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Decision Making Process in Information Systems Outsourcing

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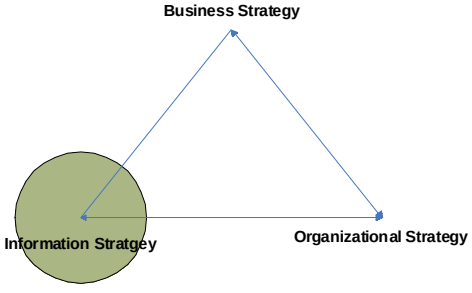
INTRODUCTION

Information Systems (IS) outsourcing is all the rage these days in corporate America and seems to be spreading worldwide with current globalization trends (Pfannenstein and Tsai, 2004). While IS, is still considered a key component of the business strategy at most corporations cost cutting, core competency and competitive pressures have led many companies to look at IS outsourcing. The decision to outsource IS, is very critical in these situations as it effects not only the company organizationally and strategically but also economically. So this paper intends to examine the phenomenon of IS outsourcing, its origins, types, impacts and trends. The major part of the paper will look at the various decision making processes and models for IS outsourcing. The paper concludes with the current trends in IS outsourcing that are expected to have a major impact on companies around the world.

IMPACT OF IS OUTSOURCING

The IS outsourcing decision affects a corporation in a major way but it also has an indirect effect on the social and economic fabric of a country. While IS outsourcing is vilified in the US because of its potential to move jobs out of the country, it also has far reaching ramifications on the global economy as it allows for developing countries to increase their standard of living. Outsourcing of IS functions has far reaching effects within a company as it could sometimes lead to a loss in control over a critical part of a business function. The limited visibility of the IS function that is outsourced could weaken the capacity of the company to properly achieve its business strategy. This destabilizes the strategy triangle of a company as the overall business strategy is dependent to a large part on the IS strategy which when outsourced may not work towards the overall business strategy. Any loss of visibility into the IS functions of a company could weaken its competitive edge. The strategy triangle of a company that outsources its IS functions could be as shown in Figure 1.

Figure 1. Strategy triangle with IS outsourcing



The effects of IS outsourcing can also be felt on the social fabric of a company where employees feel less loyalty to their company as the possibility of outsourcing could lead to job losses. Employees working on IS functions in a company with outsourcing would be more loyal to the outsourcer rather than to the company that they work for.

IS OUTSOURCING DECISION MAKING

The decision making process in a company for outsourcing IS functions can be very challenging and prone to difficulties. "To outsource or not to outsource" is a major decision point many companies face in their day to day operations. This is because if done well, outsourcing can have a large impact on a company's bottom line. If done poorly, IS outsourcing can lead to large losses and a negative impact on the business. To this end there is a need for different models, approaches and frameworks to help in the decision making process of IS outsourcing. While the use of these models by corporations in decision making is not well documented, they provide a guideline for companies to come up with their own approaches which best suit their requirements. A few models and approaches are presented here.

Behavioral vs. Prescriptive

Recent research indicates that the IT-outsourcing decision is largely behavioral rather then prescriptive in nature (Fink and Shoeib, 2003). Behavioral decision making is descriptive by nature and explains actual human decision making behavior but in contrast a prescriptive approach assumes complete information about alternatives, rationality of the decision maker and optimum results. The behavioral approach is considered better suited for an IS-outsourcing decision making as it allows companies to take into account their own special circumstances and requirements.

In the long-term decision making needs to become more prescriptive. This could be done by monitoring the outsourcing vendor's work to make sure that performance metrics like response times, completion dates and responsiveness are met properly. Another approach suggested by Due (1992) involves giving outsourcing vendors a small but difficult job to prove themselves. Another suggested approach could be where an early phased approach is taken so that IT outsourcing is done by conducting a pilot system, identifying potential suppliers and conducting an assessment. Based on the results, a larger scale outsourcing project is then considered. It is critical that the decision to outsource be based on facts, models and empirical data rather than the behavioral perception of people making the decision.

Value-Chain Analysis

The need for a structured framework for making IS-outsourcing decisions has led to a lot of research with many customized models for various

markets. The Value-Chain Analysis theory is used to define a framework that focuses on the interfaces between functions-specifically, those that affect the customer's value. This framework will allow companies to confidently answer three critical questions needed to make outsourcing decision:

- What aspects of my IT value chain should I outsource?
- To whom do I outsource these functions?
- How do I structure the outsourcing deal?

The first step in the decision making process involves examining the critical value-chain links within a company's IS department and between its IS systems and business operations. Since IS systems link key business processes such as finance, human resources, and marketing it makes sense to keep it in-house so the interfaces between functional departments and their supporting systems are tightly integrated. Since Value-Chain analysis requires that interfaces that linked critical business processes stayed in-house IS outsourcing was not a compelling argument for most of the 80s.

The advent of packaged applications in the mid 1990s has changed the importance of interfaces between the functional divisions to integration among the various components of the IS architecture and the supporting communications infrastructure which define the various functional groups in the company. There is also an increased need for systems integration between the company and its alliance partners, so the task of designing, building, and managing these interfaces has become so technically demanding that many companies can no longer do it themselves. It must be left to closely integrated value chains outside the company. The increased need for integration between multiple IS systems has now become one of the key factors to consider when outsourcing along with the traditional considerations of strategic focus, cost control, and speed. So the key is to integrate a value chain across the elements that drive the performance of a customer's value, and outsource the rest.

The changes in the value chains of many industries driven by changes in the competitive and business landscape has made it clear that outsourcing decisions based purely on traditional motivations would prove ineffective. It ignores dramatic shifts and advancements that have occurred in corporate IS systems. As the role and capabilities of IS systems in companies increasing, a decision to send these critical functions outside will likely increase. A thorough feasibility analysis needs to be done ensure that the outsourcing decision does not adversely affect the company. So the Value-Chain Analysis theory could be used to address the original three questions posed:

What aspects of my IT value chain do I outsource? The first step is to identify the competition in the market in which your company works. Then look at the IS functions being considered for outsourcing and how their outsourcing will affect the competitive advantage in the market. This determination would be tough considering the IS systems could be used across a number of products and markets. If the decision to outsource improves or keeps the competitive advantage then the IS function in questions could be considered for outsourcing. If the competitive market rewards convenience or cost in exchange for functionality, then a very different type of outsourcing will be required than in situations where raw power or quality of service is key.

The IS manager is responsible for assessing how to create an integrated value chain even after some of the IS functions are outsourced. This value chain could exist within a company or could be found outside the company with an external provider. The focus is to find the best tightly integrated value chain that will provide the company with a competitive advantage in addition to cost saving and increased overall value for the company.

To whom do I outsource? The actual process of determining who to outsource to is very critical stage in the outsourcing decision process. The outsourcing company selected should work with the company to ensure that the IS function outsourcing does not effect their business strategy. Care needs to be taken to ensure that the outsourcing company can integrate their value chain with that of the outsourcer. When a company alone cannot establish the needed tightly integrated network and system architecture necessary, an outsourcing vendor can help them be successful.

This assumes that the outsourcer can find an outsourcing vendor with the appropriate degree of value-chain integration along with those interfaces critical to performance and functionality. This requires an exhaustive search of the available service providers and their willingness to work with an outsourcer at their set terms. The use of the Value-Chain Analysis can help companies identify the most appropriate vendor for IT and business process outsourcing functions. If the outsourcing is to be done selectively or across a number of vendors care needs to be taken that they can get their value chain integrated with one another in an effective manner. Using general trends or the market leaders for outsourcing can lead to trouble as the requirements vary from one situation to another. It is desired that the outsourcing company can buy into the strategic focus of the outsourcer.

How do I structure the outsourcing deal? The outsourcing deal needs to be flexible enough to handle any changes in the competitive marketplace. Understanding the basis of competition in the market and how outsourcing affects the ability to perform against it will improve competitiveness. But in order to stay competitive requires understanding two additional but related questions: How will the competition change and what will be the role of a given process after the change has taken place? Making an outsourcing decision based on what's good for the company today could backfire if the market or competitive environment shifts and a differently integrated value chain would be warranted to remain competitive in the new marketplace.

Value-Chain analysis is a framework for answering the most critical IS-outsourcing questions by relating the basis of competition in a market to the optimal structure of the value chain. This approach will provide guidelines for companies to make the right decision about outsourcing irrespective of any competitive context. (Agar, 2003). The Value-Chain analysis can be summarized in the following Figure 2.

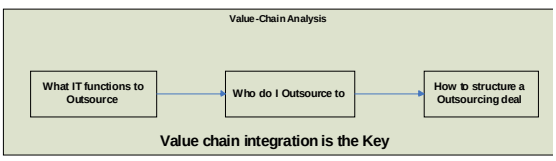
TRENDS IN IS OUTSOURCING

Domestic vs. Offshore Outsourcing

While outsourcing of IS functions can be done to any company geographically located within the country or offshore to another country, these two types of outsourcing are considerable different. Domestic outsourcing is perceived as good for the local economy as the jobs stay in the local area or within the country. Domestic outsourcing does cause shift in jobs from one location to the other and would cause some loss in headcount and reduction in capital expenditure due to consolidation and reduction in redundancies. Offshore outsourcing has spread from India to many other regions in South East Asia with changes in pricing. Eastern Europe is also emerging as a major outsourcing destination for European countries because of language similarities and geographic proximity (Slaughter and Ang, 1996).

Recent trends in domestic outsourcing includes rural outsourcing where many rural parts of the US are being leveraged for performing IS functions at a competitive rate compared to the offshore service providers. New companies like 'Rural Sourcing' a new start-up based in Carolina believe they can provide services such as application maintenance and Internet development for roughly 40 percent less than what other domestic tech outsourcers charge, which is close to the overall cost of using an offshore service provider.

Figure 2. Value-chain analysis key questions



Security Issues

Outsourcing of IS functions bring up a number of security concerns because of the sensitive nature of the information handled by people outside the companies and in some cases outside the country. Security has been one of the major factors limiting the growth of outsourcing across state and national boundaries. This will continue to be a major factor that needs to be addressed for continued growth of outsourcing. Recent frauds committed in some outsourcing hot-stops located in India has lead to major concerns over identify and asset theft. This has lead to many companies beefing up security and procedures to prevent similar occurrences.

Many European and US companies are under growing pressure from regulators and legislators in their countries to guarantee the privacy of their customers' personal information. Many countries are trying to use security and privacy fears to head off the growing outsourcing phenomenon. Today 186 bills that aim to limit offshore outsourcing are pending in the U.S. Congress and 40 state legislatures. This involves mostly restrictions on transmission of data for increased security.

Is IS Still Strategic?

Even in the face of increased popularity for IS outsourcing, the mantra 'Keep the core' resonated with companies who wanted to hang on to core parts of the IS systems for strategic advantages. This conventional wisdom about outsourcing is being challenged by Mark Gottfredson and his co-authors in Harvard Business Review. They propose that IS sourcing, which was always tactical, needs to become a core strategic function as companies need to redefine business to find if one should do things or have them done by someone else or more cheaply somewhere else (Ang and Straub, 1998).

The traditional view was to look at IS functions as core and non-core and then consider outsourcing the non-core. This model is not useful anymore. Consider the example of customer service which was considered a 'core' function at one time as it interfaces with customers but this function is not proprietary across industries so others can do the same job better and cheaper. So the current rule of thumb for outsourcing is not based on 'core' functions but keeping functions that are highly proprietary and not common in the industry. The authors have proposed a model called "capability sourcing". In this model companies should look at every single activity in the entire value chain and determine if they are the best at it , if not invest to be the best or outsource to someone who is best. The authors also propose that companies develop capabilities called "dynamic sourcing," that would allow them to manage the increased numbers and spectrum of vendors that they need to deal with when they outsource various IS functions (Raynor and Littmann, 2003).

Moving Further East

While India gets all the attention from IS managers looking to outsource there are a number of up and coming countries that hope to unseat India as the major destination of IS outsourcing. Some industry experts predict that China could eventually become the world's biggest provider of high-tech services as it costs a lot less than India. China expects to generate a flood of highly skilled programmers graduating annually from Chinese colleges that would help attract more corporations to outsource there (Rao, 2004). China's income from outsourcing is growing quickly, in large part by contracts with Japanese companies, which make up 60% of the country's outsourcing business. But big American companies also have begun sending IT business-process work to China, accounting for about 15% of the country's outsourcing contracts.

India was considered to have advantages over China with regards language and intellectual-property risks. India has been quick in curbing piracy as it was key for showing it in a proper light to other countries, but China with its heavy reliance on manufacturing has not been quick to curb piracy which has keep many companies from outsourcing there. But China is still compelling from a saving point of view as programmers in China are paid between $600 and $960 dollars which is half that paid for similar positions in India.

The Chinese government is trying to follow the Indian model to ensure a steady supply of IT talent by investing in education and quality control. The government has established 35 national schools to provide software training, with the goal to have 800,000 trained software pros by the end of 2005, versus 600,000 in India. In spite of these advances, language is expected to continue to be a huge issue for the next five to 10 years, but China is trying to counter that by requiring Chinese children to take English from the third grade on.

CONCLUSION

IS outsourcing with its origins in the 1960s has gained mainstream acceptance with many corporations starting with Eastman Kodak using outsourcing as a way to cut costs and concentrate on core competency. While outsourcing trends in the industry drive many companies to embrace it without a review of their need for it, a decision making process is very critical for them to consider. Outsourcing is a not a fix of all solution that many companies think it is. Companies need to use well; know outsourcing decision making frameworks and analysis to decide what, who and how to outsource to. This will ensure that the outsourcing decision is based on business needs and would add value to the company.

There has been an increase in research on the decision making frameworks for IS outsourcing in recent times. The framework that needs to be chosen by a company depends on their specific situation and their success with a framework in the past. The key frameworks that could be considered include "Behavioral vs. Perspective", "Decision Framework" and "Value Chain Analysis". Using one of these frameworks will ensure that the outsourcing decision making process is steeped in analysis and not driven by the latest fad. Companies also need to track the current trends in outsourcing in order to stay up to date with the changing market forces that shape their businesses. Current trends like outsourcing to china, offshoring, security issues, multi-vendor outsourcing and the outsourcing of core systems will have a major impact on businesses in the years to come.

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