three months to draw an inventory of IS infrastructure with BigBuy, spoke to several stakeholders to identify critical bottlenecks, and also analyzed the options regarding outsourcing infrastructure versus internally managing it. The consultants as well as the managerial team at BigBuy concluded that outsourcing the infrastructure was an effective way to fix several of the issues plaguing BigBuy. The essential arguments that favored outsourcing was that this would help BigBuy reduce overall IS spending, focus on high-value initiatives, achieve the goal of a stable and future-proof infrastructure faster, and avoid hiring a large number of technology specialists. The reduction in costs were to be achieved by moving several of the IS employees and considerable portion of IS assets to the external vendor. This would eventually have an overall impact on the organization by cutting cost, improving margins, and driving up business performance.
Choosing a Vendor

A Senior IS executive we interviewed explained that the entire outsourcing project revolved around a set of 3 tenets (3 ‘T’s) – Talent: Who will do the job? Time: How long would it take?, and Treasure – What would be the costs and benefits. These three tenets formed the basis of vendor search and subsequent choice of the external vendor. BigBuy opted for a competitive bidding and spent considerable time in framing a detailed request-for-proposal (RFP). This process progressed in three phases:

RFP Development and Preparation: BigBuy’s IS executives got involved in defining the outsourcing objectives, requirements and scope, along with business environment’s complexity to be outsourced. Based on the requirements, potential vendors were to provide solution proposals and pricing. The RFPs with detailed requirements were issued to several potential vendors.

Criterion for Vendor Assessment: BigBuy developed an array of metrics for evaluating the vendor. These metrics included costs, completion time, proposed plan for infrastructure overhaul, reputation of vendor, vendor clientele, vendor experience in working on similar projects, staff expertise, scalability etc. Based on the responses received and the criterion mentioned above, BigBuy short listed five vendors for further assessment. The company made site-visits and held detailed discussions with these vendors.

Negotiation and Contract Development: BigBuy decided to award the contract to Top-Tech. The two parties developed an initial contract structure and services agreement, which was subsequently developed into a detailed contract. The outsourcing contract was negotiated, finalized, and signed by both sides. The contract ran into over five hundred pages that detailed division of responsibilities between client and the vendor, detailed service level stipulations and metrics.

The outsourcing deal gave TopTech the responsibility for managing much of BigBuy’s technology infrastructure. This included providing desktop and server technical support, supporting the retailer stores’ voice and data networks, service systems that supported the retailer’s websites and decision support systems, as well as handling the company’s IS asset and risk management operations. As a part of the agreement BigBuy sold certain IS assets to TopTech for approximately $15 million. Based on the infrastructure, BigBuy planned to roll out and integrate a new generation of retail applications that will standardize the way customers make purchases, regardless of the sale channel; in-store, catalog, or through the world wide web. The overall IS architecture policies, and standards were areas that were retained by BigBuy.

Overseeing the Execution

Two boards were established soon after signing the contract – Architecture and Standardization Board (ASB) and Operation Review Board (ORB). These boards had IS managers from BigBuy and were responsible for overseeing the transition process and the entire agreement lifecycle. A detailed roadmap was laid out and a launch-sequence plan was formed. Because of BigBuy’s complexity of the system, two parties ended up laying the plan into around 20 phases. Depending upon the relevancy and the connection between any two projects on the progress map, a logical sequence was created to proceed further. The roadmap of development cycle was mapped out in such a detailed way that guaranteed that the ORB board would not review or start a new phase or project before the ASB board has reviewed it. This process helped in migration of several systems and the data center. At the completion of each of the planned phases and projects, ASB looked into the level of depth and accuracy each of these projects was processed in. The ORB board kept track of cost and time as a way of measure to performance and success rate. TopTech created a web-system to monitor the development path of the whole project. Daily updates of the in-progress projects and tasks were posted.

Problems in the Outsourcing Relationship

Despite a good start and a detailed approach, cracks started appearing when the day-to-day operations went into execution. Though BigBuy expected TopTech to meet or even exceed the service level expectations, TopTech had little freedom at the operational level to overhaul certain activities. BigBuy’s IS staff on ground expected TopTech to simply follow its prior methods, which were crept with certain inefficiencies and redundancies. The IS personnel who were hired from BigBuy by TopTech continued to perform their routine activities. In effect, most of the prior inefficiencies were simply inherited by TopTech, with the vendor having little room to make any significant improvements. Though the service level stipulations required TopTech to perform well, the initiative to make changes did not transcend to the ground-level in the IS organization. TopTech initiated a few changes to existing IS processes and systems but these had to be bunged due to resistance from BigBuy’s staff.
There were also considerable issues in managing the transition and change. “The first 6 months were very painful” said one of the IS managers. He added: “but then Top Tech put extended hours to thoroughly understand how the transition process needs to happen to meet BigBuy’s expectations and then acted accordingly. However there were problems at the operational level”. The processes for placing user-request and tracking them were not clear and the old processes and TopTech initiated new processes co-existed for several months.

Another problem related to the lack of adequate interaction between the vendor staff and BigBuy’s IS and functional staff. There were high-level committees, boards and joint task forces, but none of them involved staff at operational level. An interviewee remarked: “There was very little cohesion at the operational level. Their [vendor] staff acted in separate compartment and our people acted in isolation.”

There were significant people-issues that had to be addressed. TopTech hired a majority of the BigBuy’s IS infrastructure staff. These staff lost certain privileges, benefits and identities that they enjoyed with BigBuy. While some of the staff was hired by TopTech at equivalent or higher salaries, some of the staff had to accept lower positions or even lesser pay. There were also cultural issues that came to forefront. The re-hired IS staff continued to work in same premises but had to re-orient themselves to the culture of new vendor. A systems analyst commented: “I still continued to perform the same job at same location. But now, I belonged to some other firm. The business practices, norms and expectations suddenly changed overnight.”

Another bigger business change that BigBuy was faced with was a potential merger with a major retailer. In terms of technology, this merger implied a complete overhaul of IS systems, policies, people and processes. This created considerable business uncertainties that further strained the relationship between BigBuy and TopTech.

**The Divorce**

Before BigBuy and TopTech could celebrate their deal’s first anniversary, the deal was terminated. The reason cited by BigBuy was the vendor’s “failure to perform its obligations that resulted in the termination”. According to BigBuy, TopTech graded itself as poor in nearly every category of contract performance, including service delivery; project planning and tracking, and team organization and strength. It also claimed that TopTech had failed to meet implementation milestones and was forced to bring in Red Teams (crisis management) to rectify Top Tech’s alleged breaches. However, TopTech denied performance issues and sought legal remedies. TopTech had invested significant dollars in taking over the IS assets, re-hiring BigBuy’s IS staff, training, learning and organization. Both the firms are currently in the process of resolving the divorce through the legal system.

**Analysis and Discussion**

Drawing on the experiences of BigBuy and TopTech, we now turn our attention to understanding the nuances of the outsourcing failure. We use the concepts of contractual flexibility and relational capital (along with the three dimensions – structural, personal relationships and cognitive) to analyze the problems in the outsourcing relationship. Our analysis is summarized in the framework shown in Figure 1. As illustrated by the framework, we suggest that contractual inflexibility and lack of social capital in terms of structure, personal relationships and cognition are likely to lead to failure in IS outsourcing arrangements.

**Contractual Flexibility**

A contract is fundamental to any outsourcing relationship and the importance of details that go into an outsourcing contract cannot be overstated. A contract provides a blueprint for the outsourcing relationship and also specifies the roles, responsibilities, performance expectations and metrics for outcomes. There were two significant issues with respect to the contract between BigBuy and TopTech. While these firms engaged in detailed exercise to hammer out specific details, there was little done to specify how the outsourcing objectives will be realized. When TopTech engaged in certain improvement initiatives in order to meet the performance expectations, they had little support from operational IS staff. The contract was used primarily as an instrument of control, rather than as a blueprint to facilitate the realization of outsourcing goals. Moreover, while the contract detailed the expected responsibilities of the vendor, it did not get into specifics regarding the support and responsibilities of operational staff at BigBuy.

The case study also exemplifies the importance of clarity in certain sections of the contract, especially the termination clauses. As per the contract, BigBuy was to pay a huge termination fee if it breaches the contract for its own ‘convenience’
but it did not have to incur this fee if the deal was terminated due to ‘cause’ such as performance issues and problems. The amount of the termination fee was not specified, but it depended on the duration of the relationship, i.e., the closer the breaching date is to the contract signing date, the higher the fee. After the transition phase is over, the termination fees would gradually start declining over the remaining period of the contract. The two companies differ in their positions on performance outcomes, possibly exploiting the loop-holes in the contract.

Proposition 1: Contractual inflexibility, in terms tighter instrument of control and ambiguity in performance expectations, is likely to be associated with IS outsourcing failure.

\[ \text{Contractual Inflexibility} \rightarrow \text{IS Outsourcing Failure} \]

- Inadequate Relational Capital
  - Structures
  - Personal Relationships
  - Shared Cognition

\[ \text{Figure.1 an Exploratory Framework for Understanding IS Outsourcing Failures} \]

**Relational Capital**

Relational ties between the client and vendor can be a significant facilitator for improved relationships in IS outsourcing arrangement. By-products of strong social connections between the client and vendor such as mutual understanding, trust, cooperative attitude and balanced expectations can be more effective than formal elements of contractual control. The structural dimension of relational capital focuses on the pattern of connections between key stakeholders in client and vendor firms. Structural mechanisms governing the outsourcing arrangement greatly determines the extent of interaction, formal and informal communications and ties between the client and vendor. As the case study illustrates, BigBuy engaged in setting up boards and committees to oversee the activities in the outsourcing relationship. However, most of these committees were at higher levels in the organization, and did not extent to operational levels. As a result, there were problems in coordination, interactions and communications at the basic operational level among the IS staff of BigBuy and TopTech. The case study demonstrates the importance of structural mechanisms involving both client and vendor staff at various levels of firm hierarchy.

Proposition 2: Failure to set up structural governance mechanisms at multiple levels of organizational hierarchy is likely to be associated with IS outsourcing failure.

The personal relationship dimension focuses on ties and social interactions at an individual level. Individual ties help in mitigating differences in organizational culture and for establishing some basic norms of cooperation for day-to-day functioning. In the case study, the vendor and client personnel acted in isolated compartments, effectively preventing formation of any individual ties across the two organizations. BigBuy’s staff re-hired by TopTech also faced problems in
readjustments and transition. Moreover, lack of formal structural mechanisms also added to the challenges faced an individual level.

Proposition 3: Lack of personal, social ties between key stakeholders is likely to be associated with IS outsourcing failure.

The cognitive dimension of relational capital emphasizes the importance of shared goals, mutual understanding and shared identities in a client-vendor relationship. Though there was an agreement on the overall outcomes of the outsourcing effort, the two companies had fundamentally different goals. BigBuy was keen to reduce its IS costs by squeezing out inefficiencies in its infrastructure. This implied TopTech making substantial investments in technologies, people, learning and processes. This also necessitated the need for a long term commitment so that TopTech could recover its costs and make profits as well. While BigBuy took care to protect its interest to save every penny from the arrangement, TopTech had lesser freedom to execute its initiatives to make the deal profitable for them. There was an imbalance and inequity in the relationship that led to problems.

Proposition 4: Lack of shared cognition across the client and vendor is likely to be associated with IS outsourcing failure.

Contributions and Conclusions

This study examined the dynamics underlying IS outsourcing failures through a case study of a multi-year multi-million dollar outsourcing agreement. We presented a framework populated by constructs integrating both economic and partnership imperatives to understand ARE outsourcing failures.

We believe this study makes some key contributions to the research and practice on IS outsourcing. First, it focuses on an IS outsourcing failure, unlike many studies that highlight ‘success stories’ in IS outsourcing. Second, it integrates perspectives from both transaction costs and social exchange theories to understand some of the dynamics underlying IS outsourcing failures (Miranda and Kavan 2005). This paper highlights the importance of contract flexibility (Tan and Sia 2006) and relational capital (Kern and Willcocks 2002; Kale et al 2000) in effective execution of outsourcing arrangements. Third, the experiences of BigBuy and TopTech hold important lessons for other organizations engaging in outsourcing endeavors. IS managers should try to strike a balance between the control and partnership elements in the contract, while maintaining clarity on the clauses of contract. Our study also illustrates the importance of investing in governance structures at both macro and micro levels of an organization, facilitation of personal relationships and having shared understanding between client and vendor firms. Fourth, given the increased disappointments with IS outsourcing (Overby 2006), our study is timely and highlight several salient issues for managerial attention.

There are several limitations that need to be recognized. Our study is an exploratory attempt to understand IS outsourcing failures. Our framework, at best, provides a starting point for deeper investigation of the phenomenon, rather than being a very comprehensive model explaining all aspects of a failure. Moreover, the broad limitations of a single case study approach such as the generalizability of findings also apply to this research. We hope our study provides a foundation for future researchers to probe into finer aspects of IS outsourcing failure.

References

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