STRATEGIC AND FINANCIAL MOTIVATION AND INFORMATION SYSTEMS OUTSOURCING SUCCESS

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SERDAR YARLIKAŞ

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Approval of the Graduate School of Informatics

_____

Assoc. Prof. Dr. Nazife Baykal
Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Science.

_____

Assoc. Prof. Dr. Yasemin Yardımcı
Head of Department

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Science.

_____

Prof. Dr. Semih Bilgen
Supervisor

Examining Committee Members

Assoc. Prof. Dr. Onur Demirörs	(METU, II)	_____
Prof. Dr. Semih Bilgen	(METU, EEE)	_____
Assoc. Prof. Dr. Erkan Mumcuoğlu	(METU, II)	_____
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Name, Last name : Serdar Yarlıkaş

Signature : _____

ABSTRACT

STRATEGIC AND FINANCIAL MOTIVATION
AND
INFORMATION SYSTEMS OUTSOURCING SUCCESS

Yarlıkaş, Serdar
M.S., Department of Information Systems
Supervisor: Prof. Dr. Semih Bilgen

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In this thesis, the relations between information systems outsourcing success measures and strategic and financial drivers are investigated. After a study of the relevant literature, 14 organizations that belong to four different categories are investigated in terms of IS outsourcing. These categories are: IS vendors, IS outsourcers, firms that both procure and supply IS services, and IS system integrators. Thus, the subject matter is studied from both customers' and vendors' points of view. The investigation is realized in three steps: First, general questions were posed in order to gather the characteristics of organizations, then, questionnaires were conducted, and finally, financial data documents were

prepared according to the type of the organization. The results show that the number of relations between strategic drivers and information systems outsourcing success measures are more than the number of relations between financial drivers and information systems outsourcing success measures. Besides, strategic drivers influence each of the information system outsourcing success measures, whereas financial drivers affect only two of them.

Keywords: IS Outsourcing Success Measures, Financial Drivers, Strategic Drivers

ÖZ

STRATEJİK VE FİNANSAL MOTİVASYON
İLE
BİLİŞİM SİSTEMLERİNDE DIŞKAYNAK KULLANIM BAŞARISI

Yarlıkaş, Serdar
Yüksek Lisans, Bilişim Sistemleri Bölümü
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Bu tezde, bilişim sistemleri dışkaynak kullanım başarı ölçüleri ile stratejik ve finansal faktörler arasındaki ilişkiler incelenmektedir. İlgili literatür çalışmasından sonra, dört farklı kategoriye ait olan 14 şirket bilişim sistemlerinde dışkaynak kullanımı açısından incelenmektedir. Bu kategoriler: bilişim sistemleri satıcıları, bilişim sistemleri müşterileri, bilişim sistemlerini hem tedarik eden ve hem de sağlayan firmalar ve bilişim sistemleri sistem entegratörleri. Bu nedenle, konu içeriği hem müşterilerin hem de satıcıların bakış açılarından irdelenmektedir. İnceleme 3 aşamada gerçekleştirilmektedir: Önce, şirketlerin

özelliklerini bir araya getirmek için genel sorular ortaya atıldı, sonra, anketler yönetildi ve son olarak, finansal veri belgeleri şirket türüne göre hazırlandı. Sonuçlar, stratejik faktörler ile bilişim sistemleri dışkaynak kullanım başarı ölçüleri arasındaki ilişki sayısının, finansal faktörler ile bilişim sistemleri dışkaynak kullanım başarı ölçüleri arasındaki ilişki sayısından daha çok olduğunu göstermektedir. Bunun yanında, stratejik faktörler, bilişim sistemleri dışkaynak kullanım başarı ölçülerinin her birini etkilemektedir. Öte yandan, finansal faktörler bunlardan sadece ikisini etkilemektedir.

Anahtar Kelimeler: Bilişim Sistemlerinde Dışkaynak Kullanım Başarı Ölçüleri, Finansal Faktörler, Stratejik Faktörler

To My Parents

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I express sincere appreciation to Prof. Dr. Semih Bilgen for his guidance and insight throughout this study. I thank my parents, my sister and my sister's husband for their support throughout the research. I am also thankful to the staff of the organizations who participated in this research.

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LIST OF ABBREVIATIONS

ERP: Enterprise Resource Planning

IS: Information System

IT: Information Technology

ROI: Return On Investment

SLA: Service Level Agreement

CHAPTER 1

INTRODUCTION

Organizations prefer to use outsourcing in information systems in order to provide many advantages. Usually it is expected that all the risks and benefits of outsourcing are taken into consideration before an outsourcing decision. Organizations generally try to focus on their core businesses after outsourcing secondary activities. Besides, they can achieve substantial economical savings through outsourcing. Generally, outsourcing customers expect to obtain economical, strategical and technological advantages through outsourcing. Outsourcing vendors also expect various advantages by offering services to their customers. Thus, IS outsourcing usage can be evaluated from both customers' and vendors' points of view.

To determine the success of information systems provided by outsourcing vendors, various IS outsourcing success measures have been proposed by researchers. Financial and strategic motivation can be considered as benefits expected from outsourcing. On the other hand, IS outsourcing success measures denote the results of IS outsourcing.

By taking these into consideration, in this thesis, the relations between IS outsourcing success measures and financial and strategic motivation will be

examined within the framework of multiple case studies. The effects of IS outsourcing on organizations will be determined through these relations. The aim of the study is to determine how the motivations for IS outsourcing correlate with actual benefits. Throughout the study, the term " financial and strategic drivers will be used to indicate expectations that provide motivation to firms for IS outsourcing.

The rest of this document is structured as follows:

Chapter 2 examines the literature on IS outsourcing success and financial and strategic drivers. Motivations for IS outsourcing are reviewed and the concepts of cost reduction, IS performance, IS-cost structure, cost saving level, shared risk level, focus on core business, innovative use of IS functionality, knowledge acquisition, flexibility are defined based on the relevant literature. Besides, general information outlined on case study research is explained.

In Chapter 3, all of the strategic and financial drivers and IS outsourcing success measures that will be examined in the case study are defined and explained in detailed way. Precise definitions of financial drivers are presented in the form of quantitative formulas. Besides, based on the study of literature, a hypothesis matrix which shows the expected relations between IS outsourcing success measures and financial and strategic drivers is constructed and the relations are explained.

In Chapter 4, first, the pilot study is explained. After the pilot study, interviews with organizations are outlined. The roles of contacted staff in the organizations are also stated. The content and meaning of our study in the case study literature are explained. The reasons of selecting holistic multiple case design are discussed in detail. Besides, why the qualitative method has to be used in this study is explained. Then, the case study is presented. 14 firms under the categories of outsourcing vendors, customers, systems integrators and firms that buy as well as sell outsourcing services are investigated in a three phase study. First, general

characteristics of organizations are identified, then, questionnaires are used to determine financial and strategic motivation factors as well as outsourcing success levels and finally, financial data documents were compiled according to the type of the organization. The hypothesis matrix is modified according to the findings of the case study. Findings of the case study and outliers are discussed in detail.

Chapter 5 concludes the thesis after a review of the main results, considerations of some of the shortcomings of the study and suggestions for possible further research in this area.

CHAPTER 2

LITERATURE SURVEY

In this chapter, IS outsourcing success and strategic and financial motivation are surveyed. Besides, motivations for IS outsourcing are reviewed. The aim with this literature survey is to obtain and define IS outsourcing success measures and financial and strategic drivers.

2.1) IS OUTSOURCING SUCCESS

Lee and Pai (2003), Mahnke, Overby and Vang (2003), Ye (2005) state the importance of IS outsourcing success in terms of different views, concepts and perspectives.

Lee and Pai (2003) state that the increasing strategic role of IS affects IS outsourcing success. Integration of existing and new IS applications determine the importance of IS outsourcing success. Firms must make appropriate IS strategic plan. Otherwise, organizations may fail to realize the anticipated benefits of their IS investments if they do not engage in appropriate IS strategic planning.

Mahnke, Overby and Vang (2003) stress that the majority of studies on IS outsourcing concentrates on the outsourcing decision. Behind the outsourcing decision, outsourcing outcomes must be taken into consideration. For that reason, IS outsourcing definitions and measures take important place in studies. While making outsourcing decision, the firms must evaluate the situations of their firms and they have to make their decisions according to these results.

Ye (2005) states that knowledge is a critical factor for a firm to achieve successful outcomes in outsourcing and IS value creation must be achieved thanks to IS outsourcing.

These studies denote that IS outsourcing success measures must be determined in order to realize the success level of IS outsourcing. Before determining IS outsourcing success measures, IS success measures must be realized. DeLone and McLean (1992) stated IS success measures in their IS success model. DeLone and McLean (1992) stated in their IS success model that user satisfaction, information quality, system quality, organizational impact, individual impact are IS success measures.

DeLone and McLean (1992) stated in their IS success model that user satisfaction facilitates the evaluation of user satisfaction from the output of the information systems. Software satisfaction, hardware satisfaction, enjoyment, user information satisfaction and overall satisfaction are evaluation parameters included by this measure. User satisfaction can also be considered as an IS outsourcing success measure. Organizations evaluate the systems provided through outsourcing inside their organization in terms of user satisfaction. They use different techniques to evaluate user satisfaction, for instance, they apply questionnaires to obtain user satisfaction level. If the system provided through outsourcing is satisfactory, the organization may continue to use the system in the future. As a result, organizations take user satisfaction into consideration while purchasing a system or information technology solution from a vendor. In other words, if a system provided through outsourcing is satisfactory in terms of

user satisfaction in the organization, the organization is successful in IS outsourcing in terms of this measure. For these reasons, user satisfaction may be assumed as an IS outsourcing success measure.

Information quality can be considered as another IS outsourcing success measure. DeLone and McLean (1992) stressed in their IS success model that information quality facilitates the evaluation of the information quality of the output produced by the information systems. Accuracy, precision, currency, timeliness, reliability, completeness, understandability, relevance, conciseness, format are some of the evaluation parameters included by this measure**.** Organizations evaluate the information systems provided through outsourcing in terms of information quality. For instance, they try to determine whether the information that the system provides is accurate or not. By taking the evaluation parameters into consideration, the organizations realize whether the system provided through outsourcing has information quality. Consequently, if the system provided through outsourcing meets expectations in terms of information quality, the organization is successful in IS outsourcing in terms of this measure.

System quality can be counted as another IS outsourcing success measure. DeLone and McLean (1992) explained in their IS success model that system quality facilitates the evaluation of the information processing system itself. Flexibility of system, integration of systems, response time, realization of user requirements, system reliability, ease of use, ease of learning, system accessibility, system efficiency are some of the evaluation parameters included by this measure. Organizations evaluate the information systems provided through outsourcing in terms of system quality. For instance, they try to determine whether the system's response time is fast or not. Consequently, if the information system provided through outsourcing has a system quality, the organization is successful in IS outsourcing in terms of this measure.

Organizational impact may also be accepted as a measure to determine IS outsourcing success in terms of organizational perspective. DeLone and McLean

(1992) stated in their IS success model that organizational impact facilitates the evaluation of the effect of the information system on the organizations or the firms. Return on investment, contribution to achieving goals, cost reduction, increased work volume and ıncreased revenue are some of the evaluation parameters of this measure. Organizations evaluate the information systems provided through outsourcing in terms of organizational perspective. For instance, they try to determine whether the information system provided through outsourcing causes increases in work volume or not. Consequently, if the information system provided through outsourcing affects the organization in a positive manner in terms of organizational perspective, the organization is successful in IS outsourcing in terms of this measure.

Individual impact may be accepted as the last IS outsourcing success measure . DeLone and McLean (1992) declared in their IS success model that individual impact facilitates the evaluation of the effect of the information system on the user. Decision quality, time taken to complete a task, learning and time to reach a decision are some of the evaluation parameters included by this measure. Organizations try to learn whether the information system provided through outsourcing affects the user in the organization in a positive manner or not. If it affects the user positively, the organization is successful in IS outsourcing in terms of this measure.

Lee, Kim and Kim (2006) found that these IS outsourcing success measures have dependencies among them. As stated by Lee, Kim and Kim (2006), system quality and information quality together influence user satisfaction directly. Besides, system quality and information quality together influence individual impact indirectly, user satisfaction influences individual impact directly. In addition to these, system quality, information quality and user satisfaction together influence organizational impact indirectly, on the other hand, individual impact influences organizational impact directly.

Consequently, IS success measures can also be used in IS outsourcing evaluations. These five measures may be accepted as IS outsourcing success measures. Thanks to these five measures, the success of IS outsourcing can be determined. These are also appropriate measures since IS outsourcing success can be evaluated in terms of different concepts.

2.2) STRATEGIC MOTIVATION

The publications by Lin and Pervan (2001), Bristol (2005), Mclellan, Marcolin and Beamish (1995) are related with strategic motivation in terms of different views, concepts and perspectives.

Lin and Pervan (2001) found that technical knowledge or technical expertise support sometimes may not be provided by outsourcing vendors due to the conflicts in IS outsourcing contracts. This means knowledge acquisition sometimes are not completely provided by outsourcing vendors.

Bristol (2005) explained outsourcing in a multidimensional manner. The Healthcare outsourcing is estimated in hospitals in USA. The strategic drivers as flexibility, focus on core business are evaluated in terms of IS outsourcing in hospitals.

Mclellan, Marcolin and Beamish (1995) revealed that the strategic motivations appear to be increasingly more important than financial motivations and outsourcing offers access to additional capabilities that can have a most important effect on expanding the set of strategic options available to a firm. This study also stressed that organizations must access to the new technologies so that they can improve the management of IS operations in their organizations. From this study, it may be inferred that innovative use of IS functionality is important for

organizations and organizations may focus on their core businesses in the help of IS outsourcing.

According to the literature, focus on core business, innovative use of IS functionality, knowledge acquisition, strategic alliances, flexibility are accepted as strategic drivers.

Smith, Mitra and Narashiman (1998) implied that focus on core business is the firm's facility to deal with its profitable area activities. By taking advantage of a quality IT service vendor, the organization can optimize the use of technology and focus the energies on the organization's core business goals. To determine the ability of focusing on core business with IS outsourcing; the qualitative definitions of focus on core business driver must be constituted by taking the literature surveys into consideration. The levels were similar to those used in the earlier surveys of Willcocks and Fitzgerald (1994), repeated by Willcocks and Currie (1996); Lacity and Willcocks (2000).

Innovative use of IS functionality is another strategic driver. Venkatraman and Loh (1994) defined this driver as the usage of tools provided by the outsourcing vendor to build new applications in firm's information technology according to firm's usage area. Mason, McKenny and Copeland (1997) declared that the innovative use of IS functionality is perhaps the most important way in which IT can contribute to a firm.

DiRomualdo and Gurbaxani (1998) stated that knowledge acquisiton is the process of eliciting, analyzing, transforming, classifying, organizing and integrating knowledge and representing that knowledge in a form that can be used in a computer system. Knowledge acquisition may reflect the incremental stock of knowledge in three areas: technical, managerial, networking. DiRomualdo and Gurbaxani (1998), Feeny and Willcocks (1998) stressed that technical IT knowledge refers to the knowledge directly related to information technology obtained from the external source. Bharadwaj (2000) said that

managerial IT knowledge is critical for the successful integration and implementation of the technology into the business operations. In the IT context, managerial knowledge includes effective management of the IT function, project management and leadership skills. Basselier, Benbasat and Reich (2003), Kale, Singh and Perlmutter (2000), Simonin (1999) defined networking knowledge as the knowledge cumulated through in prior experience in networking and partnering. Such accumulated knowledge will help identify the firm's IT outsourcing needs. Knowledge acquisition can be measured by adapting established items from several studies as Basselier, Benbasat and Reich (2003), Kale, Singh and Perlmutter (2000) and Simonin (1999) as well as new items.

Altinkemer, Chaturvedi and Gulati (1994) concluded that the organization has to protect its core competency, which is considered essential to its success, so as to become a member of the strategic alliance.

Yoshino and Rangan (1995) concluded that; through collaboration and knowledge transfer, strategic alliances may lead to improved firm performance such as increased productivity and innovation. Yoshino and Rangan (1995) stated that strategic alliance is a synergistic arrangement whereby two or more organizations agree to cooperate in the carrying out of a business activity where each brings different strengths and capabilities to the arrangement.

David Knoke (2003) demonstrated that a strategic alliance is an interaction event where organizations are present or absent as partners.

Flexibility is the last strategic driver defined in the literature. Carlson (1989) declared, especially in the purchase of rapidly developing new technologies, the flexibility is the easiness of adaptation to the new technology. Besides, Harrison (1994) stated that outsourcing can provide organizations greater capacity for flexibility.

It is inferred from the literature that strategic drivers may have dependencies among them. For instance, knowledge acquisiton may influence innovative use of IS functionality. Besides, strategic alliance may influence focus on core business.

2.3) FINANCIAL MOTIVATION

The works by Lin and Pervan (2001), Gewald and Hinz (2004), Bristol (2005), Mclellan, Marcolin and Beamish (1995) are related with financial motivation in terms of different views, concepts and perspectives.

Lin and Pervan (2001) found that there was a lack of well-defined IS investment evaluation methodology. This study also stresses that the organizations must execute cost and benefit analysis before outsourcing decision. From this, it may be inferred that cost reduction value have to be estimated before outsourcing decision.

Gewald and Hinz (2004) stressed that the risks of outsourcing must be evaluated and shared risk have to be taken into consideration before outsourcing decision. Bristol (2005) declared that cost savings, time saving, economies of scale are taken into consideration before outsourcing decision.

Mclellan, Marcolin and Beamish (2005) stated that IS outsourcing affects IS cost; IS performance and business cost. From this study, it may be inferred that the organizations may succeed in cost reduction and improving performance with the usage of IS outsourcing and the outsourcing vendor's economies of scale allow the organizations to undertake dramatic financial and strategic changes and IS outsourcing may probably facilitate these changes.

According to the literature, cost reduction, IS performance, IS-cost structure, cost saving level, shared risk level are accepted as financial drivers.

First financial driver is cost reduction. The organizations execute cost and benefit analysis to calculate the cost reduction value. Smith, Mitra and Narashiman (1998) implied that cost reduction is the difference between the firm's internal cost to provide the services and the cost of the external services.

IS performance is another financial driver. Loh and Venkatraman (1992) stressed that this financial driver is measured by dividing IT net income and sales to the IT expenditure. IT net (income and sales) state the sum of net (income and sales) achieved through outsourcing in the organization.

IS-cost structure is also defined as a financial driver according to the literature. Loh and Venkatraman (1992) suggested that it is the ratio of IT expenditure with both gross plant, property, equipment (i.e. before depreciation) and net plant property, equipment (i.e. after depreciation).

In other words, it is measured by dividing the IT expenditure to the total budget of the firm. Total budget of the firm states the budget reserved for IT in the firm. IT expenditure is the sum of equipment expenses, expenses for services relating to computer systems, operating expenses. This financial driver is measured before and after depreciation.

Khalfan and Gough (2002) stated that cost saving level results from economies of scale of professional IS vendors. Grevor, Cheon and Teng (1994) implied that the cost of technology acquisition is the sum of the cost of vendor's technology for the firm and the costs of computer hardware. Costs of computer hardware can be calculated according to the number of customers that the vendor has. If the vendor has many customers, unit cost of computer hardware decrease. The vendor reflects this situation to its customers and offers the computer hardware in a reduced cost. Thus, the firm acquires the technology in a cheaper way. The

costs of computer hardware can be defined as economies of scale cost. As a result, the cost of technology acquisition is the total of vendor's technology cost and economies of scale cost. Consequently, it is inferred from these definitions that cost saving level is the difference between the firm's budget level reserved for technological products and the actual costs of technology acquisiton.

Shared risk level is the last strategic driver defined in the literature. Technological uncertainty poses a risk to firms and outsourcing provides an opportunity to mitigate and distribute the risk. McLellan, Marcolin and Beamish (1995) concluded that IS contains a large component of technological uncertainty with its rapidly changing foundation. Through outsourcing, managers try to transfer all of the risk to the supplier. Dibbern, Goles, Hirschheim and Jayatilaka (2004) concluded that the vendor organization is expected to have superior skills and resources to handle these risk factors. By taking these interferences into consideration, risk can be defined in terms of outsourcing.

A risk is the expectation that a threat may succeed and the potential damage that can occur. Risk sharing is the distribution of risk among the firm and the outsourcing vendor. The contract may be the method between the outsourcing vendor and firms used to share or transfer risk. Sharing risk is a risk management technique for distributing the possible consequences of risk among the outsourcing vendor and the firm.

2.4) MOTIVATIONS FOR IS OUTSOURCING

Clark, Zmud and McCray (1995), Finlay and King (1999), Grover, Cheon and Teng (1996) found that the boundary choice decision of an organization is usually motivated by a combination of economic, technological, and strategical considerations. Antonucci and Tucker (1998), Collins and Millen (1995), Loh and Venkatraman (1992), Reponen (1993) reveal thanks to their survey studies

that cost reduction, flexibility and focus on core business are among the most dominant motivations for IS Outsourcing. Mc Farlan and Nolan (1995), Grover et al. (1996), Yang and Huang (2000) stated that there are many reasons why organizations consider IS outsourcing and the motivations have been proposed in terms of three main types of expected potential benefits: strategic, financial and technological.

Yang and Huang (2000) declared that the most important considerations when organizations think about is the benefits that organizations could obtain. Altinkemer, Chaturvadi and Gulati (1994) stress the importance that organizations should carefully examine all the potential benefits and risks of outsourcing in order to facilitate or gain more understanding of various issues which will help the top management to make knowledgeable decisions about outsourcing.

Apte (1990), Loh and Venkatraman (1992) stated that strategic benefit means that organisations need to concentrate on core functions for promoting competitiveness by outsourcing routine IT activities and Henderson (1990), Yang and Huan (2000) stated that the organizations also try to create new strategic initiatives.

Apte (1990), Lacity and Hirscheim (1993), Mclellan, Marcolin and Beamish (1995), Yang and Huang (2000) declared that economic (financial) benefits accrue substantial savings through utilising human and technological resources of the IS service providers.

Altinkemer et al. (1994) stated that technological benefits refer to the ability of the organization to gain access to leading- edge technology.

In this study, in order to highlight the expected benefits from IS outsourcing, financial and strategic drivers will be explained in detail, respectively. On the other hand, technological motivation category is beyond the scope of this study.

Financial motivation category describes one of the main motivations for IS outsourcing. Especially, in the beginning of financial motivation literature, cost reduction, economies of scale, shared risk and improved performance were counted as financial drivers. Then, these drivers were modified and combined with other financial drivers. As a result of these changes, cost reduction, IS performance, cost structure, cost saving level, shared risk level are accepted as financial drivers.

For the organizations, IS outsourcing can mean substantial cost reduction, in other words financial motivations. In most empirical comparative IS outsourcing practices, Apte et al. (1997) found out that cost reduction was the most important advantage recognised by the managers. Many studies have emphasized that organizations are experiencing great pressure to cut IS costs. Consequently, cost reduction is an important financial motivation which is provided by IS outsourcing in achieving cost cutting goals.

As stated by Khalfan and Gough (2002), cost savings usually occur due to economies of scale. When small firms make agreements with IT service providers, they provide the technology from these firms in a reduced cost. These vendors have the suitable technology and they have also experience. Besides, many hardware providers sell their products with decreasing costs. Unit cost of these products decrease thanks to economies of scale of service providers.. Thus, a big outsourcing vendor firm may be able to distribute fixed costs of computer hardware over a broad base of its customers. In this point of view, it can be realized that economies of scale provide indirectly lower costs and better efficiencies.

Another important financial driver is related to shared risk. Especially, the banking applications in the literature stress the importance of IS outsourcing benefits in estimating the uncertainties in the organizations. In each situation, the type of contract is important and for situations of uncertainty the contract which includes shared risk may be the only suitable and necessary arrangement.

IS Outsourcing also provides improved performance from a financial perspective. Loh and Venkatraman (1992) proposed business performance as one of the determinants of IS outsourcing activities. Other researchers as Mclellan et al. (1995) have realised that this motivation is a long-term objective, which can only be detected after a period of time.

Strategic motivation category also describes one of the main motivations for IS outsourcing. Especially, in the literature, focus on core business, flexibility, strategic alliances , innovative use of IT functionality and knowledge acquisition (increased knowledge and expertise) are strategic drivers.

Strategic benefits of IS outsourcing generally provide organizations to focus on their core business rather than dealing with routine IT activities for competitive advantage. The organizations make contract with external vendors to provide them the routine IT activities, so they can spend their more time to deal with the core business so as to make their organizations profit margin much more in the long-term. Besides, the organizations can focus on their core businesses so as to realize the important details about the core businesses. Focus on core business thanks to IS outsourcing provide both time advantage and indirectly cost minimization and profit maximization opportunity.

Carlson (1989), Harrison (1994) stated that outsourcing can provide organizations with greater capacity especially in the purchase of rapidly developing new technologies, or the myriad components of complex systems. Collins and Millen (1995) have recognized the importance of flexibility and control in the outsourcing arrangements as an important impetus.

Thompson (1965) stressed that innovation means the generation, acceptance, and implementation of new ideas, processes, products or services.

Coombs and Metcalfe (2000) realized that rarely do adopters of IT-enabled innovation command all necessary competence inhouse so that distributed capabilities need to be coordinated across firm boundaries.

Innovative use of IT functionality provides strategic advantage to the organizations.

Consequently, organizations can improve the tools according to their usage area. Besides, they can implement new products by building applications, so the knowledge level increases in the organization.

Clark et al. (1995), Palvia (1995) stated that access to the leading-edge technology is a persuasive argument for outsourcing. In fact, outsourcing can provide immediate access to the most up-to-date technology, as the organisations can request to have the latest and most advanced technology. Apte (1990) argues that IS outsourcing may increase the competitiveness of product offerings through the use of the state of the art technology that may not be easily available in-house. Behind these, vendors can increase their expertise level through outsourcing. In this point of view, increased knowledge and expertise is the strategic benefit provided by IS outsourcing.

Consequently, financial and strategic drivers and IS outsourcing success measures were determined through this literature survey.

2.5) CASE STUDY RESEARCH

Case study research method is used in our study. Below, the methodology of case study research and the meaning of case study shall be briefly reviewed according to the literature.

Benbasat, Goldstein and Mead (1987) defined that a case study examines a phenemenon in its natural setting, employing multiple methods of data collection to gather information from one or a few entities (People, groups or organizations).

Yin (1994) stressed that a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and its context are not clearly evident; and in which multiple sources of evidence are used .

Benbasat et al. (1987) stated that a fundamental difference between case studies and the other alternative methods is that the case study researcher may have less a priori knowledge of what the variables of interest will be and how they will be measured.

Yin (1994) stated that the case study method must be used when a how or why question is being asked about a contemporary set of events over which the investigator has little or no control.

According to Benbasat et al. (1987), there are three reasons why case study research is a viable information systems research strategy:

1. The researcher can study information systems in a natural setting, learn about the state of the art, and generate theories from practice.

2. The case study method allows the researcher to answer “how” and “why” questions to understand the nature and complexity of processes taking place.

3. A case approach is an appropriate way to research an area in which few previous studies have been carried out.

As stated by Benbasat et al. (1987), the significant point in case research design is the decision to include one or several cases in the project.

Yin (1994) stated that the single case study is an appropriate design under several circumstances as listed below.

1) When a single case represents the critical case in testing a well formulated theory:

2) When a single case represents an extreme or unique case.

3) When a single case is revelatory: This situation exists when an investigator has an opportunity to observe and analyze a phenomenon previously inaccessible to scientific investigation.

Benbasat et al. (1987) stated that single- case study projects are most useful at the outset of theory generation and late in theory testing. A single case used for exploration may be followed by a multiple-case study. A single case may be used to test the boundaries of well-formed theory.

On the other hand, multiple-case designs are appropriate when the intent of the research is description, theory building, or theory testing. Multiple–case designs allow for cross-case analysis and the extension of theory. Multiple cases yield more general research results.

Yin (1994) declared that the case study may involve more than one unit of analysis. This occurs when, within a single case, attention also is given to a subunit or subunits. Embedded designs include multiple unit of analysis. The study may include main and smaller units on different levels, and the aim is to look for consistent patterns of evidence across units, but within a case. In contrast, if the case study examined only the global nature of a program or an organization, a holistic design would have been used.

Besides, in a case study the choice between qualitative and quantitative methods is a crucial one and there may be some criteria to evaluate the differences between qualitative and quantitative methods in terms of their procedures and concepts. Procedures and methods for qualitative research are often formulated verbally, whereas quantitative methods are mostly defined numerically. Studies as Ragin (1989), Creswell (1994), Stake (1995) implicitly or explicitly say that only qualitative methods should be used in the case study, while some of the studies as Lee (1999) advocate the use of quantitative methods. Consequently, the used methods in the case study can be qualitative, quantitative, or both of them.

CHAPTER 3

THE EXPECTED RELATIONS BETWEEN MOTIVATION AND SUCCESS

In this chapter, first, the financial and strategic drivers for outsourcing are identified, based on the literature study presented in the previous chapter. Then, IS outsourcing success measures are determined, and the expected relations between drivers and success measures are discussed.

3.1) DRIVERS

3.1.1) FINANCIAL DRIVERS

The equations related with financial drivers were derived in this section to use them in the quantitative analysis. At the beginning of our study, our aim was to calculate the correlation coefficients between drivers and measures, but enough financial data to make quantitative analysis could not be obtained from organizations. For these reasons, the financial data obtained from organizations

were used to support qualitative relations between financial drivers and IS outsourcing success measures in the research based hypothesis matrix. The financial data obtained from organizations are stated in Table J.7 in Appendix J. The comments about these data are below this table.

3.1.1.1) COST REDUCTION

Cost reduction is the difference between the firm's internal cost to provide the services and the cost of external services. The firm's internal cost to provide the services can be defined as IS insourcing cost, on the other hand, the cost of external services can be defined as IS outsourcing cost. As a result, cost reduction is the difference between the IS insourcing cost and IS outsourcing cost. As stated in section 2.3, the organizations execute cost and benefit analysis before outsourcing decision and so they calculate cost reduction value. They give their outsourcing decision according to the value of this driver. Cost reduction can be defined in a mathematical formula as below.

Cost Reduction= IS insourcing cost - IS outsourcing cost (Equation 3.1)

If IS insourcing cost is higher than IS outsourcing cost, organizations may prefer to provide services by outsourcing.

If IS insourcing cost is lower than IS outsourcing cost, organizations prefer insourcing except compulsory situations. Compulsory situations state the services that the organizations cannot provide with insourcing.

3.1.1.2) IS PERFORMANCE (ECONOMIC EFFICIENCY)

As stated in section 2.3, IS performance is measured by dividing IT net income and sales to the IT expenditure. As stated in Draft general budget 2004 of European Union, IT expenditure can be defined in a mathematical formula as below.

IT Expenditure= equipment expenses +operating expenses +expenses for services relating to computer systems (Equation 3.2)

IT net income and sales can be defined in a mathematical formula as below.

IT net (income + sales)= IT gross (income + sales)- tax rate * IT gross (income + sales) (Equation 3.3)

By taking this definition into consideration, IS performance can be calculated in a mathematical formula as below.

IS Performance= IT net (income+sales) /(IT expenditure) (Equation 3.4)

This driver is used to determine the IS performance of organization in outsourcing situation. IT expenditure includes the expenses for outsourcing services. Besides, IT net (income and sales) state the sum of net (income and sales) achieved through outsourcing in the organization. The organizations can use this ratio to support the qualitative relation between IS performance and IS outsourcing success measures. Besides, industrial ratio for IS performance may be used by the organization to compare itself with the other organizations in the same industry.

3.1.1.3) IS-COST STRUCTURE (EXPENDITURE RATIO)

As stated in section 2.3, IS-cost structure is the ratio of IT expenditure to the total budget of the firm. Total budget of the firm states the budget reserved for IT in the firm. IS-cost structure driver can be defined in two different ways by taking the depreciation situations (before and after depreciation) into consideration. In this study, the value of IS-cost structure for organizations are tried to be obtained before outsourcing and after outsourcing so that the effects of IS outsourcing can be observed in the organizations. Besides, the relations between IS-cost structure and IS outsourcing success measures can be determined. IS-cost structure can be defined in the following formulas in two different ways as below.

Before Depreciation

IT Expenditure-1= equipment expenses(expenses for acquisition of equipment and software)+ expenses for services relating to computer systems+ operating expenses+gross plant+gross property+gross equipment (Equation 3.5)

IS-Cost Structure-1= (IT Expenditure-1)/ (Total-budget) (Equation 3.6)

IT Expenditure-1 states the IT expenditure of organization before depreciation.

After Depreciation

IT Expenditure-2= (IT Expenditure-1) - (gross plant+gross property+gross equipment) *(depreciation rate) (Equation 3.7)

IS-Cost Structure-2= (IT Expenditure-2) / (Total-budget) (Equation 3.8)

IT Expenditure-2 states the IT expenditure of organization after depreciation.

3.1.1.4) COST SAVING LEVEL

As stated in section 2.3, cost saving level results from economies of scale of IS outsourcing vendors. Cost saving level can be determined in mathematical representation as below.

The Cost-Saving Level= The firm's budget level reserved for technological products – The actual costs of the technology acquisition (Equation 3.9)

Consequently, the cost saving level is the difference between the firm's budget level reserved for technological products and the actual costs of technology acquisition. If the firm's budget level reserved for technological products is higher than the costs of technology acquisition, the organization reaches to the cost saving level. The saved budget can be used for other technological purposes. The costs of the technology acquisition show the effect of IS outsourcing. If the costs of technology acquisiton is minimized through outsourcing, organization prefers outsourcing instead of insourcing.

3.1.1.5) SHARED RISK LEVEL

The risk can be defined in a mathematical formula. As stated by Holton (2004), risk can be defined in the following formula. This formula is stated as an engineering definition of risk.

Risk= (Probability of Technological uncertainty * consequence in lost money)/ per technological uncertainty (Equation 3.10)

The risk can be formulated before outsourcing and after outsourcing as below.

Before Outsourcing

Risk= (Probability of Technological uncertainty * quantity of (consequence in) lost money for the firm)/ per technological uncertainty (Equation 3.11)

Before outsourcing, the firm undertakes the responsibility of all risk related with probable money losses in the project.

After Outsourcing

Risk= (Probability of Technological uncertainty * new quantity of (consequence in) lost money for the firm)/ per technological uncertainty +(Probability of Technological uncertainty * quantity of (consequence in) lost money for the outsourcing vendor)/ per technological uncertainty (Equation 3.12)

After outsourcing, the firm and outsourcing vendor shares the responsibility of risk related with probable money losses in the project.

With these formulas, the equation as below can be inferred.

quantity of lost money for the firm= new quantity of lost money+quantity of lost money for the outsourcing vendor (Equation 3.13)

As shown above in the formulas, the risk of the firm is mitigated after outsourcing. Besides, the risk proportion of the firm and the risk proportion of the outsourcing vendor in the total risk can be achieved . Consequently, the shared risk of the firm and the shared risk of outsourcing vendor is generated. These are defined in mathematical formulas as below.

The Shared Risk of the firm= [(Probability of Technological uncertainty * new quantity of (consequence in) lost money for the firm)/ per technological uncertainty] / [(Probability of Technological uncertainty * new quantity of (consequence in) lost money for the firm)/ per technological uncertainty)] +[(Probability of Technological uncertainty * quantity of (consequence in) lost money for the outsourcing vendor)/ per technological uncertainty)] (Equation 3.14)

The Shared Risk of the firm= [(Probability of Technological uncertainty * new quantity of (consequence in) lost money for the firm)/ (per technological uncertainty)] /[(Probability of Technological uncertainty * quantity of (consequence in) lost money for the firm)/(per technological uncertainty)] (Equation 3.15)

The Shared Risk of the Outsourcing Vendor=[(Probability of Technological uncertainty * quantity of (consequence in) lost money for the outsourcing vendor)/ per technological uncertainty)] / [Probability of Technological uncertainty * new quantity of (consequence in) lost money for the firm)/ per technological uncertainty)]+(Probability of Technological uncertainty * quantity of (consequence in) lost money for the outsourcing vendor)/ per technological uncertainty)] (Equation 3.16)

The Shared Risk of the Outsourcing Vendor=[(Probability of Technological uncertainty * quantity of (consequence in) lost money for the outsourcing vendor)/ per technological uncertainty)] /[(Probability of Technological uncertainty * quantity of (consequence in) lost money for the firm)/ per technological uncertainty)] (Equation 3.17)

Through outsourcing, managers may prefer to transfer all risk to the expert vendor firm so as to utilize vendor's firm superior skills. The similar risk transfer and risk sharing concepts may be determined according the contract between the outsourcing vendor and the firm. The shared risk level is used to determine the situation of the firm after outsourcing. If the organization undertakes the responsibility of all risk in the outsourcing project, organization cannot achieve advantage thanks to IS outsourcing. If the risk level of firm is minimized through outsourcing, organization achieves many advantages. By taking this driver into consideration, the qualitative relations between shared risk level and IS outsourcing success measures can be supported.

3.1.2) STRATEGIC DRIVERS

3.1.2.1) FOCUS ON CORE BUSINESS

Willcocks and Fitzgerald (1994) and Deloittes (1997) defined the focus on core business with four levels. Focus on core business driver can be defined in a qualitative way as in Table 3.1 with these four levels.

Table 3.1 : Levels of Focus On Core Business Driver

Focus on Core Business
Significant Improvement
Some Improvement
No Change
Worse

THE DEFINITION OF LEVELS

1. Significant Improvement: The IS outsourcing affected the focus on core business in the company in a significantly positive manner.

2. Some Improvement: The IS outsourcing affected the focus on core business in the company; but the improvement level is not as much as the company expected.

3. No Change: There is not any advantage or disadvantage of IS outsourcing in terms of focusing on core business in the company.

4. Worse: The IS outsourcing affected the focus on core business in the company in a negative manner.

3.1.2.2) INNOVATIVE USE OF IS FUNCTIONALITY

Kleinschmidt and Cooper (1991) followed a triad innovativeness categorization as defined below.

THE INNOVATIVENESS LEVELS

1. High: Information technology products and applications are highly innovative when new to the world and ones that were innovatively new to the company's product lines.

2. Medium (Moderate): Information technology products and applications are moderately innovative when consisting of new-to-the firm lines, but ones where the information technology products were not new to the market; and new items in the firm's existing product lines.

3. Low: Low innovativeness comprising all others such as modifications to existing information technology products; redesigned information technology products to achieve cost reductions; and repositionings.

3.1.2.3) KNOWLEDGE ACQUISITION

The meaning of knowledge acquisiton can be defined in a qualitative way as the following table.

Table 3.2 : Levels of Knowledge Acquisition Driver

Knowledge Types Situations	**Knowledge Acquisition**
All of the three types (technical and managerial and networking) of IT knowledge are present	Achieved
At least one of the IT knowledge type is absent	Not Achieved

Consequently, by taking the literature into consideration, to achieve the knowledge acquisiton, technical, managerial and networking knowledge must be

current in the firm; otherwise knowledge acquisiton cannot be achieved. For instance, in the absence of the managerial knowledge, the knowledge cannot be organized and integrated with the business operations, so the knowledge acquisiton process cannot be completed.

3.1.2.4) STRATEGIC ALLIANCES

Strategic alliances driver can be defined in a qualitative way as the following table.

Table 3.3 : Levels of Strategic Alliances Driver

Strategic Alliances
Present
Absent

THE DEFINITION OF LEVELS

1. Present: The company has a partnership with at least one or more companies so as to utilize from the strategic advantage of alliances.

2. Absent: The company has no strategic alliances with any company.

3.1.2.5) FLEXIBILITY

Flexibility can be defined in a qualitative way as the following table.

Table 3.4 : Levels of Flexibility Driver

Flexibility Levels
High
Medium
Low

THE DEFINITION OF LEVELS

1. High : Gebauer and Schober (2006) suggested that high flexibility can be defined as flexibility to change an information system. Gebauer and Schober (2006) also stressed that flexibility to change an information system is the effort required to change a given information system after its initial implementation. Hanseth, Monteiro, and Hatling (1996) said that choices range from systems that cannot be changed, upgraded, or expanded in any way (off-the-shelf, turnkey systems), to arrangements that provide many opportunities for change after the initial system has been put to use, based for example on decomposition and modularization.

2. Medium: Gebauer and Schober (2006) stressed that a situation of medium flexibility calls for a balanced approach integrating flexibility to use and flexibility to change .

3. Low: Gebauer and Schober (2006) suggested that low flexibility can be defined as flexibility to use an information system. Applying Sethi and Sethi's (1990) general understanding of flexibility to information systems, flexibility to use an information system can be defined as the range of possibilities that is provided by an information system until a major change is required. For example, the flexibility to use an electronic procurement system refers to the scope of different products and procurement procedures that is built into the system.

3.2) IS OUTSOURCING SUCCESS MEASURES

3.2.1) USER SATISFACTION

Lee, Kim and Kim (2006) stated that user satisfaction may be measured by the use of the seven-point semantic differential scales. The semantic differential scale asks people in the company to rate the information system based upon a seven-point rating scale that has two bi-polar adjectives at each end. It must be noticed that unlike the rating scale, the semantic differential scale does not have a neutral or middle selection. A person must choose, to a certain extent, one or the other adjective. According to the literature, the semantic differential scales is preferred more to measure user satisfaction success.

To measure the success of user satisfaction, a research questionnaire can be created and formed with measurement items. According to the result of the research questionnaire, user satisfaction success can be evaluated.

As stated by Lee, Kim and Kim (2006), for instance, the following semantic differential question shall be used to evaluate the user satisfaction success.

Using the system is:
(7) Very Satisfactory
(1) Very Unsatisfactory

The person in the company must choose one of the qualifications. If the person chooses very pleasing, it will be evaluated as seven (7) points in the analysis, and if the person chooses very displeasing, it will be evaluated as one (1) point in the analysis. In the research, after determining the evaluation parameters (items), the evaluations of the people in the company for every item will be calculated separately by summing the points of each person for every evaluation items.

Consequently, by taking the results of the all items into consideration, user satisfaction success will be obtained thanks to the qualitative structure of the semantic differential scale.

3.2.2) OTHER IS OUTSOURCING SUCCESS MEASURES

As stated by Lee, Kim and Kim (2006), and by Rouse, Corbitt and Aubert (2001), information quality, system quality, organizational impact and individual impact may be measured by the use of the the seven-point Likert-type scale from strongly disagree to strongly agree.

In the Likert scale, the attitudes of people in the company can be the summed score from each research questions. In the seven- point Likert-type scale, "Strongly agree" has a value of 7, "Agree" 6, "Agree somewhat" 5, "Undecided" 4, "Disagree somewhat" 3, "Disagree" 2 and "Strongly disagree" 1.

Lee, Kim and Kim (2006) declared that the following semantic differential questions shall be used to evaluate the information quality success, system quality success, organizational impact success and individual impact success respectively.

The Question for Information Quality Success:

"The Information that the system provides is accurate."

The Question for System Quality Success:

"The system 's response time is fast."

The Question for Organizational Impact Success:

"Using the system , my company reduced the cost related to IS."

The Question for Individual Impact Success:

"The system is useful in my job."

The person in the company must choose one of the seven qualifications for each question. After determining the evaluation parameters (items), the evaluations of the people in the company for every item will be calculated separately by summing the points of each person for every evaluation item. Consequently, by taking the results of all items into consideration, information quality success, system quality success, organizational impact success and individual impact success will be obtained thanks to the qualitative structure of the seven –point Likert- type scale.

3.3) RESEARCH HYPOTHESIS

The relations between drivers and measures according to the literature are explained in this section. Table 3.5. presents the hypothesized relations between financial and strategic drivers and IS success measures. The hypotheses depicted in this table have been prepared after the review of literature presented in Chapter 2. In the table, a (+) reflects a hypothesized positive influence of the related driver on the related success measure where a (-) is a hypothesized negative influence. Chapter 4 will present the reflection of our research results onto this hypothesis matrix and its modification according to our findings. Below the table, a discussion of the hypothesized relations is presented.

Table 3.5 : The Literature Based Hypothesis Matrix

Strategic Drivers					**Financial Drivers**					**Hypothesis Matrix**	
Flexibility	Strategic Alliances	Knowledge Acquisition	Innovative Use Of IS Functionality	Focus on Core Business	Shared Risk Level	Cost Saving Level	IS-Cost Structure	IS Performance	Cost Reduction		
			(+)	(+)						User Satisfaction	**IS Outsourcing Success Measures**
		(+)	(+)							Information Quality	
(+)		(+)	(+)							System Quality	
	(-)	(+)	(+)	(+)	(-)	(+)	(+)	(-)	(+)	Organizational Impact	
		(+)	(+)							Individual Impact	

3.3.1) THE EXPECTED RELATIONS BETWEEN FINANCIAL AND STRATEGIC DRIVERS AND IS OUTSOURCING SUCCESS MEASURES

In this section, the relations between financial and strategic drivers and IS outsourcing success measures are explained.

Cost Reduction-Organizational Impact

According to Smith, Mitra and Narasimhan (1998); Apte, Sobol and Hanaoka (1997); Clark, Zmud and McCray (1995); Sobol and Apte (1995), there may be a positive relationship between cost reduction and organizational impact. Because by using IS outsourcing, the firms achieved in cost cutting goals, so the organizational impact level increases thanks to cost minimization.

IS Performance-Organizational Impact

As stated by Loh and Venkatraman (1992), there may be a negative relationship between IS performance and organizational impact. The literature shows that IS outsourcing expenditure are generally too high especially for small firms, so by using IS outsourcing, IS performance (economic efficiency) decreases and the organizational impact may be increased by achieving the goals but in a high-cost level.

IS-Cost Structure-Organizational Impact

As stated by Loh and Venkatraman (1992), there may be a positive relationship between IS-cost structure and organizational impact. After the usage of IS outsourcing, IS-cost structure may be converted into an optimal situation. Because after some period, work volume increases and cost is minimized in the firm thanks to IS outsourcing usage, so the organizational impact increases.

Cost Saving Level-Organizational Impact

As stated by Lacity and Willcocks (1998); Apte et.al (1997); Loh and Venkatraman (1992); Slaughter and Ang (1996); Ang and Cummings (1997), there may be a positive relationship between cost saving level and organizational impact. By utilizing through the economies of scale of IS outsourcing vendors, the costs of technology acquisiton decreases and so the cost saving level increases. Additionally, in this situation, the saving budget can be used for other technological purposes and organizational impact convertes into a more suitable situation.

Shared Risk Level-Organizational Impact

Loh (1994) declared that there may be a negative relationship between shared risk level and organizational impact. The literature shows that the difficulty in contractual resolution generally prevents the distribution of risk between the firms and IS outsourcing vendors in an optimal manner. Fully defining and specifying the contract by taking uncertainty condition into consideration is not

so easy for the firm and the vendor. Consequently, organizational impact decreases when the risk position is in a high-level.

Focus on core Business-User Satisfaction

Slaughter and Ang (1996) stated that there may be a positive relationship between focus on core business and user satisfaction. By focusing on core business, since the routine IS activities are provided by IS outsourcing , the overall satisfaction level for the user increases. The user can provide time advantage thanks to IS outsourcing.

Focus on core Business-Organizational Impact

As stated by Slaughter and Ang (1996), there may be a positive relationship between focus on core business and organizational impact. By focusing on core business, the organizations can realize the important details about the core business. Focus on core business thanks to IS outsourcing provide indirectly cost minimization and profit maximization opportunity, so organizational impact increases.

Innovative Use Of IS Functionality-User Satisfaction

As stated by Apte (1990); Clark et al. (1995); Palvia (1995), there may be a positive relationship between innovative use of IS functionality and user satisfaction. By innovative use of IS functionality, software satisfaction,

hardware satisfaction, user information satisfaction is provided in a high-level manner.

Innovative Use Of IS Functionality -Information Quality

Apte(1990) found that there may be a positive relationship between innovative use of IS functionality and information quality. By innovative use of IS functionality, the organization can build new application according to its usage area, so the information quality is achieved in terms of expected properties.

Innovative Use Of IS Functionality-System Quality

Apte(1990) declared that there may be a positive relationship between innovative use of IS functionality and system quality. By innovative use of IS functionality, the applications are build and developed according to the desired properties, so the realization of user requirements can be achieved and system quality level increases.

Innovative Use Of IS Functionality -Organizational Impact

As stated by Earl (1996), there may be a positive relationship between innovative use of IS functionality and organizational impact. By innovative use of IS functionality, knowledge level increases and work volume increases, so the organizational impact increases.

Innovative Use Of IS Functionality -Individual Impact

As stated by Clark et al. (1995); Palvia (1995); Apte(1990), there may be a positive relationship between innovative use of IS functionality and individual impact. By innovative use of IS functionality, decision quality and learning increases due to the rise in the knowledge level. As a result of this, individual impact increases.

Knowledge Acquisition-Information Quality

Altinkemer et al. (1994); Clark et al. (1995); Grover, Cheon and Teng (1994); Smith et al. (1998); Venkatraman and Loh (1994) found that there may be a positive relationship between knowledge acquisiton and information quality. Due to the rise in the expertise and knowledge level, the latest and most advanced technology can be generated and so the information quality level increases.

Knowledge Acquisition-System Quality

Altinkemer et al.(1994); Clark et al. (1995); Grover et al. (1994); Smith et al.(1998); Venkatraman and Loh (1994) declared that there may be a positive relationship between knowledge acquisiton and system quality. By acquiring expertise, the system quality can be achieved in a more specific and detailed manner.

Knowledge Acquisition-Organizational Impact

As stated by Altinkemer et al. (1994); Clark et al. (1995); Grover et al. (1994); Smith et al.(1998); Venkatraman and Loh (1994), there may be a positive relationship between knowledge acquisiton and organizational impact. Thanks to knowledge acquisition, outsourcing can save capital investment in hardware and hiring costs, so the work volume increases and return on investment is provided.

Knowledge Acquisition-Individual Impact

Altinkemer et al. (1994); Clark et al. (1995); Grover et al. (1994a); Smith et al. (1998); Venkatraman and Loh (1994) stressed that there may be a positive relationship between knowledge acquisiton and individual impact. Thanks to knowledge acquisition, learning and decision ability increases, so the individual impact improves.

Strategic Alliances-Organizational Impact

Teng, Cheon and Grover (1995); Altinkemer et al. (1994) stated that there may be a negative relationship between strategic alliances and organizational impact. According to the literature, in the strategic alliances the firms generally could not protect a core competency closely so the competitive advantage is lost. For that reason, the members of the alliance is affected in a very bad manner. They are expected to have advantage on their competitors, but, they even could not achieve their primary goals.

Flexibility-System Quality

As stated by Carlson (1989); Harrison (1994); Collins and Millen (1995); Altinkemer et al. (1994), there may be a positive relationship between flexibility and system quality. The easiness of adaptation to the new technology shows the flexibility. Flexibility of system and integration of systems can be achieved in terms of system quality. Consequently, there is a direct relationship between flexibility and system quality.

CHAPTER 4

CASE ANALYSIS

4.1) DESCRIPTION OF THE CASE STUDY

Content of the case study and the organizations in the case study are explained in this section. In the content of the case study part, the pilot study, the types of organizations in the case study, the steps of data collection, the roles of contacted staff in the organizations, the design method selected for this study in terms of case study research methodology are explained in detail. The reasons of qualitative method selection is also stressed. Besides, the properties of organizations in the case study are summarized in Table 4.1. In addition to these, the IS outsourcing services offered by organizations and the IS outsourcing services taken by organizations are stressed.

4.1.1) CONTENT OF THE CASE STUDY

Before our study, we thought that there were two types of organizations to be investigated in terms of IS outsourcing: IS outsourcing vendor organizations and IS outsourcing customer organizations. By taking this situation into consideration, firstly, we communicated with 6 organizations and we made preliminary face to face interviews with the staff of them. In other words, we made a pilot study. In this pilot study, we realized that outsourcing vendors and outsourcing customers were not enough to represent IS outsourcing projects. System integrators and organizations which are both outsourcing vendor and customer also participate in outsourcing projects. As a result, this pilot study showed us that there were four categories of organizations in terms of IS outsourcing: IS outsourcing vendors, IS outsourcing customers, system integrators and organizations which are both outsourcing vendor and outsourcing customer. Then, we searched for organizations related with these categories. We found 22 organizations related with these four categories including 6 organizations that we made preliminary interviews at the beginning of our study. We phoned the related staff of these 22 organizations. 14 of them accepted to participate in our study. We made face to face interviews with the staff of these 14 organizations. 5 of them were IS outsourcing vendors, 5 of them were system integrators, 2 of them were IS outsourcing customers and 2 of them were organizations which are both outsourcing vendor and outsourcing customer. Consequently, in our case study, we could communicate with 14 organizations and contact their relevant staff. In other words, our study included 14 organizations. We contacted with outsourcing group manager of Organization A, project manager of Organization B, assistant general manager of Organization C, call center product manager of Organization D, project manager of Organization H, system development manager of Organization I, system development manager of Organization J, professional services of Organization K, system support manager of Organization L, information technology manager of Organization M, information technology coordinator of Organization N. We contacted also with

public relations manager of Organization E, human resources manager of Organization F and sales manager of organization G. Public relations manager of organization E, human resources manager of organization F and sales manager of organization G provide us to make interviews with the staff responsible for IS outsourcing in their organizations. We interviewed with these staff, but we could not learn the duty of them in their organizations since they did not want to state.

If we evaluate our case study in terms of case study research methodology, our study includes the properties of a multiple- case study in terms of the number of cases used in the research, since we were interested in four different types of organizations in the case study. Behind multiple case design, we also selected holistic design since we examined the global natures of organizations, we did not investigate the specific departments inside the organizations. By taking these situations into consideration, it may be stated that the selection of holistic multiple-case design was appropriate in our study. In our study, the relations between the IS outsourcing success measures and the financial and the strategic drivers were achieved by taking the four different types of organizations into considerations in terms of outsourcing services under the same circumstances. These four groups of organizations were evaluated under the same circumstances and the investigator collected the data about the same dimensions for these four groups of organizations. Then, these four groups of organizations were compared with each other. Finally, the inferences and conclusions about the relations between the IS outsourcing success measures and the financial and the strategic drivers were constituted.

Our case study must also be evaluated in terms of the choice between the qualitative and quantitative methods. It may be said that the used methods in our study are qualitative ones. In our study, some simple numerical analysis were made and financial data documents and ratios were prepared and obtained from some of the organizations, but these were not enough to denote the numerical correlations between financial and strategic drivers and IS outsourcing success measures. As a result, at the end of the study, the relations between financial and

strategic drivers and IS outsourcing success measures could be stated in a qualitative manner. Besides, the financial data obtained from organizations were used to support the qualitative relations between drivers and measures.

Data was collected in three steps:

In the first step, the general questions were posed in order to gather the characteristics of organizations and to determine the relations between the IS outsourcing success measures and the financial and strategic drivers. 32 questions were prepared for the organizations, but the number of questions to be answered varied according to the type of the organization. IS outsourcing vendors and system integrators answered 12 questions and IS outsourcing customers (IS outsourcing purchasers) answered 21 questions. In addition to these, the organizations which are both IS outsourcing customer and IS outsourcing purchaser answered all 32 questions.

In the second step, questionnaires were prepared by taking the properties of organizations in terms of IS outsourcing into consideration. The questionnaire including 13 questions was applied to the system integrators and the organizations which are both IS outsourcing customer and IS outsourcing purchaser, the questionnaire including 8 questions was applied to the IS outsourcing vendors.

Besides, the questionnaire including 34 questions was applied to the IS outsourcing customers. No one filled the questionnaire in 2 of the 14 organizations, all other 12 organizations filled the questionnaire. Generally, in every organization, a staff member filled the questionnaire, but in one system integrator firm two members of the organization filled the questionnaire.

In the third step, financial data documents were prepared according to the type of the organization. Financial ratios and financial values were arranged in three questions for IS outsourcing vendors, on the other hand, for system integrators

and IS outsourcing customers, the financial ratios and values were arranged in five questions. Seven of the organizations gave information about financial ratios. Although we stated that the financial ratios would be used in a master thesis to achieve the relations in our hypothesis matrix and the name of the organizations would not be used in the study, the other organizations did not give any information about financial ratios due to the secrecy, confidentiality and organizational policy. Behind these reasons, 2 of the organizations could not give information about financial ratios since they did not hold so specific financial ratios related with IS outsourcing in their financial charts.

4.1.2) THE ORGANIZATIONS IN THE CASE STUDY

Table 4.1. presents brief descriptions of the organizations included in the case studies. Organization A has given services outsourcing services by focusing on total solution and service fields. Organization B offers operating services. The outsourcing services provided by organization B are related with hardware, software, communication, human resources, project management, process management, maintenance and support services. Organization C gives services in all fields of information technology. Technical service, consulting services, network security, expert personnel service, software and application development, networking services are provided by organization C either in its organization or with the support of its outsourcing business solution partners. The outsourcing services provided by Organization D are in the field of desktop management, call center services, network management, enterprise resource planning (ERP) applications, operating, server management. The outsourcing services provided by Organization E are help desk services, desktop systems support services, server hardware and software support, inventory management, proactive and predictive system management services. Organization F gives outsourcing service in the area of software and system management. Organization G deals with telecom, technical support and information

technologies. Organization H deals with communication area in terms of information technology. Organization I takes outsourcing service about database management. On the other hand, the outsourcing services that are provided by Organization I are expert personnel service, system operating and system maintenance, software. Organization J provides technical support services to its customers, on the other hand, organization J takes outsourcing service about software management. Organization K provides full and partial information technology outsourcing. Organization L provides the information technology expert personnel and the information technology services. Organization M takes outsourcing services related with hardware, networking and cabling. Organization N takes outsourcing service related with hardware service and buys hardware products, also organization N takes outsourcing service for software and buys software products. Organization N buys necessary tools to manage software applications, and also the organization buys tools to manage security. Organization N also buys tools for intrusion detection systems, and the organization buys tools for the backup system in order to have required institutional backups. For more detailed information, the reader is referred to Appendix B.

Table 4.1 : The Organizations in the Case Study

Organization	Turnover or Production Level for Year 2006	Number of Employees	Type of the Organization	Contacted Staff of the Organization
Organization A	100 Million $	598	System Integrator	Outsourcing Group Manager
Organization B	400 Million $	971	System Integrator	Project Manager
Organization C	4.5 Million $	120	System Integrator	Assistant General Manager
Organization D	—	1000	System Integrator	Call Center Product Manager
Organization E	—	30	Outsourcing Vendor	Public Relations Manager
Organization F	5 Million $	72	Outsourcing Vendor and Outsourcing Customer	Human Resources Manager
Organization G	100 Million $	1000	System Integrator	Sales Manager
Organization H	(—)	(—)	Outsourcing Vendor	Project Manager
Organization I	3 Million $	36	Outsourcing Vendor and Outsourcing Customer	System Development Manager
Organization J	(—)	(—)	Outsourcing Vendor	System Development Manager
Organization K	(—)	113	Outsourcing Vendor	Professional Services Manager
Organization L	(—)	(—)	Outsourcing Vendor	System Support Manager
Organization M	300 Million $	3800	Outsourcing Customer	Information Technology Manager
Organization N	100000 tons	538	Outsourcing Customer	Information Technology Coordinator

In Table 4.1, a (—) states that the related information of the related organization could not be obtained.

4.2) COMMON FINDINGS

In the case study, 2 organizations did not fill the questionnaire, and 7 organizations did not give information about financial ratios and values. For these reasons, common findings for all 14 organizations were determined according to the contacts with the staff of the organizations. In other words, the information obtained in the first step of the case study was used in order to describe the common findings for 14 organizations. In the subsections of this section, the common findings for the same type of organizations were clarified.

4.2.1) THE COMMON FINDING FOR ALL OF THE ORGANIZATIONS

The common finding is adopted by all of 14 organizations in the case study.

Before outsourcing decision, all of the organizations in the study execute cost - benefit analyses.

Organization G executes cost-benefit and competitive analysis for its customers. In competitive analysis, they analyse the vendors which participate in adjudications. In the context of the analysis, they try to find the optimal vendor which can provide the most appropriate product in terms of price and specifications defined by the customer in the contract between Organization G and its customer. According to the results of the analysis, Organization G buys the product from the optimal vendor. In addition to the competitive analysis, they execute cost - benefit analysis for the product. The main aim of the organization G is to provide cost optimization opportunities to its customers. The other system integrators execute the similar analysis for outsourcing decision. Organization M and Organization N also execute the cost - benefit analysis before outsourcing decision.

While proposing outsourcing of certain IT functions to its customers, Organization K reports the results of cost - benefit analysis to them simultaneously. In the context of the analysis, Organization K makes a comperative analysis of outsourcing and insourcing decisions. Firstly, Organization K puts the expected results forward in the event of outsourcing decision. Secondly, they put the expected results forward in the event of insourcing decision. By comparing two alternatives, the customers give their decision. The other outsourcing vendors execute the cost - benefit analysis. Organization I also executes the cost - benefit analysis . The staff of the Organization I claims that providing the same services insourcing instead of by outsourcing to Organization I brings disadvantages to their customers. Organization F executes cost- benefit analysis for server hosting. The first reason for executing cost-benefit analysis is the necessity of a special room which have to pass many approvals. The second reason is that high level security precautions have to be taken in this special room. The last reason is that high infrastructure cost is required for server hosting.

Consequently, all 14 organizations execute cost - benefit and similar analyses for outsourcing decision. Outsourcing customers execute these analysis for themselves. On the other hand, system integrators and outsourcing vendors execute these analysis for their customers. While selecting among outsourcing and insourcing alternatives, organizations evaluate the difference between expected IS outsourcing and insourcing costs. In other words, cost reduction is a significant driver for organizations before outsourcing decision.

4.2.2) COMMON FINDINGS FOR ALL SYSTEM INTEGRATORS

These common findings are adopted by all of 5 system integrators.

Common Finding 1

System integrators provide cost advantage to their customers.

The staff of Organization A stated in the interview that the customers of them achieve at least cost advantage of 14% with the outsourcing service model compared with purchasing the product. The staff of Organization D stated in the interview that the customers of them achieve cost advantage through operation economy and consumption economy. According to organization D , operation economy deals with the costs of every calls of the users into the help desk. In other words, operation economy queries the total cost of the completion of installation of the operating system into the desktop platform. Minimizing the operation cost is important, but the better way is to decrease the consumption necessity of the related service, or even eliminate the service. In this sense, consumption economy intends to terminate the related service, and to provide this, consumption economy arranges and accelerates the usage of required tools and processes.

Eliminating a necessity related with a support (for instance, the installation of the required patches quickly and on time into a PC by remote access) is as important as the cost of the user's call to help desk while the user system is not working due to the absence of the patch. Both in operation economy and in consumption economy, the added value is created in terms of costs in the scope of services provided by organization D. Organization B , C, G also provide cost advantages to their customers by giving outsourcing services to them. Their main way is to buy the products from the vendors in an optimal cost, then they arrange the products according to the customers'expectations, so their customers achieve the products cheaper than expected cost.

Common Finding 2

Outsourcing services provided by system integrators have other economic impacts beside cost advantage on customer organizations.

Personnel expenditures, costs and the beginning investment costs of the customers of Organization A decrease through outsourcing. In addition to this, their customers achieve economical advantage in terms of operational costs in the long term. The businesses of their customers are being done more productively and effectively thanks to the decrease in the number of personnel in information technology. The work volume increases in the organizations of their customers. The impacts of outsourcing services provided by Organization D are seen in terms of two different aspects. Firstly, since the core business of Organization D is technology and they provide services to many organizations, the prices of outsourcing services decrease. In other words, the customers of Organization D utilize economies of scale of Organization D. Secondly, organizations use technology more effectively in their businesses through the outsourcing services of Organization D. Thus, the productivity of the users and the perceptions of improvement in decision making increase in these organizations.

The staff of Organization B stated in the interview that having regular costs denotes having economies of scales according to their organizational thought. Regular costs provide Organization B to have competitive advantage and its customers utilize this advantage. For instance, a customer of organization B engaged new personnel in the field of database management before taking outsourcing service from organization B, but could not utilize the personnel effectively. On the other hand, Organization B provides this service with less personnel and also provides it to many organizations. In other words, the outsourcing services of Organization B have more quality and they are less expensive. Organization C offers the solutions to its customers by combining the

solutions of experts in an optimal way so as to provide the most effective prices for the services. Organization G aims to provide the cost optimization for its customers. Organization G gains project discounts thanks to the economies of scale of vendors. Organization G participates in many adjudications and Organization G buys a lot of products from the vendors. For that reason; the vendors provide organization G generally additional discounts between the former project and latter project.

As a result, outsourcing services of system integrators in the case study create positive influences on organizational economic structures.

Common Finding 3

The customers of system integrators benefit from the economies of scale provided by system integrators.

Organization A focuses on outsourcing service businesses, and it has the knowledge, experience and cost advantages. The staff of Organization A stated in the interview that firms use outsourcing to adapt to the new technology, to focus on their core businesses, to use the human resources effectively, to share their risks and to overcome the difficulties of management and control in the support processes. The staff of Organization A stressed that the advantages of economies of scale in the outsourcing process are allowing organizations to manage and control the costs and to have competitive ability. Organization D has the economies of scale especially in the area of common resources usage in the help desk structure. The organizations which use the help desk management solution achieve the entry level problem solution in the central help desk environment. In this structure, the users of multi customers are supported by help desk agents which offer services with common resources usage. Thus, the organizations achieve significant gains in costs. Regular costs of Organization B

denote the first dimension of economies of scale. The second dimension of economies of scale is related with time management. Organization B provides the time advantage to its customers by arranging the time sharing slices of the skills of the qualitative personnels according to the customers' expectations.

The staff of organization C and G described the rules of economies of scale. There are some general rules related with the economies of scale. One of the rules is related with quota. If the organizations exceed their quota level, the vendors provide the discount for the products to the system integrators. The other rule is related with registration concept. Registration is an agreement made between the system integrator and the vendor. Thanks to this agreement, the system integrator firm which provides the conditions of the project better than the other system integrators can buy the technological product of the vendor cheaper and the specific discount rate of the technological product for this system integrator is defined in the registration agreement. If the system integrator firm deals with the project more than the other system integrators by persuading the customer and by spending more time on the project, the vendor evaluates this situation and if the system integrator firm proposes the vendor organization as a partner organization in the project to the customer firm, then the vendor organization provides this system integrator more discount than the other system integrators. Both Organization C and G have advantages in terms of economies of scale. Consequently, the system integrators in the case study provide economies of scale to their customers.

Common Finding 4

The system integrators have agreements with the vendors and the customers. The contents of the agreements include risks, types of risks, shared risk, risk distribution and the contents of services.

Organization A shares the financial and non-financial risks with the firms that it gives the outsourcing services. In the agreements, success rate of the services is defined and the penal items are determined for unsuccessful situations. If the success rate is below the rate defined in service level agreement, it means unsuccessful situation occurred. According to the Organization D, system integrators must take the risk of customer firms in the boundaries of the service context. The aim of Organization D is to increase the IS outsourcing service quality and to decrease the costs simultaneously. While trying to provide this equilibrium, if the service level falls under the acceptable situation, the punishment mechanism is applied by the customers, on the other hand, in case of offering extraordinary services to the customers, gift mechanism is applied.

Organization B, C, and G make back to back agreements with vendors, so the risks are shared between the system integrators and the vendors. Back to back agreement is an agreement which is made between the system integrator firm and the vendor. If the system integrator cannot meet the expectations of its customers due to the vendor firm, the results of punishment mechanism is reflected to the vendor firm. It is realized that contract management must be provided and defined in an optimal manner. The contracts must take the situations of system integrators and vendors into consideration so as to distribute the risk between vendors and system integrators. If the company makes back to back agreement, the risk is distributed and the risk position is not in a high-level for the system integrator. But if all the risk is transferred to the system integrator, the risk is high in the system integrator firm . Thus, the system integrator firm cannot meet all expectations of the customers.

The staff of Organization C stressed that win-win principle is the main principle in the back-to-back agreement . If the system integrators buy the products from the vendors on time, the system integrators can offer the products by making some changes on products to the customers, so the system integrators earn money and also the vendors earn money. It means that there is no problem if the system

integrators and vendors obey the rules of win-win principle. Consequently, the system integrators make agreements in the outsourcing processes.

Common Finding 5

The system integrators completely provide knowledge acquisition to their customers.

Organization D is global and it has also good references about the services that are provided locally. Organization D can convert the knowledge gained from other projects, the acquisitions from the best practices in the world and the experiences into the useful conditions by taking the requirements of customers into the consideration. Organization D provides technical knowledge, technical support and managerial knowledge to the customers. Organization D informs the customers about the usage of information systems in business operations. In addition to these, Organization D offers the previous experiences with the reference documents. Organization A collects the documents related with knowledge acquisiton and makes studies to improve the knowledge acquisiton level. Organization A also shares the reference documents and knowledge with its customers. These attributes denote the retrospective experiences and knowledge of the organization. Organization G completely provides the managerial, technical and networking knowledge to its customers. Organization G offers the reference documents and knowledge. Organization B and C provide the knowledge acquisiton completely in the same way as Organization G. Consequently, the customers of system integrators can completely achieve knowledge acquisition thanks to the system integrators.

Common Finding 6

The staff of all system integrators have stated in the interviews that they have successful strategic alliances with some companies.

Common Finding 7

The risk levels of system integrators in the outsourcing projects are lower than 100%, because all the system integrators make back to back and strategic agreements. Thus, they do not take the responsibility of all the risks in the outsourcing projects.

The staff of organization G explained the two main situations of risk sharing. Risk sharing ratio may be the ratio of the price of the agreement between the vendor and system integrator to the overall price of the project, or risk sharing ratio may be arranged according to the main agreement between the system integrator and its customer. For instance, in an outsourcing project, there may be an agreement between a system integrator and a vendor which has a price of 1 million $, and in the same project there also may be an agreement between a system integrator and its customer which has a price of 4 million $. The total price of the project according to the agreements is 5 million $. According to the first assumption, the risk for the vendor is 20%, but according to the second assumption the risk for the vendor is 25%. The risk sharing situation changes from project to project. For instance, if a system stops due to the vendor's product (for instance, due to the switch corruption) , the punishment and risk sharing systems shall change. In this sense, the vendor shall pay 0,2% of the overall price of the project as a punishment to the system integrator. Consequently, the system integrators do not undertake all the risks in the outsourcing projects.

Common Finding 8

System integrators do not deal with reserving budget for technological products at the beginning of the year. They try to determine the sales quotas of the vendors by making sales plan. Instead of cost saving level, the profit ratio and income are important drivers for system integrators.

4.2.3) COMMON FINDINGS FOR ALL OUTSOURCING VENDORS

These common findings are adopted by all of 5 outsourcing vendors.

Common Finding 1

The outsourcing vendors provide cost advantages to their customers.

The customers of Organization E get the information technology services with less costs than insourcing. Organization H provides the similar opportunity to its customers. Organization J provides cost advantage to some of its customers directly. In contrast, some of its customers get the outsourcing services with more high costs . In this situation, added value is created in the organizations of its customers by utilizing human resources more efficiently. The customers of organization K achieve cost advantage especially thanks to the usage of common resources more effectively. This situation is valid for both human resources and technological investments. Organization K estimates IS insourcing costs and IS outsourcing costs for its customers, and so it makes cost - benefit analysis for them. After executing the analysis, it offers the results to its customers. In this way, it helps their customers while giving decision about outsourcing. The

customers of Organization L eliminate the unnecessary expenditures and they can manage the costs related with information technology thanks to the outsourcing services of Organization L.

Common Finding 2

Economical effects of outsourcing vary according to the company size.

According to the organization E, the big companies request more services from Organization E than the small ones, so their unit cost of outsourcing is lower. Thus, the firms can use their saving budgets for other services. The similar situation occurs in organization H. According to the organization J, the firm's scale causes the economic differentiations. Big firms' money rate of return (rate of return for money) is higher than the same rate in the small firms. The reason of this is that these kind of firms have high personnel costs compared to other firms. The small scale firms benefit from the technology rather than the costs. Because, these kind of firms cannot have an ability of employing high-qualitative personnel into their firms.

Thanks to outsourcing, firms have an ability of achieving services in the context of Service Level Agreement (SLA). The firms which give outsourcing services pay more attention to the SLA since they know that the customers cannot tolerate low quality of service. The services taken in the context of SLA minimize the service interruption period. Even with this aspect, SLA creates added values in firms. The investments made to the information systems absolutely return as earnings to the customers. Moreover, the projects are positioned by offering total cost of ownership and return on investment accounts to the customers.

Total cost of ownership (of an IT system) is a frequently used measurement to assess the total cost of maintaining (or investing in a new) IT system, including hardware, software, installation and maintenance services, and the associated cost of the business processes that the IT system supports.

According to the Organization K, outsourcing acquisiton has a direct relation with the size of the services. The economic earnings of full information technology outsourcing (for instance, operating IT infrastructure by full outsourcing) is different than the economic earnings of partial information technology outsourcing (for instance, operating and maintenance of an application by outsourcing). According to the analysis executed by organization K, the firms which outsource the all information technology use the information technology for adding values to their businesses. The reason of this is that they can focus on their core businesses. In addition to this, while focusing on their core businesses, they can learn more about how they can benefit from the information technology.

Organization L generally provides the outsourcing service in a field of information technology to the big firms. On the other hand, total outsourcing of information technology is preferred by small firms.

Common Finding 3

The outsourcing vendors completely provide the knowledge acquisition to its customers.

Organization E offers its retrospective experiences and studies to its customers. The works of Organization H are offered in the periodical reports to its customers. Organization J, K, and L provide the knowledge acquisition to their customers in the similar way as Organization E and H.

Common Finding 4

According to the questionnaire results, the feedback outsourcing vendors receive about the information technologies solutions offered to their customers is satisfactory. The results show that user satisfaction is provided in the organizations of customers of outsourcing vendors through the information technologies solutions of outsourcing vendors.

Common Finding 5

According to the questionnaire results, the staff of outsourcing vendors at least agree that the usage of information technologies offered by the outsourcing vendors to their customers is easy.

While the staff of Organization E and Organization H answered the related question with agree option, the staff of Organization J, Organization K and L answered the question with strongly agree option. The results show the effect of the information technologies offered by outsourcing vendors on system quality.

Common Finding 6

According to the questionnaire results, the staff of outsourcing vendors at least agree that the information technologies offered by the outsourcing vendors provide data integrity.

While the staff of Organization E, Organization H and J answered the related question with agree option, the staff of Organization K and L answered the question with strongly agree option. The results show the effect of the information technologies offered by outsourcing vendors on information quality.

Common Finding 7

According to the questionnaire results , the staff of outsourcing vendors at least agree that the information technologies offered by their organizations enable the information to reach the users on time to reach decisions and to complete tasks.

While the staff of Organization E, Organization H and J answered the related question with strongly agree option, the staff of Organization K and L answered the question with strongly agree option. The results show the effect of the information technologies offered by outsourcing vendors on individual impact.

Common Finding 8

According to the questionnaire results, the staff of outsourcing vendors at least agree that the information technologies offered by their organizations enable more quality decision making.

While the staff of Organization E ,Organization H and Organization J answered the related question with agree option, the staff of Organization K and L answered the question with strongly agree option. The results show the effect of

the information technologies offered by outsourcing vendors on organizational impact.

Common Finding 9

According to the questionnaire results, the staff of outsourcing vendors at least agree that their customers always achieve cost advantages related with information technologies development and purchases thanks to the information technologies solutions of outsourcing vendors.

While the staff of Organization E and H answered the related question with agree option, the staff of Organization J, Organization K and L answered the question with strongly agree option. The results show the effect of the information technologies offered by outsourcing vendors on organizational impact.

Common Finding 10

According to the questionnaire results, the staff of the outsourcing vendors at least agree that the information technologies solutions of system integrators always increase individual productivity in the organizations of their customers.

While the staff of Organization E and H answered the related question with agree option, Organization J, Organization K and L answered the question with strongly agree option. The results show the effect of the information technologies offered by outsourcing vendors on individual impact.

Common Finding 11

According to the financial ratios, the risk level of outsourcing vendors in the outsourcing projects is lower than 100%.

For organization H and L, specific ratios were obtained. The shared risk level for organization H is 20%, on the other hand, the shared risk level for organization L is 50%. Consequently, outsourcing vendors in the case study do not undertake all the risks in the outsourcing projects.

4.2.4) COMMON FINDINGS FOR ORGANIZATIONS WHICH ARE BOTH OUTSOURCING VENDOR AND OUTSOURCING CUSTOMER

These common findings are adopted by all of 2 organizations which are both outsourcing vendor and outsourcing customer.

Common Finding 1

The firms which take outsourcing services from Organization F and I achieve cost reduction and cost saving advantages. They both achieve cost advantages and take better services thanks to the experiences of Organization F and I.

Common Finding 2

Economical impacts of the services provided by organization I and F change according to the firms' scales.

The customers of Organization I prefer to take the outsourcing service from organization I instead of building computer center. The staff of Organization F claims that the firms take outsourcing services related with information system businesses so that they can focus on their core businesses. These firms achieve the cost advantage at the beginning, but they cannot achieve expert skill. As a result, they cannot be successful in the following projects and they have more high costs .

Common Finding 3

After the outsourcing usage, the cost structure of Organization I and F changed.

The outsourcing usage did not affect the cost structure of information technology expenditures of Organization I in the budget in a decreased manner. Compared to the previous cost structure, a smoother cost increase occurred. According to the financial ratios and values, the difference between IS outsourcing cost and IS insourcing cost was 7000$ for year 2006. This value supports the idea that outsourcing usage does not cause a decrease in the IT expenditures of Organization I.

Common Finding 4

The outsourcing services offered to the Organization I and F enable them to focus on their core businesses at sufficient level. Thus, user satisfaction in both firms increase.

Organization I can reserve more resources for its main topic "software development".

Common Finding 5

Thanks to the focus on core businesses, Organization I and F can deal with their main topics in a more detailed way. For instance, Organization I does not deal with system operating .

Common Finding 6

Organization I and F provide complete knowledge acquisiton to their customers.

Common Finding 7

Organization I and F have strategic alliances with some companies. They perform the outsourcing services successfully in the context of strategic agreements.

Common Finding 8

Organization I and F have strategic agreement structures which provide the ability of using the outsourcing services in order to achieve competitive advantage.

Common Finding 9

Organization I and F adapt themselves easily to the new technologies which come together with outsourcing services. In other words, Organization F and I have flexibility. Organization F applies the new technologies to its customers.

Common Finding 10

According to the questionnaire results, the feedback organizations receive about the information technologies solutions offered to their customers is satisfactory.

Common Finding 11

According to the questionnaire results, the staff of organizations at least agree that the usage of information technologies offered by them to their customers is easy.

While the staff of Organization F answered the related question with strongly agree option, the staff of Organization I answered the question with agree option. Organization I and F were evaluated as outsourcing vendors in this finding.

Common Finding 12

According to the questionnaire results, the staff of organizations strongly agree that the information technologies offered by them enable the information to reach the users on time to reach decisions and to complete tasks.

Common Finding 13

According to the questionnaire results, the staff of organizations strongly agree that the information technologies offered by them enable more quality decision making.

4.2.5) COMMON FINDINGS FOR ALL OUTSOURCING CUSTOMERS

These common findings are adopted by all of 2 outsourcing customers.

Common Finding 1

Organizations M and N realize 90% of the turnover related with information technology through insourcing, and they realize 10% of the turnover related with information technology via outsourcing .

Common Finding 2

Cost saving level affects Organization M and N in terms of two different positive aspects. The cost saving level value of organization M is always bigger than 0. It means that budget is managed in an optimal manner in this organization. In Organization N, cost saving level is reflected to the labour productivity. Instead of achieving positive value in budget, Organization N prefers to perform the businesses related with information technology with less personnel than the current situation.

4.3) OTHER FINDINGS

Other Finding 1

According to the questionnaire results, the feedback system integrators receive about the information technologies solutions offered to their customers is satisfactory. The results show that user satisfaction is provided in the organizations of customers of system integrators through the information technologies solutions of system integrators.

This common finding is obtained by considering the questionnaires of all system integrators except Organization D. Because none of the personnel in Organization D filled the questionnaire.

Other Finding 2

According to the questionnaire results, the staff of the system integrators at least agree that the information technologies solutions offered to the customers by them meet the users' needs. While the staff of organization A, the staff of Organization G and the project coordinator of Organization C answered the related question with strongly agree option, the staff of Organization B and the sales manager of organization C answered the question with agree option. The results show the effect of the information technologies solutions offered by system integrators on individual impact.

This common finding is obtained by considering the questionnaires of all system integrators except Organization D. Because none of the personnel in Organization D filled the questionnaire.

Other Finding 3

According to the questionnaire results, the staff of the system integrators at least agree that the information technologies offered by them enable the information to reach the users on time to reach decisions and to complete tasks. While the staff of Organization A and the project coordinator of organization C answered the related question with strongly agree option, the staff of Organization B, the staff of Organization G and the sales manager of organization C answered the question with agree option. The results show the effect of the information technologies offered by system integrators on individual impact.

Other Finding 4

According to the questionnaire results, the staff of the system integrators at least agree that their customers always achieve cost advantages related with information technologies development and purchases thanks to the information technologies solutions of system integrators. While the staff of Organization A, the staff of Organization G, and the two members of Organization C answered the related question with agree option, the staff of Organization B answered the question with strongly agree option. The results show the effect of the information technologies solutions offered by system integrators on organizational impact.

Other Finding 5

According to the questionnaire results, the staff of the system integrators at least agree that the information technologies solutions of system integrators always increase individual productivity in the organizations of their customers. While the staff of Organization G and the project coordinator of organization C answered the related question with strongly agree option, the staff of Organization A, the staff of Organization B, the sales manager of organization C answered the question with agree option. The results show the effect of the information technologies solutions offered by system integrators on individual impact.

Other Finding 6

The results show that system integrators are pleased about outsourcing usage and outsourcing services provided by the organizations that they collaborate with.

This common finding is obtained by considering organization C and organization G. Since Organization A and Organization B did not define the process of purchasing the products from the vendors as outsourcing usage, they did not fill the first part of the questionnaire.

Other Finding 7

The staff of organization C and G agree that the information technologies provided by the organizations that they collaborate with always increase the information quality. While the staff of Organization G and the project coordinator of organization C answered the related question with agree option, the sales manager of organization C answered the question with strongly agree option.

Other Finding 8

The staff of organization C and G agree that the information technologies provided by the organizations that they collaborate with always increase the quality of system that is integrated by them. The staff of Organization G and the two members of organization C answered the related question with agree option.

Other Finding 9

The staff of organization C and G agree that the information technologies provided by the organizations that they collaborate with provide the time advantage to the personnel of system integrators while creating information technologies solutions for their customers. While the staff of Organization G answered the related question with strongly agree option, the two members of organization C answered the question with agree option.

Other Finding 10

The customers of Organization E, J, and K benefit from the economies of scale provided by them. The staff of Organization J stated in the interview that Organization J is the big firm in the sector. Thus, the customers of organization J benefit from its spare part stocks, its expert resources, its augmented support resources with more suitable costs. Organization K buys a lot of products. As a result of this, significant price advantage is provided to its customers. Organization E provides the price advantage to its customers in the same way as organization K.

Other Finding 11

Organization E, J, K, and H have agreements with their customers. The time intervals and periods (except the compulsory reasons) for giving the outsourcing services to its customers are determined in the agreements of organization E with its customers. Organization E aims to give the outsourcing services which are defined in the context of agreements. Furthermore, risk reduction has a direct

proportion with the needs of the customers. For instance, in maintenance projects, if the customers do not need, the equivalent products are not kept in stock. The shared risk level and working principles of Organization H are defined in the agreements of Organization H with its customers. Privacy policies are firstly placed into the agreements of organization J with its customers. The agreements are made to protect the private information mutually. According to the size of the projects, tangible sanctions are put into the agreement. If the organizations do not give the services in the context of SLA, penal sanctions which are determined in the agreements are applied. Providing that the members of the agreements obey the rules, Organization J wants the period of agreements to be for at least a year. Organization K determines the contents of the outsourcing services in the context of the agreements together with its customers. The customers of organization K determine the service levels with these agreements. Moreover, by taking the problems related with outsourcing services into consideration, penal sanctions are determined by the customers and special items related with the risks of the customers can be added to the agreements by the customers. Generally, if the critical application is failed, the customers of Organization K request monetary penalties for per hour or per day .

Other Finding 12

Organization E, J, and K provide innovative tools and technologies to its customers. Generally, medium level innovative tools and technologies are provided by organization E. Organization J offers high, medium and low level innovative tools but especially medium and low level innovative ones to its customers. Organization K makes creative researches so as to give the outsourcing services to its customers with high quality and with minimum resources. For instance, the services offered by organization K includes the updated technologies for ERP outsourcing service.

Other Finding 13

Organization E, J, K, and H have strategic alliances with some companies. They perform the outsourcing services successfully in the context of strategic agreements.

Other Finding 14

Organization E, J, K, and H have strategic agreement structures which provide the ability of using the outsourcing services in order to achieve competitive advantage. According to organization J, the firms must be ready to the competitive advantage thought. Consequently, the competitive advantages are achieved if the firms focus on their core businesses. Outsourcing must not only be thought for cost advantage, but also thought as a model which provides the organizations to focus on their core businesses better.

Other Finding 15

The staff of Organization E, J, and H stated in the interviews that there is a relationship between strategic alliances and organizational impact. Organization E aims to increase the quality of outsourcing services by making the strategic alliances. The strategic alliance contributes to the firms in generalizing the outsourcing services. The staff of Organization J stressed that strategic alliances cause the organization J to be the natural member of the customers' organizations. The staff of Organization H stated in the interview that there may be a negative relationship between strategic alliances and organizational impact.

Other Finding 16

Organization K and J deal with strategic outsourcing. According to Organization J, strategic outsourcing is the essential collaboration between the outsourcing vendor and the customer in the context of win-win principle. According to the organization K, in strategic outsourcing, outsourcing service is taken by assuming that it will provide added value to the core business of the organization directly and it is known that this service creates value for the organization.

Other Finding 17

According to the financial ratios, after outsourcing service, the information system cost structures of some outsourcing vendors change. Before the outsourcing service, IS-cost structure value is 38 for organization L. After the outsourcing service, this value increases to 40. For Organization L, the values show that offering outsourcing services to the customers causes the increases on IT expenditures of organization L. Before the outsourcing service, IS-cost structure percentage is 5% for organization K. After the outsourcing service, this percentage increases to 15%. For Organization K, the ratios show that offering outsourcing services to the customers cause the increases on IT expenditures of organization K. Before the outsourcing service, IS-Cost Structure percentage is 2% for organization H. After the outsourcing service, this percentage decreases to 1%. For Organization H, the ratios show that offering outsourcing services to the customers causes the decreases on IT expenditures of organization H.

4.4) OUTLIERS

Outlier 1

Organization N has difficulty in benefiting from economies of scale in practice. The staff of Organization N declared in the interview that the cost generally exceeds the expected benefit through the economies of scale and the vendor firm does not take responsibility for any financial losses and corruptions in the system. Also because of reliability, the organization prefers to use its own personnel for some of the services related with information technology.

Organization N tries to have a strategic agreement and wants to participate in strategic alliances, but in the monopoly or oligopoly market , there is no alternative for Organization N to select the optimal organizations according to its conditions.

Organization N cannot achieve knowledge acquisition completely.

IS outsourcing generally affects negatively the focus on the core business in Organization N, for instance, it causes time losses and the overall satisfaction level for the user is generally low in organization N.

Organization N competes with the other firms with its core business in the world, but although it is successful in its sector, Organization N cannot achieve the IT outsourcing services in terms of quality and cost as Organization N expected.

The IS performance value of Organization N is between 1% and 1,5%. This value is below the industry ratio. The industry ratio is %3 for this financial driver. Consequently, it can be said that Organization N is not economically efficient in terms of information technologies.

Organization N is not satisfied about the outsourcing services .

According to the questionnaire results, Organization N stated that the information technologies provided by the outsourcing vendors do not generally have any of IS outsourcing success measures. Organization N answered only 1 of the question with agree option. In contrast, Organization N answered 16 questions with agree somewhat option, 3 questions with undecided option, 11 questions with disagree somewhat option and 2 questions with disagree option.

Outlier 2

The shared risk level of Organization I and Organization N is 100%. The outsourcing vendors of these firms do not undertake the responsibility of risks. The type of organization M is similar with Organization N, but the shared risk level of organization M is always lower than 100%, since it has important strategic alliances and strategic agreements with the outsourcing vendors.

Outlier 3

Since the customers of Organization H reflect the outsourcing services provided by organization H as expenditures into their financial charts, they gain financial earnings in terms of tax.

Outlier 4

According to the financial ratios, IS performance value of Organization H is 16,67 and IS performance value of Organization L is 40, IS performance value

of Organization K is 10%. The ratio of Organization K show that the sum of net income and sales is smaller than the IT expenditure for organization K. On the other hand, the ratios of Organization L and H show that they gain the multipliers of their IT expenditures.

4.5) SUMMARY OF FINDINGS: THE HYPOTHESIS MATRIX

Below, in Table 4.2, the hypothesis matrix based on the literature review presented in Chapter 3 is repeated, for easy reference and comparison.

In Table 4.2, a (+) reflects a hypothesized positive influence of the related driver on the related success measure where a (-) is a hypothesized negative influence.

Table 4.2 :The Literature Based Hypothesis Matrix (Table 3.5, repeated)

Strategic Drivers					**Financial Drivers**					**Hypothesis Matrix**	
Flexibility	Strategic Alliances	Knowledge Acquisition	Innovative Use Of IS Functionality	Focus on Core Business	Shared Risk Level	Cost Saving Level	IS-Cost Structure	IS Performance	Cost Reduction		
			(+)	(+)						User Satisfaction	**IS Outsourcing Success Measures**
		(+)	(+)							Information Quality	
(+)		(+)	(+)							System Quality	
	(-)	(+)	(+)	(+)	(-)	(+)	(+)	(-)	(+)	Organizational Impact	
		(+)	(+)							Individual Impact	

Table 4.3 :The Research Based Relationship Matrix

Strategic Drivers					**Financial Drivers**					**Hypothesis Matrix**	
Flexibility	Strategic Alliances	Knowledge Acquisition	Innovative Use Of IS Functionality	Focus on Core Business	Shared Risk Level	Cost Saving Level	IS Cost-Structure	IS Performance	Cost Reduction		
			(+)	(+) (-)						User Satisfaction	**IS Outsourcing Success Measures**
		(+) (-)	(+)							Information Quality	
(+)		(+) (-)	(+)							System Quality	
	(+) (-)	(+) (-)	(+)	(+) (-)	(+) (-)	(+) (-)	(+)	(+) (-)	(+) (-)	Organizational Impact	
		(+) (-)	(+)					(+)		Individual Impact	

Table 4.3, reflects the results of the study conducted on the 14 organizations. In Table 4.3, a (+) reflects an observed positive influence of the related driver on the related success measure where a (-) is an observed negative influence. Besides, a (+) (-) reflects both an observed positive influence and an observed negative influence of the related driver on the related success measure.

EVALUATION OF THE RELATIONS IN THE MATRIX BASED ON THE RESEARCH

Cost Reduction-Organizational Impact

According to the research findings, there is a positive relationship between cost reduction and organizational impact. On the other hand, there is also a negative relationship between cost reduction and organizational impact.

The outsourcing purchaser firms are not obliged to use all outsourcing services provided by outsourcing vendors. If there is no differentiation in terms of financial meaning, these services are provided by insourcing, so the staff in the organization can improve their ability and skills.

Consequently, the firms generally achieve their cost cutting goals by using IS outsourcing, so the organizational impact level increases thanks to cost minimization.

IS Performance-Organizational Impact

Both positive and negative relationships between IS performance and organizational impact have been observed. IS outsourcing expenditure may exceed budget limits for organizations, all organizations may have financial difficulties while using IS outsourcing. By using IS outsourcing, the technology can be used more effectively and so the business results will be better. In spite of the expenditures for IS outsourcing, the net income and sales will be higher and the economic efficiency will be greater. But, IS performance value of one of the organizations in the case study has been seen to be below the industry ratio. This means that this organization is not economically efficient in terms of information technologies.

IS Performance- Individual Impact

A positive relationship between IS performance and individual impact has been observed. Because by using IS outsourcing, thanks to the effective usage of technology, the productivity of individual increases and perceptions of improvement in decision making can be observed in the organizations.

IS Cost Structure-Organizational Impact

A positive relationship between IS-cost structure and organizational impact has been observed. Since the IS outsourcing customers reflect the outsourcing service as an expenditure into the financial charts, IS outsourcing customers gain financial earnings in terms of tax. Consequently, cost is minimized and the ratio

of IT expenditure in the total budget of the firm is decreased in the organization thanks to the IS outsourcing usage, so the organizational impact increases.

Cost Saving Level-Organizational Impact

A positive relationship between cost saving level and organizational impact has been observed and also there is a negative relationship between cost saving level and organizational impact. According to the research, in terms of outsourcing customers, by utilizing the economies of scale of IS outsourcing vendors, the cost saving level increases and the saving budget can be used for other technological purposes and organizational impact convertes into a more suitable situation or cost saving level is reflected to labour productivity.

On the other hand, the outsourcing customer may have difficulty in benefiting from economies of scale in practice.

Shared Risk Level-Organizational Impact

Both negative and positive relationships between shared risk level and organizational impact have been observed. System integrators generally make back to back agreement with vendors, so the risk is shared between the system integrators and the vendors.

It is realized that contract management must be provided and defined in an optimal manner. The contract must take both the vendors and customers situations into consideration so as to distribute the risk between customers and vendors. If the company makes back to back agreement, the risk is distributed and the risk position is not in a high-level for the companies, so organizational

impact increases. But if all the risk is transferred to the outsourcing vendor, the risk is high in the vendor firm, thus the vendor firm cannot meet all expectations of the customer and the organizational impact decreases.

Focus on Core Business-User Satisfaction

Both positive and negative relationships between focus on core business and user satisfaction have been observed. The routine IS activities are directed to IS outsourcing vendor which is thought of more better in terms of cost and performance criteria. Generally, thanks to IS outsourcing usage, by focusing on core business, the overall satisfaction level for the user may increase. But sometimes, IS outsourcing may affect the focus on core business in the organization in a negative manner, for instance it causes time losses and the overall satisfaction level for the user may decrease.

Focus on Core Business-Organizational Impact

Both positive and negative relationships between focus on core business and organizational impact have been observed. By focusing on core business, the important details about the core business can be realized; so the work volume related with core business is increased and the revenue increases; besides the cost minimization and profit maximization opportunity can be provided.

On the other hand, IS outsourcing may affect the focus on core business in an organization in a negative manner, specifically, it may cause the organization members to deal with the matter which comes with IS outsourcing service to the organization, so the work volume related with core business is directly reduced and the profit margin decreases indirectly.

Innovative Use of IS Functionality-User Satisfaction

A positive relationship between innovative use of IS functionality and user satisfaction has been observed.

Especially, system integrator firms can provide high level technology tools, but they also provide the low and medium technology tools. IS outsourcing customers can achieve innovative tools and achieve process innovation by adapting the best practices of the processes to its organization thanks to IS outsourcing vendors. By innovative use of IS functionality, software satisfaction, hardware satisfaction, user information satisfaction are provided in a high-level manner.

Innovative Use of IS Functionality- Information Quality

A positive relationship between innovative use of IS functionality and information quality has been observed. By innovative use of IS functionality, especially the system integrators can build new applications according to the usage area of the customer, so the information quality may be achieved in terms of expected properties.

Sytem integrators integrate the system, implement the system and test the operations, they offer the suitable solutions to their customer. The system integrators can provide the expected properties such as understandability and timeliness.

Innovative Use of IS Functionality- System Quality

A positive relationship between innovative use of IS functionality and system quality has been observed. By innovative use of IS functionality, the applications are built and developed according to the desired properties, so the realization of user requirements can be achieved and system quality level increases. In the contract, service level part is defined by the customers and vendors. In some services, service level part can include mathematical definitions, and also the quality of the system is evaluated. Consequently, innovative use of IS functionality increases the system quality.

Innovative Use of IS Functionality-Organizational Impact

A positive relationship between innovative use of IS functionality and organizational impact has been observed. By the innovative use of IS functionality, the outsourcing vendors and especially the system integrators offer know-how information to the customer to tell the new technology principles and so knowledge level and work volume in the organization increases, so the organizational impact increases.

Innovative Use of IS Functionality-Individual Impact

A positive relationship between innovative use of IS functionality and individual impact has been observed. By innovative use of IS functionality, decision quality and learning increases due to the rise in the knowledge level. Besides, a technology which is not available in the organization may be provided by outsourcing. Thanks to this service or technology, the members of the

organization can improve their skills and this internal learning increases the knowledge level in the organization. Consequently, individual impact increases.

Knowledge Acquisition-Information Quality

Both positive and negative relationships between knowledge acquisition and information quality have been observed. Technical, managerial and networking knowledge must be completely achieved, otherwise knowledge acquisition cannot be provided.

Due to the rise in the expertise and knowledge level, the latest and most advanced technology can be generated and so the information quality level increases. On the other hand, if the outsourcing customer does not achieve at least one of the IT knowledge type, then the outsourcing customer cannot achieve knowledge acquisition. In this situation, the vendor is lack of providing all knowledge types to the customer. As a result of this deficiency, the knowledge acquisiton cannot be achieved, so the information quality level in the organization decreases.

Knowledge Acquisition-System Quality

Both positive and negative relationship between knowledge acquisition and system quality have been observed. In terms of positive relationship, the system quality can be achieved in a more specific and detailed manner by acquiring expertise.

In terms of negative relationship, the vendor does not provide the expertise level as the customer expected, so according to the IS outsourcing customer , the system quality cannot reach the expected level .

Knowledge Acquisition-Organizational Impact

Both positive and negative relationship between knowledge acquisition and organizational impact have been observed. In terms of positive relationship, outsourcing can save capital investment in hardware and hiring costs, so the work volume increases and return on investment is provided.

In terms of negative relationship, the vendor does not provide the knowledge acquisition to the customer, so the customer organization cannot save capital investment and the customer organization cannot increase work volume especially due to the knowledge deficiency about the usage mechanism of the system in terms of business operations, and so the organizational impact decreases.

Knowledge Acquisition-Individual Impact

Both positive and negative relationship between knowledge acquisition and individual impact have been observed. In terms of positive relationship, learning and decision ability increases thanks to the knowledge acquisition, so the individual impact improves.

On the other hand, if the vendor does not provide knowledge acquisition to the customer and the individuals in the organization do not achieve managerial knowledge and know-how, the individual impact cannot improve.

Strategic Alliances –Organizational Impact

Both positive and negative relationship between strategic alliances and organizational impact have been observed. The outsourcing vendor is obliged to participate in the strategic agreements and strategic alliances. Offering IS outsourcing service to the rival firm of IS outsourcing customer is not approved, but this situation changes in the course of time, although the outsourcing customer firm behaves the vendor firm as its own firm, the outsourcing customer firm sometimes cannot meet the needs of the vendor firm and so the outsourcing vendor disobeys the rules of the strategic agreement and strategic alliances sometimes.

In addition to this, the outsourcing customer firm may try to have a strategic agreement and the outsourcing customer firm may want to participate in the strategic alliances, but in the monopoly or oligopoly market , there may be no alternative for the customer firm to select the optimal organizations according to its conditions. Thus, a negative relationship emerges between the strategic alliances and organizational impact in this case. In this case, although the customer firm wants to have a strategic agreement structure so as to use the IS outsourcing services in a competitive manner, this advantage cannot be provided and achieved. Since the outsourcing vendor firm tries to standardize its products instead of offering suitable solution for the firm.

On the other hand, there can be a positive relationship between strategic alliances and organizational impact. The more the firm constructs powerful alliances and the more the firm extends its coverage area in the market, the more the firm creates a positive influence in terms of sales and fame.

Flexibility- System Quality

A positive relationship between flexibility and system quality has been observed. The firms have to follow the technology and they must be flexible. The firms do not insist on being flexible, the conditions force them to be flexible. If the firm is not flexible in this century in terms of technology, the firm cannot survive. Due to the survival mode and digital divide, the firms have to be flexible.

Flexibility of system and integration of systems can be achieved in terms of system quality.

CHAPTER 5

CONCLUSION

5.1) MAIN RESULTS OF THE THESIS

The organizations execute cost and benefit analyses before outsourcing decision. System integrators and outsourcing vendors execute the analysis for their customers. On the other hand, outsourcing customers execute the analysis for themselves. Organizations behave according to the results of these analyses.

System integrators and outsourcing vendors generally provide cost advantage to their customers through outsourcing. Their customers get the information technology services with less costs than insourcing. However, some outsourcing customers cannot utilize this advantage.

System integrators and outsourcing vendors generally provide knowledge acquisition to their customers and they offer their retrospective experiences and studies related with outsourcing projects to their customers. However, some outsourcing customers cannot succeed in achieving knowledge acquisition completely.

The customers of system integrators benefit from the economies of scale provided by system integrators. Their customers benefit from knowledge, experience and cost advantages of system integrators.

Economical effects of outsourcing vary according to the company size. The big companies request more services from outsourcing vendors, so their unit cost of outsourcing is lower. In other words, they especially achieve cost advantages through outsourcing. On the other hand, small scale firms benefit from the technology of outsourcing vendors rather than the costs.

The risk levels of system integrators in the outsourcing projects are always lower than 100% since they make back to back agreements with vendors. On the other hand, the other types of organizations may be forced to undertake all the risks of outsourcing projects. As a result, the system integrators have the best agreement structures in the outsourcing projects.

Outsourcing vendors and system integrators give outsourcing services to their outsourcing customers in the context of Service Level Agreement (SLA). The members of SLA have to obey the rules of the agreement.

The organizations which participate in outsourcing projects generally have strategic alliances and strategic agreements with some companies. However, some outsourcing customers cannot have strategic alliances and they cannot select the optimal organizations for outsourcing services according to the conditions of their organizations.

The feedback that the outsourcing vendors and system integrators receive from their customers about their services is generally satisfactory.

After outsourcing, the cost structure of organizations may change. Offering outsourcing services to the customers causes an increase or decrease of IT expenditures of outsourcing vendors.

Outsourcing can affect the focus on core business in some of the outsourcing customers in positive or negative manner. In addition to this, no changes occur in some of the outsourcing customers about focus on core business objectives after outsourcing usage.

Some of the outsourcing customers do not have any experience to measure the flexibility level of their organizations in terms of outsourcing services, on the other hand, some of the outsourcing customers have flexibility since they adapt themselves easily to the new technologies which come together with outsourcing services.

Some of the outsourcing customers reflect the services provided by vendors as expenditures into their financial charts so that they can gain financial earnings in terms of tax.

5.2) SHORTCOMINGS OF THE STUDY

We had difficulty in obtaining information from organizations. Although we stated that the information would be used in a thesis study and the name of the organization would be withheld, some organizations did not share any information with us due to secrecy and organizational policy. The staff of organizations generally gave answers to the questions related with outsourcing in the interviews and they filled the questionnaires, but they did not want to give any information about financial ratios.

The organizations generally do not keep so specific financial ratios related with IS outsourcing in their financial charts. Due to the deficiencies in financial ratios and financial data, external researchers may probably have difficulty in carrying out quantitative and statistical analyses. Many of the financial values obtained in this study were very general and they were not sufficient for substantial

quantitative analysis. At the beginning of our study, our aim was to determine the relations between IS outsourcing success measures and financial and strategic drivers through a quantitative analysis. After interviews, we gave up the aim of quantitative analysis by taking these situations into the consideration. Thus, instead of quantitative analysis, a qualitative approach has been adopted in our study.

The organizations generally do not have specific IT outsourcing departments . In our study, only one organization had a specific IT outsourcing department. In the organizations, the information technology department generally undertakes the responsibility of IT outsourcing, so the more detailed information about IT outsourcing cannot be obtained. We encountered problems especially while demanding financial ratios from organizations since the staff of information technology departments do not have enough information about financial ratios and the financial records are found in the finance departments of the organizations. Due to secrecy, the staff of finance departments did not give information about financial ratios. For these reasons, we could obtain financial ratios of seven organizations in our study, and the values were very general.

5.3) FURTHER RESEARCH OPPORTUNITIES

In the context of future studies, the staff of different types of organizations can be contacted. The new categories of organizations related with IS outsourcing may be found and added to the studies. The relations between IS outsourcing success measures and financial and strategic drivers can be determined according to the types of organizations. These results can be used to compare the different types of organizations in terms of IS outsourcing success measures.

Preliminary investigation can be done about the organizations before interviews. More detailed investigations can be done about the organizations to determine the

characteristics of organizations in terms of outsourcing. Thus, more to-the-point questions can be prepared for the interviews, and the questions which can take the properties of organizations into consideration can be prepared.

More detailed questionnaires can be prepared to verify the hypothesized relations. The number of questions can be increased in the questionnaires or more specific questions may be included in the questionnaires.

New variables can be derived from existing drivers in the hypothesis matrix. Specifically, the variables which are expected to explain the relations between cost and quality may be investigated.

In the IT outsourcing field, different studies can be done. For instance, a quantitative study and analysis can be made with a large number of organizations. Thus, statistical inferences can be derived for the relations between IS outsourcing success measures and drivers in the hypothesis matrix.

Through quantitative analysis, econometric models which show the relations between drivers and IS outsourcing measures can be constructed. The correlations between the variables may be calculated and the direction of relations and degree of relations can be determined. The coefficients in the econometric models can be tested statistically and so meaningful relations between drivers and measures can be realized.

Technological drivers can be investigated from the literature and they can be defined. Behind these, according to the results of further case studies, technological drivers may be located in the hypothesis matrix so as to show the relations between technological drivers and IS outsourcing success measures.

In terms of IS methodology, this thesis can be a preliminary study for researchers who want to conduct quantitative studies. By taking the relations in

the research based hypothesis matrix into consideration, the researchers can arrange their quantitative studies.

The findings of this study can be compared with the results of similar kinds of studies. In particular, the relations in the hypothesis matrix can be evaluated by taking the similar kinds of studies into consideration. Common and dissimilar results of these studies can be analyzed and combined to constitute different hypothesis matrices. Thus, researchers may benefit from many alternatives while studying this field and also combined results of hypothesis matrices may help organizations in their outsourcing decisions.

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APPENDICES

APPENDIX A. LIST OF TERMS USED IN THE STUDY

1) **System Integrator**: A company that builds and markets a complex solution using components from other companies. A system integrator sells these solutions and the service required to install the solution under their own name. System Integrators provide complete end-to-end custom integrated solutions for the end purchaser.

2) **Back to Back Agreement**: An agreement which is made between the system integrator firms and vendors. If the system integrators cannot meet the expectations of its customers due to the vendor firm, the results of punishment mechanism is reflected to the vendor firm in the context of this agreement.

3) **Service Level Agreement (SLA) :** That part of a service contract in which a certain level of service is agreed upon. A SLA is therefore not a type of service contract, but rather a part of a service contract. A SLA is a formal negotiated agreement between two parties. It is a contract that exists between customers and their service provider, or between service providers. It transcripts the common understanding about services, priorities, responsibilities, guarantee, etc. with the main purpose to agree on the level of service. For example, it may specify the levels of availability, serviceability, performance, operation or other attributes of the service like billing and even penalties in the case of violation of the SLA.

4) **Return On Investment (ROI) :** It is a financial measure of the relative return from an investment, usually expressed as a percentage of earnings produced by an asset to the amount invested in the asset.

5) **Total Cost of Ownership:** A frequently used measurement to assess the total cost of maintaining (or investing in a new) IT system, including hardware, software, installation and maintenance services, and the associated cost of the business process(es) that the IT system supports.

6) **Win-Win** : Of or being in a situation in which the outcome benefits each of two often opposing groups. A win-win proposition for outsourcing buyer and outsourcing seller.

7) **Rate of Return for Money (Money Rate of Return):** The ratio of money gained or lost on an investment relative to the amount of money invested.

8) **Cost-Benefit Analysis**: The process of weighing the total expected costs vs. the total expected benefits of one or more actions in order to choose the most profitable option.

9) **Competitive Analysis**: The assessment and analysis of the respective strengths and weaknesses of a business against its competitors - this might include their product, staff policy or marketing strategies for example.

10) **Strategic IT Outsourcing**: The management of a companies' applications and information technology (IT) systems. Customers strategically partner with the company to manage and operate their applications and IT systems, generally under a mutually beneficial agreement. The outsourcing agreement may include the transfer of IT employees and IT assets to the company. The company provides service level assurances to ensure quality of service is attained and measured.

11) **Full IT Outsourcing :** Providing, operating and managing all information technology services that a company needed .

12) **Partial IT Outsourcing:** For instance, operating or maintenance of an application by outsourcing.

13) **Outsourcing Vendor:** An organization that provides software and/or hardware and/or firmware and/or documentation to their customers for a fee or in exchange for services. Outsourcing vendor gives outsourcing services to its customers.

14) **IS Outsourcing Customer (Purchaser):** An organization which takes outsourcing services from outsourcing vendors and system integrators.

APPENDIX B. BUSINESSES OF ORGANIZATIONS IN THE CASE STUDY

Organization A

Organization A has continued its activities in the information technology sector since 1945. It is a system integrator firm. They have given outsourcing services for years by focusing on total solution and service fields.

The turnover of the organization A for year 2006 was 100 million $. The number of employees in Organization A is 598. The outsourcing group manager of the organization was contacted for the case study.

The Outsourcing Services Provided by Organization A

1.Operating Services (System operating and system management in data center)

2. Full Comprehensive Outsourcing Services (Providing, operating and managing all information technology services that a company needed)

3. Business Process Outsourcing Services (Call Center Services, Print Center Services etc.)

4. Desktop Outsourcing Services

5. Business Continuity Outsourcing Services

6.Outsourcing Services in Software and Application Development

7. Disaster Services

The sectors that Organization A gives outsourcing services are industrial commercial sector, logistics sector, energy sector, automotive sector, finance sector.

According to the Organization A, the organizations that are candidates to take outsourcing services are:

a) The organizations which want to realize their e-transformation

b) According to the financial model, the organizations which have difficulties in making information technology investments

c) According to the operational model, the organizations which have difficulties in executing projects with their internal resources

d) Multi-located organizations which work in centralized application model

e) The organizations which want to work with their purveyors / distributors / vendors/ services/ departments in an integrated manner.

Organization B

Organization B is a system integrator firm which makes use of outsourcing and offer the outsourcing solutions into their customers by adding value to the systems.

The turnover of the organization B for year 2006 was 400 million $. The number of employees in Organization B is 971. The project manager of the organization was contacted for the case study.

While the customers of Organization B deal with their core businesses, Organization B follows the changes in technology in place of its customers. By making information technology investments in place of its customers, Organization B offers operating services. The outsourcing services provided are related with hardware, software, communication, human resources, project management, process management, maintenance and support services. They participate in public sector and private sector projects related with outsourcing.

Organization C

Organization C is a system integrator firm which has participated in key delivery projects as a system integrator firm since 1989.

The turnover of the organization C for year 2006 was 4.5 million $. The number of employees in Organization C is 120. The assistant general manager of the organization was contacted for the case study.

While giving services to its customers, Organization C can provide some of the services to its customers in the organization , however, the other services which cannot be achieved in the organization is taken from the firms which is named as outsourcing solution business partners. It is stated that outsourcing solution business partners are financially small but expert firms in a specific area. By using the financial strength of Organization C, they can participate in outsourcing projects. Organization C also has products in health area. In the public projects , there are multiple services, so the duty of Organization C in these projects is to combine the solutions of firms so as to obtain one common and effective solution. Organization C gives services in all fields of information technology. Technical service, consulting services, network security, expert personnel service, software and application development, networking services are provided by organization C either in its organization or with the support of its outsourcing business solution partners.

Organization C generally tries to choose the projects which it can add value and which increase its expertise level.

Organization D

Organization D is a system integrator firm. It is a firm which provides services with outsourcing usage.

The turnover of Organization D for year 2006 could not be obtained. The number of employees in Organization D is 1000. The call center product manager of the organization was contacted for the case study.

The outsourcing services provided by Organization D are in the field of desktop management, call center services, network management, enterprise resource planning (ERP) applications, operating, server management. While providing these services to their customers, customers from the finance sector take precedence over the customers which belong to the telecom and industry sectors . In addition to these services, Organization D offers system integration services to the customers which belong to the public energy sector.

Organization D is a firm which offers services from departmental outsourcing usage necessities to total information technology outsourcing usage in a wide area. With the departmental outsourcing solutions as help desk and desktop management, which affect only a department of the company, Organization D offers added value by undertaking the responsibility of operating a function of the company or a department of the company.

When its customers choose total IT instead of selective IT outsourcing usage, in this phase, the added value increases and the period of agreement gets longer. In this situation; the solutions which are more flexible and which increase shared risk level as employee transfer, infrastructure changes, equipment hiring and agreement turn over can be provided to the customers.

Organization D produces outsourcing solutions which follow each other consecutively and in every step, Organization D offers a solution which has more added value than the former step.

Organization E

Organization E is an outsourcing vendor firm .

The turnover of Organization E for year 2006 could not be obtained. The number of employees in Organization E is 30. The public relations manager of the organization was contacted for the case study.

The outsourcing services provided by Organization E are help desk services, desktop systems support services, server hardware and software support, inventory management, proactive and predictive system management services.

The contents of the Outsourcing services provided by Organization E

1.Help Desk Services

Help desk services include the coordination, management, execution and reporting services which are needed in the process of carrying out information technology operations. These services fundamentally aim to provide the help desk operations to be accessed in the frame of a certain service level.

2.Desktop Systems Support Services

Desktop systems support services include various services which are provided for products used by last user and for product solutions. These services fundamentally aim to provide the related product and solutions to be installed, added, modified, moved, supported, maintained and accessed in the frame of a certain service level.

3.Server Hardware and Software Support

Server hardware and software support include various services which are provided for servers used in the main office and offices of firms. These services fundamentally aim to provide the related product and solutions to be installed, maintained and supported in the frame of a certain service level.

4.Inventory Management

Inventory management services include the tracing of the customers' information technology inventory from one place, the managing and reporting of the customers' information technology inventory. These services fundamentally aim to provide the budget control, licence management, inventory control of related product and solutions.

5.Proactive and Predictive System Management Services

Proactive system management services include the management of the customers' information technology inventory centrally, the tracing of the customers' information technology inventory , the determining and preventing probable system interruptions and problems before problems occurred. Behind these, proactive system management services include remote intervention and software distribution services.

Information technology outsourcing services provided by organization E are formed in the way of forecasting all kind of advances needed in the future. The

services given are managed centrally and the services are subjected to performance measurement and the results are reported. In this way, it will be probable to response all the requests in a fast manner, and so the service quality will be always in the high level. The outsourcing services provided by Organization E meet also the system support requirement, employee requirement and the requirements about maintenance.

Organization F

Organization F is a firm which is both outsourcing vendor and outsourcing customer.

The turnover of Organization F for year 2006 was 5 Million $. The number of employees in Organization F is 72. The human resources manager of the organization was contacted for the case study.

Organization F gives outsourcing service in the area of software and system management. Behind these, Organization F gives outsourcing service by providing software usage support. Organization F takes outsourcing service related with server hosting. Organization F gives outsourcing service in various software projects and in the area of project management and project coding. They have customers from all sectors.

Organization G

Organization G is a system integrator firm which uses outsourcing very much. Information technology is significant in the scope and content of the activities of Organization G.

The turnover of Organization G for year 2006 was 100 million $. The number of employees in Organization G is 1000. The sales manager of the organization was contacted for the case study.

They deal with telecom, technical support and information technologies. Organization G offers solutions to the public, private and finance sectors. Generally, Organization G offers solutions to big firms in the public sector. Organization G offers solution services to its customers. The firms that Organization G provides solution service can be both domestic firms and foreign firms. Organization G prefers working according to the “build operate transfer" mechanism as a system integrator. Firstly, they buy the third party software and hardware products from the vendors. Then, they arrange the products according to the expectations and needs of its customers by making system integration, implementation and testing operation. The aim of Organization G is to provide customers’ satisfaction and to offer the products to its customers more cheaper. Organization G has used outsourcing as a system integrator firm since 2002.

Organization H

Organization H is an outsourcing vendor.

The turnover and the number of employees of Organization H for year 2006 could not be obtained. The project manager of the organization was contacted for the case study.

Organization H sells the PBX (Private Branch Exchange) of a firm. Organization H undertakes the responsibility of maintenance and assembly operations of the PBX . They deal with communication area in terms of information technology. They also deal with maintenance , assembly and repairing operations of GSM systems and they offer the maintenance and repairing services of electronic cards. Behind these, Organization H gives all infrastructure services related with computer systems and they provide the cabling service. Organization H deals with all sales, maintenance and repairing operations related with information technology.

Organization I

Organization I is a firm which is both outsourcing vendor and outsourcing customer.

The turnover of Organization I for year 2006 was 3 million $. The number of employees in Organization I is 36. The system development manager of the organization was contacted for the case study.
Organization I takes outsourcing service about database management. Organization I uses this service for managing the databases that they outsource. Organization I generally takes outsourcing services about the subjects outside of its expertise areas. On the other hand, the outsourcing services that are provided by Organization I are expert personnel service, system operating and system maintenance, software.

Organization J

Organization J is an outsourcing vendor.

The turnover and the number of employees of Organization J for year 2006 could not be obtained. The system development manager of the organization was contacted for the case study.

The outsourcing services that the firm provided are related with the technical support services which are necessary for information technology infrastructures of its customers. The organization provides outsourcing services to its customers in two dimension. In the first dimension, it provides the outsourcing services that its customers are not necessary to produce in their firms. These services are hardware repairing, windows setup (installation) etc. In the second dimension,

the services which constitute high costs for firms can be provided by Organization J. These services are advanced level engineering services, server support services etc. The aim of customers by outsourcing usage are achieving these services with suitable prices thanks to Organization J. Organization J has customers from different sectors.

Organization K

Organization K is an outsourcing vendor. Organization K offers the outsourcing services to its customers completely or partially.

The turnover of Organization K for year 2006 could not be obtained. The number of employees in Organization K is 113. The professional services manager of the organization was contacted for the case study.

The contents of the Outsourcing services provided by Organization K

1. Full Information Technology Outsourcing

The customers of Organization K do not have information technology personnel, information technology systems and information technology licence. All the investments related with information technology are done by Organization K for its customers. The services can be provided to its customers by making an agreement with the customers. The agreement generally includes the operating and support services and the period of agreement is 3 or 5 years.

2. Partial Information Technology Outsourcing

Organization K provides the services related with ERP(Enterprise Resource Planning) applications like SAP and Axapta. Adapting these applications to the projects, operating these applications after projects and support for these applications after projects are the various services provided by Organization K. These necessary services are provided to the customers with an agreement and the period of agreement is 3 or 5 years.

Thanks to the outsourcing services provided by Organization K, instead of managing the difficult processes as providing high quality personnel so as to follow the changeable information technologies, the customers can focus on their core businesses and so the customers can have an ability of using the services more effective for their businesses.

Organization K provides full information technology outsourcing services to the all other organizations in their holding company. At the beginning of year 2006, Organization K started to provide ERP outsourcing service (partial information technology outsourcing) to another holding company.

Organization L

Organization L is an outsourcing vendor.

The turnover and the number of employees of Organization L for year 2006 could not be obtained. The system support manager of the organization was contacted for the case study.

Organization L provides the information technology expert personnel and the information technology services. Organization L provides outsourcing services to the leader firms in public and private sector. Organization L provides outsourcing services to its customers with a serious experience, information technology requirements of its customers are provided and organization L tries to bring down these requirements to the minimum level.

Organization M

Organization M is an outsourcing purchaser (outsourcing customer) firm which takes outsourcing service. The core business of Organization M is related with food. Organization M produces some food products and sells these products to its customers in Turkey and in the foreign countries.

The turnover of Organization M for year 2006 was 300 Million $. The number of employees in Organization M is 3800. The information technology manager of the organization was contacted for the case study.

Organization M takes outsourcing services related with hardware, networking and cabling. For software, the platform is provided from outside the organization, but Organization M integrates the software according to the requirements of the organization by insourcing. Their information technology personnel generally have enough ability to integrate the software into the organization. Organization M generally does not consult to a system integrator firm for software help and support. Since the organization is the member of food sector, the organization generally distributes its products to its customers. For that reason, the organization took suitable software package for the distribution system. The organization integrated the software package to the organization by insourcing and then implemented the software package according to the conditions of the organization. The budget of the organization for information technology expenditures for a year is always approximately 1 Million $. The organization makes the 90% of the businesses related with information technology by insourcing , and the organization makes the 10% of the businesses related with information technology with outsourcing .

Organization N

Organization N is an outsourcing purchaser (outsourcing customer) firm which takes outsourcing service. The core business of Organization N is glass

production. The product range includes stemwares, jars, bowls, ashtrays, decorated and gold printed glasses.

The production capacity of organization N for year 2006 was 100000 tons. The number of employees in Organization N is 538. The information technology coordinator of the organization was contacted for the case study.

When the organization is necessary to have products for hardware and software, the organization buys the products related with hardware and software. The organization arranges the information technology infrastructure in the organization. In 1995, the organization used to create all the software applications the organization used, but now the organization produces a part of them. The organization uses one of the ERP applications in the production department of the organization. After adapting the ERP application to the organization, they began to take consultancy service from the experts of this ERP software application about process modeling and implementation of this ERP software application, but the organization realized that the experts were not adapting the application according to the organization real needs and the experts were not thinking as detailed as the personnel of the organization. Behind these, the service cost was more expensive than the expected cost and the service was reaching to the organization in a long-period, that is, time management of experts was not well for the firm. Because of these reasons, the organization gave insourcing decision for consultancy service and the organization engage new personnel by paying salary to them in order to perform the consultancy in the organization. The organization takes outsourcing service related with hardware service and buys hardware products, also the organization takes outsourcing service for software and buys software products. The organization buys necessary tools to manage software applications, and also the organization buys tools to manage security. The organization buys tools for intrusion detection systems, and the organization buys tools for the backup system in order to have required institutional backups. Lastly, the organization had a platform necessity to communicate with its customers in an electronical environment. For that reason, the electronical data interchange system was adapted to the organization by a firm, the organization continues to take outsourcing service from the firm about how to operate the system .

APPENDIX C. QUESTIONS ABOUT IS OUTSOURCING

Questions aimed at outsourcing vendors : 1, 4, 6, 9, 14, 16, 22, 25, 27, 28, 29 , 32
Questions aimed at outsourcing customers: 1, 2, 3, 5, 7, 8, 10,11, 12, 13, 15,17, 18, 19, 20, 21, 23, 24, 26, 27, 28, 29, 30, 31, 32
Questions aimed at system integrators and for firms which are both vendor and customer: all of the questions

Soru 1: Firmanızın bilişim sistemlerinde outsourcing (dışkaynak kullanımı) ile ilişkisi ne yöndedir? Firmanız bilişim sistemlerinde outsourcing hizmeti alan mı ya da outsourcing hizmeti veren bir firma mıdır?
Cevap:

Soru 2: Firmanızın aldığı bilişim outsourcing hizmetinin içeriği nedir? Firmanız hangi firma ya da firmalar tarafından outsource ediliyor? Aldığınız outsourcing hizmeti firmanızın hangi noktadaki ihtiyaçlarına cevap vermektedir?
Cevap:

Soru 3: Genel olarak, firmanızın aldığı bilişim sistemleri outsourcing hizmeti firmanıza ne yönde etkide bulunmaktadır? Firmanız genel anlamda aldığı bilişim sistemleri outsourcing hizmetinden memnun mudur?
Cevap:

Soru 4: Firmanızın verdiği bilişim outsourcing hizmetinin içeriği nedir? Firmanız hangi firma ya da firmaları outsource ediyor? Sunduğunuz outsourcing hizmeti outsource ettiğiniz firmaların hangi noktadaki ihtiyaçlarına cevap verme amacı taşımaktadır?
Cevap:

Soru 5: Firmanız bilişim outsourcing hizmeti alma kararına varmadan önce, fayda-maliyet analizi yaptı mı? Aynı hizmetleri dışarıdan almadan kendi yerine getirdiği takdirde, şirketin maliyetlerinde bir dezavantaj mı yoksa avantaj mı sözkonusuydu?
Cevap:

Soru 6: Firmanızın outsourcing hizmeti verdiği firmalar, outsource edilmeleri sayesinde belli bir maliyet indirimi ve maliyet azalması elde ettiler mi?
Cevap:

Soru 7: Firmanızın outsourcing hizmeti alması sonucunda elde ettiği maliyet avantaj ya da dezavantajları, organizasyon içerisinde bir etki oluşturmakta mıdır? Eğer bir etkileşim sözkonusu ise, outsourcing sayesinde elde edilen maliyet indirimleri ile dış kaynak kullanım başarı ölçülerinden olan organizasyonel etki arasında sizin firmanız açısından ne yönde bir ilişki ile karşılaşılmaktadır?
Cevap:

Soru 8: Outsourcing sayesinde elde edilen maliyet indirimleri sizin firmanızda başka ne tür değişmeler yaratmaktadır? Ve maliyet indirimleri hangi değişkenleri etkilemektedir?
Cevap:

Soru 9: Bilişim sistemlerinde outsourcing hizmeti verdiğiniz firmalar arasında, bu hizmetin ekonomik yansımaları firmanın küçük-orta ya da büyük ölçekte olmasına göre belirgin farklılıklar göstermekte midir? Sizden outsourcing hizmeti alan firmalarda, net kazanç ve satışların bilişim sistemlerine yapılan harcamalara oranı olarak tarif edilen bilişim sistemleri performansının, organizasyonları etkilediğini gözlemlediniz mi? Başka bir deyişle firmaların sizden aldıkları outsourcing hizmetinin ekonomik yansımaları genelde firmaların organizasyonları içersinde ne tip değişmeler yarattı ?
Cevap:

Soru 10: Outsourcing hizmeti almanız bilişim sistemleri performansınız ile organizasyonel etki arasında herhangi bir ilişki oluşturdu mu? Firma olarak outsourcing harcamalarınızın firma içi belli hedefleri gerçekleştirmede bütçe sınırlarını zorladığı düşüncesi ile hiç karşılaşıldı mı?
Cevap:

Soru 11: Outsourcing kullanımından sonra firmanızın bilişim sistemleri maliyet yapısında değişmeler oldu mu? Outsourcing kullanımı bütçede bilişim sistemleri harcamalarını azaltan mali bir yapısal değişim ortaya çıkardı mı?
Cevap:

Soru 12: Outsourcing kullanımı sayesinde firmanızda ortaya çıkan yeni bilişim sistemleri mali yapısı ne tip değişmelere yol açtı ve hangi değişkenleri etkiledi?
Cevap:

Soru 13: Outsourcing hizmeti aldığınız firmanın ölçek ekonomisi avantajından yararlandığınız oldu mu? Ölçek ekonomisi sayesinde elde edilen maliyet tasarruf düzeyi ile organizasyonel etki arasında firmanız açısından bir ilişki ile karşılaştınız mı? Karşılaştıysanız ne düzeyde bir ilişki ile karşılaştınız?
Cevap:

Soru 14: Sizden outsourcing hizmeti alan firmalar sizin ölçek ekonomisi avantajınızdan faydalanabildiler mi?
Cevap:

Soru 15: Outsourcing hizmeti aldığınız firma ile ne tür bir risk paylaşımı oluşturdunuz? Belli bir sözleşme ile risk dağıtımı hususunda outsourcing hizmeti veren firma ile anlaşma sağladınız mı?
Cevap:

Soru 16: Outsourcing hizmeti verdiğiniz firma ile ne tür bir risk paylaşımı oluşturdunuz? Belli bir sözleşme ile risk dağıtımı hususunda outsourcing hizmeti alan firma ile anlaşma sağladınız mı? Genelde sizden outsourcing hizmeti alan firmalar ne tür bir risk paylaşımı talep ettiler?
Cevap:

Soru 17: Firmanızın outsourcing kullanımından sonraki risk durumu, organizasyon içersinde bir takım etkiler yarattı mı? Paylaşılan risk düzeyi neleri etkiledi?
Cevap:

Soru 18: Firmanıza sunulan outsourcing hizmeti yeterli denilebilecek düzeyde esas işe odaklanma olanağı sağladı mı? Outsourcing ile ortaya çıkan esas işe odaklanma firmanızda kullanıcı memnuniyeti üzerinde nasıl bir etki yarattı?
Cevap:

Soru 19: Firmanız açısından outsourcing ile beraber ortaya çıkan esas işe odaklanma, organizasyonel etki üzerinde ne tür değişimler yaratmaktadır? Firmanız açısından esas işe odaklanma başka hangi değişkenlerle etkileşim halindedir?
Cevap:

Soru 20: Firmanızın outsourcing hizmetinden yararlanması bilişim sistemlerinin fonksiyonelliğinin yenilikçi kullanımına ne düzeyde olanak sağlamaktadır?
Cevap:

Soru 21: Outsourcing sayesinde firmanız teknolojiden yenilikçi düzeyde yararlanılabilecek , yaratıcılık sağlayacak araçlar elde edebildi mi?
Cevap:

Soru 22: Outsourcing ile firmanız teknolojiden yenilikçi düzeyde yararlanabilecek yaratıcılık sağlayacak –innovative araçları sağladı mı? Outsourcing ile ne tür teknolojiler sunarsınız? Çok yüksek yenilikçi (dünyada ilk ve firma için yeni teknolojiler), orta yenilikçi (firma için yeni-pazarda yeni olmayan), alt seviyede yenilikçi (firmanın sahip olduğu teknolojide küçük değişmeler ile sunulan teknolojiler) teknolojilerden hangilerini firmalara sunarsınız?
Cevap:

Soru 23: Outsourcing sayesinde elde edilen bilişim sistemlerinin fonksiyonelliğinin yenilikçi kullanımı, kullanıcı memnuniyeti, bilgi kalitesi, sistem kalitesi, organizasyonel etki ve de bireysel etki gibi dış kaynak kullanımı ölçüleri ile firmanız açısından ne tür etkileşimlere sahiptir?
Cevap:

Soru 24: Firmanız outsourcing sayesinde bilişim sistemlerinde gerekli bilgi kazanımlarını tam anlamıyla elde edebildi mi?
Cevap:

Soru 25: Firmanız outsourcing ile bilişim sistemlerinde gerekli bilgi kazanımlarını tam anlamıyla outsourcing hizmeti verdiği firmalara sağladı mı? Yani firmanız yönetsel bilgi (outsourcing ile sunduğu hizmetlerin nasıl kullanılacağına dair firmaya sunulan bilgi), teknolojik bilgi (outsourcing hizmeti sunulan firmaya teknik destek), geçmişe dayalı bilgi (outsourcing hususundaki daha önceki çalışmalarını ve deneyimlerini gösteren referans bilgi ve referans belgeler) gibi bilgi kazanımlarını oluşturan unsurları outsourcing hizmeti verdiği firmalara sağlayabiliyor mu?
Cevap:

Soru 26: Outsourcing sayesinde ortaya çıkan bilgi kazanımları firmanız açısından bilgi kalitesi, system kalitesi, organizasyonel etki ve bireysel etki ile ilişkilendirilebilir mi? Bilgi kazanımlarının bu ölçülerle arasındaki etkileşim ve ilişkileri firmanız açısından değerlendirebilir misiniz?
Cevap:

Soru 27: Stratejik anlaşma içerisinde yer aldığınız şirketler var mı? Firmanız outsourcing hizmetini stratejik anlaşma içerisinde başarılı bir şekilde yürütebilmekte midir?
Cevap:

Soru 28: Firmanız outsourcing hizmetini rekabet avantajı getirecek şekilde kullanabilecek bir stratejik anlaşma yapısına sahip midir?
Cevap:

Soru 29: Stratejik ittifak ile organizasyonel etki arasında firmanız açısından nasıl bir ilişki mevcuttur?
Cevap:

Soru 30: Outsourcing hizmeti alan firmanız , outsourcing ile gelen yeni teknolojilere uyumda zorluk çekiyor mu? Firmanızın bu açıdan esnek bir yapıya sahip olduğunu söyleyebilir misiniz?
Cevap:

Soru 31: Esneklik firmanız açısından bilişim sistemlerinde outsourcing başarı ölçülerinden olan sistem kalitesi ile ilişkili midir? Esneklik sistem kalitesi üzerinde etkili midir? Esneklik firmanızda hangi değişkenler üzerinde etkilidir?
Cevap:

Soru 32: Stratejik outsourcing ne demektir? Firmanız açısından bu kavramı değerlendirir misiniz?
Cevap:

APPENDIX D. QUESTIONNAIRE FOR SYSTEM INTEGRATORS

BÖLÜM 1: Firmanın Dış Kaynak Kullanımı Açısından Değerlendirilmesi

1) Kurumumuzun işbirliği yaptığı kuruluşlardan sağladığı bilgi teknolojileri ile ilgili dış kaynak kullanımları ve dış kaynak hizmetlerinden genel anlamda
[ ] Memnunum
[ ] Memnun değilim

2) Kurumumuzun işbirliği yaptığı kuruluşlardan sağladığı bilgi teknolojileri daima bilgi kalitesini yükseltmektedir.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

3) Kurumumuzun işbirliği yaptığı kuruluşlardan sağladığı bilgi teknolojileri daima entegrasyonunu yaptığımız sistemin kalitesini yükseltmektedir.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

4) Kurumumuzun işbirliği yaptığı kuruluşlardan sağladığı bilgi teknolojileri müşterilerimize sunacağımız çözümler öncesi kurumumuza rekabet avantajı sağlamaktadır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

5) Kurumumuzun işbirliği yaptığı kuruluşlardan sağladığı bilgi teknolojileri müşterilerimize sunacağımız çözümleri oluşturmada çözümleri oluşturan bireylere zaman avantajı sağlamaktadır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

BÖLÜM 2: Firmanın Sistem Entegratörü Olması Açısından Değerlendirilmesi

6) Kurumumuzun müşterilerine bilgi teknolojileri ile ilgili sunduğu çözümlerden aldığı feedback (geri besleme)
[ ] Memnuniyet vericidir.
[ ] Memnuniyet verici değildir.

7) Kurumumuzun müşterilerine bilgi teknolojileri ile ilgili sunduğu çözümler kullanıcı isteklerini karşılamaktadır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

8) Kurumumuzun müşterilerine sunduğu bilgi teknolojilerinin kullanımı kolaydır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

9) Kurumumuzun müşterilerine sunduğu bilgi teknolojileri veri bütünlüğüne ve veri tamlığına olanak tanımaktadır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

10) Kurumumuzun müşterilerine sunduğu bilgi teknolojileri bilginin kullanıcıya zamanında, kararlarını etkileyebilecek noktada ve güncel olarak ulaşmasına olanak tanır.

[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

11) Kurumumuzun müşterilerine sunduğu bilgi teknolojileri daima daha yüksek kalitede karar almayı sağlamaktadır.

[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

12) Kurumumuzun müşterilerine sunduğu bilgi teknolojileri çözümleri sayesinde müşterilerimiz bilgi teknolojileri satın alma ve geliştirme ile ilgili maliyetlerde daima avantaj sağlamaktadırlar.

[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

13) Kurumumuzun sunduğu bilgi teknolojileri çözümleri çözüm sunduğumuz kuruluşlarda bireysel anlamda üretkenliği daima arttırmaktadır.

[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

APPENDIX E. QUESTIONNAIRE FOR OUTSOURCING VENDORS

Firmanın Dış Kaynak Hizmeti Vermesi Açısından Değerlendirilmesi

1) Kurumumuzun müşterilerine bilgi teknolojileri ile ilgili sunduğu çözümlerden aldığı feedback (geri besleme)
[ ] Memnuniyet vericidir.
[ ] Memnuniyet verici değildir.

2) Kurumumuzun müşterilerine bilgi teknolojileri ile ilgili sunduğu çözümler kullanıcı isteklerini karşılamaktadır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

3) Kurumumuzun müşterilerine sunduğu bilgi teknolojilerinin kullanımı kolaydır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

4) Kurumumuzun müşterilerine sunduğu bilgi teknolojileri veri bütünlüğüne ve veri tamlığına olanak tanımaktadır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

5) Kurumumuzun müşterilerine sunduğu bilgi teknolojileri bilginin kullanıcıya zamanında, kararlarını etkileyebilecek noktada ve güncel olarak ulaşmasına olanak tanır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

6) Kurumumuzun müşterilerine sunduğu bilgi teknolojileri daima daha yüksek kalitede karar almayı sağlamaktadır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

7) Kurumumuzun müşterilerine sunduğu bilgi teknolojileri çözümleri sayesinde müşterilerimiz bilgi teknolojileri satın alma ve geliştirme ile ilgili maliyetlerde daima avantaj sağlamaktadırlar.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

8) Kurumumuzun sunduğu bilgi teknolojileri çözümleri çözüm sunduğumuz kuruluşlarda bireysel anlamda üretkenliği daima arttırmaktadır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum

APPENDIX F. QUESTIONNAIRE FOR FIRMS WHICH ARE BOTH VENDOR AND CUSTOMER

BÖLÜM 1: Firmanın Dış Kaynak Kullanımı Açısından Değerlendirilmesi

1) Kurumumuzun işbirliği yaptığı kuruluşlardan sağladığı bilgi teknolojileri ile ilgili dış kaynak kullanımları ve dış kaynak hizmetlerinden genel anlamda
[ ] Memnunum
[ ] Memnun değilim

2) Kurumumuzun işbirliği yaptığı kuruluşlardan sağladığı bilgi teknolojileri daima bilgi kalitesini yükseltmektedir.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

3) Kurumumuzun işbirliği yaptığı kuruluşlardan sağladığı bilgi teknolojileri daima entegrasyonunu yaptığımız sistemin kalitesini yükseltmektedir.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

4) Kurumumuzun işbirliği yaptığı kuruluşlardan sağladığı bilgi teknolojileri müşterilerimize sunacağımız çözümler öncesi kurumumuza rekabet avantajı sağlamaktadır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

5) Kurumumuzun işbirliği yaptığı kuruluşlardan sağladığı bilgi teknolojileri müşterilerimize sunacağımız çözümleri oluşturmada çözümleri oluşturan bireylere zaman avantajı sağlamaktadır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

BÖLÜM 2: Firmanın Dış Kaynak Hizmeti Sunması Açısından Değerlendirilmesi

6) Kurumumuzun müşterilerine bilgi teknolojileri ile ilgili sunduğu çözümlerden aldığı feedback (geri besleme)
[ ] Memnuniyet vericidir.
[ ] Memnuniyet verici değildir.

7) Kurumumuzun müşterilerine bilgi teknolojileri ile ilgili sunduğu çözümler kullanıcı isteklerini karşılamaktadır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

8) Kurumumuzun müşterilerine sunduğu bilgi teknolojilerinin kullanımı kolaydır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

9) Kurumumuzun müşterilerine sunduğu bilgi teknolojileri veri bütünlüğüne ve veri tamlığına olanak tanımaktadır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum

[ ] Kesinlikle katılmıyorum

10) Kurumumuzun müşterilerine sunduğu bilgi teknolojileri bilginin kullanıcıya zamanında, kararlarını etkileyebilecek noktada ve güncel olarak ulaşmasına olanak tanır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

11) Kurumumuzun müşterilerine sunduğu bilgi teknolojileri daima daha yüksek kalitede karar almayı sağlamaktadır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

12) Kurumumuzun müşterilerine sunduğu bilgi teknolojileri çözümleri sayesinde müşterilerimiz bilgi teknolojileri satın alma ve geliştirme ile ilgili maliyetlerde daima avantaj sağlamaktadırlar.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

13) Kurumumuzun sunduğu bilgi teknolojileri çözümleri çözüm sunduğumuz kuruluşlarda bireysel anlamda üretkenliği daima arttırmaktadır.
[ ] Kesinlikle katılıyorum
[ ] Katılıyorum
[ ] Bir dereceye kadar katılıyorum
[ ] Kararsızım
[ ] Bir dereceye kadar katılmıyorum
[ ] Katılmıyorum
[ ] Kesinlikle katılmıyorum

APPENDIX G. QUESTIONNAIRE FOR OUTSOURCING CUSTOMERS

1) Kurumunuzun dışarıdan aldığı bilişim sistemi genel anlamda
( ) Memnun edicidir
( ) Memnun edici değildir

2) Kurumunuzun dışarıdan aldığı bilişim sisteminin sağladığı bilgi tam ve doğrudur.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

3) Kurumunuzun dışarıdan aldığı bilişim sisteminin sağladığı bilginin biçimi memnun edicidir.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

4) Kurumunuzun dışarıdan aldığı bilişim sistemi kullanıcı isteklerini karşılamaktadır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

5) Kurumunuzun dışarıdan aldığı bilişim sistemi üzerindeki bilgi kullanışlıdır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

6) Kurumunuzun dışarıdan aldığı bilişim sisteminin kullanımı kolaydır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

7) Kurumunuzun dışarıdan aldığı bilişim sisteminin öğrenimi kolaydır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

8) Kurumunuzun dışarıdan aldığı bilişim sistemi güvenilirdir.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

9) Kurumunuzun dışarıdan aldığı bilişim sistemi veri bütünlüğüne ve veri tamlığına olanak tanımaktadır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

10) Kurumunuzun dışarıdan aldığı bilişim sistemi verimlidir – yararlı olarak kullanılabilmesi için fazla emek ve zaman verilmesi gereği yoktur..
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

11) Kurumunuzun dışarıdan aldığı bilişim sistemi diğer bilgi teknolojileri sistemleri ile bütünleşmeye-entegre olmaya olanak tanımaktadır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

12) Kurumunuzun dışarıdan aldığı bilişim sistemi bilginin kullanıcıya zamanında, karar vermek için gereken noktada ve güncel olarak ulaşmasına olanak tanır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

13) Kurumunuzun dışarıdan aldığı bilişim sistemi veri geçerliliğine sahiptir.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

14) Kurumunuzun dışarıdan aldığı bilişim sisteminin (tepki) yanıtlama süresi hızlıdır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

15) Kurumunuzun dışarıdan aldığı bilişim sistemini ne zaman isterseniz kullanabilirsiniz.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum

( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

16) Kurumunuza bilişim sistemleri açısından dış kaynak sağlayan satıcı firma ya da kişiler yeterli teknik desteği sağlamaktadır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

17) Kurumunuza bilişim sistemleri açısından dış kaynak sağlayan satıcı firma ya da kişiler güvenilir ve inanılırdırlar.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

18) Dış kaynağı sağlayan satıcı firma ya da kişiler kurumunuzla iyi ilişkilere sahiptirler.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

19) Dış kaynağı sağlayan satıcı firma ya da kişiler deneyim sahibidirler ve kaliteli hizmet ile kaliteli eğitim olanağı sunarlar.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

20) Dışarıdan alınan bilişim sistemi bireysel yaratıcılığı arttırmaktadır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

21) Dışarıdan alınan bilişim sistemi kurumsal bilgiyi arttırmakta ve kurum içi öğrenme sürecinin oluşumuna olanak tanımaktadır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

22) Dışarıdan alınan bilişim sistemi bireysel üretkenliği arttırmaktadır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

23) Dışarıdan alınan bilişim sistemi bireysel görevler için yararlıdır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

24) Dışarıdan alınan bilişim sistemi daha yüksek kalitede karar almayı sağlamaktadır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

25) Dışarıdan alınan bilişim sistemi bireysel görevler ve işletmenin esas konusuyla ilgili görevler için zaman tasarrufu sağlamaktadır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

26) Dışarıdan alınan bilişim sistemi kurum içindeki bölümler arası iletişimi geliştirici bir özelliğe sahiptir ve bölümler arası koordinasyonu sağlamaya olanak tanımaktadır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

27) Dışarıdan alınan bilişim sistemi kurum içindeki alt birimlerin verimliliğini arttırmaktadır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

28) Dış kaynaktan tedarik edilen bilişim sisteminin kullanılması ile kurumunuzda bilişim sistemlerine ilişkin işletme maliyeti azaldı.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

29) Dış kaynaktan tedarik edilen bilişim sistemin kullanılması ile kurumunuz genel anlamda maliyet indirimi elde etti.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım

( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

30) Dış kaynaktan tedarik edilen bilişim sisteminin kullanılması ile kurumunuzda bilişim sistemleri geliştirme veya satın almaya ilişkin maliyet azaldı.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

31) Dış kaynaktan tedarik edilen bilişim sistemi kurumunuza rekabette avantaj getirici özellikler sağlamaktadır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

32) Dışarıdan alınan bilişim sistemi işletmedeki süreç değişimlerine uyumda kolaylık sağlamaktadır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

33) Dışarıdan alınan bilişim sistemi mümkün olandan daha fazla işi bitirmenize olanak sağlamaktadır.
( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

34) Dış kaynaktan elde edilen bilişim sisteminin genel anlamda üzerinizde oluşturduğu etki pozitiftir.

( ) Kesinlikle katılıyorum
( ) Katılıyorum
( ) Bir dereceye kadar katılıyorum
( ) Kararsızım
( ) Bir dereceye kadar katılmıyorum
( ) Katılmıyorum
( ) Kesinlikle katılmıyorum

APPENDIX H. FINANCIAL DATA DOCUMENT FOR OUTSOURCING CUSTOMERS AND SYSTEM INTEGRATORS

Financial data documents were prepared according to type of the organization. Behind this, these two financial documents were also for the firms which are both outsourcing vendor and customer. They could answer the questions in one of these two financial documents.

1. Cost Reduction = IS insourcing cost –IS outsourcing cost = ?

2. IT Expenditure=equipment expenses +operating expenses+expenses for services relating to computer systems = ?

IS Performance =IT Net(income+sales)/IT Expenditure = ?

3. IS-Cost Structure

Dış Kaynak Kullanımı Öncesi
IS-Cost Structure-1= (IT Expenditure-1)/ Total Budget = ?

Dış Kaynak Kullanımı Sonrası
IS-Cost Structure-2 = (IT Expenditure-2)/ Total Budget= ?

4. Cost Saving Level

The Cost Saving Level= The firm's budget level reserved for technological products-The costs of the technology acquisition = ?

5. Shared Risk Level

Firmanın risk düzeyi = (Firma projede dışkaynak kullanımı yaparsa olası maliyet kaybı)/ (Firma projede dışkaynak kullanımı yapmazsa olası maliyet kaybı)= ?

APPENDIX I. FINANCIAL DATA DOCUMENT FOR OUTSOURCING VENDORS

1. IT Expenditure=equipment expenses +operating expenses+expenses for services relating to computer systems = ?
   IS Performance = IT Net (income+sales)/IT Expenditure = ?

2. IS-Cost Structure

   Dış Kaynak Hizmeti Vermeden Önce
   IS-Cost Structure-1= (IT Expenditure-1)/ Total Budget = ?

   Dış Kaynak Hizmeti Verdikten Sonra
   IS-Cost Structure-2 = (IT Expenditure-2)/ Total Budget= ?

3. Shared Risk Level

Firmanın risk düzeyi = (Firma proje için dışkaynak hizmeti sunarsa firmanın olası maliyet (para) kaybı / (proje dışkaynak kullanımı olmadan yapılırsa projedeki olası maliyet (para) kaybı)= ?

APPENDIX J. EVALUATION OF THE CASE STUDIES

Questionnaire Evaluation Tables

Table J.1 : Questionnaire Evaluations of System Integrators

Organization G	Organization C	Organization B	Organization A		
					Q1
PL	$PL_{(1)}$ $PL_{(2)}$	—	—	Part1-Outsourcing Usage	
A	$A_{(1)}$ $SA_{(2)}$	—	—		**Q2**
A	$A_{(1)}$ $A_{(2)}$	—	—		**Q3**
A	$A_{(1)}$ $AS_{(2)}$	—	—		**Q4**
SA	$A_{(1)}$ $A_{(2)}$	—	—		**Q5**
SF	$SF_{(1)}$ $SF_{(2)}$	SF	SF	Part2-Outsourcing Service	**Q6**
SA	$SA_{(1)}$ $A_{(2)}$	A	SA		**Q7**
UD	$A_{(1)}$ $A_{(2)}$	A	SA		**Q8**
AS	$A_{(1)}$ $A_{(2)}$	SA	SA		**Q9**
A	$SA_{(1)}$ $A_{(2)}$	A	SA		**Q10**
AS	$SA_{(1)}$ $A_{(2)}$	A	A		**Q11**
A	$A_{(1)}$ $A_{(2)}$	SA	A		**Q12**
SA	$SA_{(1)}$ $A_{(2)}$	A	A		**Q13**

Explanations about the Table

a) (1) shows the answer of the project coordinator of Organization C for the related question.

b) (2) shows the answer of the sales manager of Organization C for the related question.

c) Since none of the personnel in Organization D filled the questionnaire, Organization D does not exist in the table.

d) Since Organization A and B did not define the process of purchasing the products from the vendors as outsourcing usage , they did not fill the first part of the questionnaire.

Comments on the Results of Questionnaire Evaluations of System Integrators

Both organization A and B filled only the second part of the questionnaire. They gave same answers to the 4 questions in the questionnaire. On the other hand, Organization C and G filled all parts in the questionnaire. The project coordinator of organization C , the sales manager of organization C and the staff of organization G gave same answers to the 4 questions in the questionnaire.

Abbreviations in the Table

A: Agree

AS: Agree Somewhat

D: Disagree

DS: Disagree Somewhat

PL: Pleased

Q : Question

SA: Strongly Agree

SD: Strongly Disagree

SF: Satisfactory

UD: Undecided

Table J.2 : Questionnaire Evaluations of Outsourcing Vendors

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Organization E	SF	A	A	A	A	A	A	A
Organization H	SF	AS	A	A	A	A	A	A
Organization J	SF	SA	SA	A	A	A	SA	SA
Organization K	SF	SA	SA	SA	SA	SA	SA	SA
Organization L	SF	SA	SA	SA	SA	SA	SA	SA

Comments on the Results of Questionnaire Evaluations of Outsourcing Vendors

The outsourcing vendors in the study gave the same answer only for the first question in the questionnaire.

Abbreviations in the Table

A: Agree

AS: Agree Somewhat

Q : Question

SA: Strongly Agree

SF: Satisfactory

Table J.3 : Questionnaire Evaluations of Outsourcing firms which are both Vendor and Customer

Organization I	Organization F		Part1- Outsourcing Customer			Part2- Outsourcing Vendor						
		Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**	**Q11**	**Q12**	**Q13**
PL	—													
AS	—													
AS	—													
A	—													
A	—													
SF	SF													
A	SA													
A	A													
SA	AS													
SA	A													
SA	A													
AS	A													
AS	A													

Explanations about the Table

Organization F filled only the second part of the questionnaire.

Comments on the Results of Questionnaire Evaluations of Firms which are both Vendor and Customer

They gave same answers to the 2 questions in the questionnaire.

Abbreviations in the Table

A: Agree

AS: Agree Somewhat

PL: Pleased

Q : Question

SA: Strongly Agree

SF: Satisfactory

Table J.4 : Questionnaire Evaluations of Outsourcing Customers

	Organization N	Organization M
Q1	USF	—
Q2	DS	—
Q3	DS	—
Q4	DS	—
Q5	AS	—
Q6	DS	—
Q7	AS	—
Q8	AS	—
Q9	AS	—
Q10	DS	—
Q11	DS	—
Q12	AS	—
Q13	AS	—
Q14	D	—
Q15	D	—
Q16	DS	—
Q17	DS	—
Q18	A	—
Q19	UD	—
Q20	UD	—
Q21	AS	—
Q22	AS	—
Q23	AS	—
Q24	DS	—
Q25	AS	—
Q26	AS	—
Q27	AS	—
Q28	DS	—
Q29	DS	—
Q30	AS	—
Q31	AS	—
Q32	UD	—
Q33	AS	—
Q34	AS	—

Explanations about the Table

a) The staff of Organization M did not fill the questionnaire, since, according to him, the comments of him do not represent the view of all staff in the organization about outsourcing services.

Comments on the Results of Questionnaire Evaluations of Outsourcing Customers

The results of the questionnaire show that Organization N is not satisfied about outsourcing services. The majority of customers state that they use generally outsourcing services in small amounts. Behind this, they declare that they are satisfied about some of the outsourcing services and also unsatisfied about some of them.

Abbreviations in the Table

A: Agree

AS: Agree Somewhat

D: Disagree

DS: Disagree Somewhat

Q : Question

UD: Undecided

USF: Unsatisfactory

Table J.5 : Quantitative Results of Questionnaires

	OUTSP	TMAXP
Organization A	53	56
Organization B	51	56
Organization C	82	91
Organization G	79	91
Organization E	49	56
Organization H	48	56
Organization J	53	56
Organization K	56	56
Organization L	56	56
Organization F	49	56
Organization I	79	91
Organization N	136	238

Explanations about the Table

a) OUTSP shows the outsourcing point of the related organization according to the seven-point semantic differential scales and the seven-point Likert-type scale.

b) TMAXP shows the total maximum point which can be achieved according to the questionnaire results.

c) OUTSP of Organization C was calculated by taking average of the values determined according to the evaluations of the project coordinator and sales manager .

Comments on the Quantitative Results of Questionnaires

The quantitative results of questionnaires show that the ratio of OUTSP to TMAXP for Organization N is very low compared to other organizations in the study. In this thesis, quantitative analysis is not made, but this simple numerical analysis even indicate that Organization N is not satisfied about outsourcing services.

Abbreviations in the Table

OUTSP: Outsourcing Point

TMAXP: Total Maximum Point

Explanations about The Table of Strategic Drivers

a) **X** shows the level of related strategic driver in the related organization.

b) — shows that the level of the related strategic driver does not belong to the related organization.

c) If there is not any sign in the levels of related strategic driver, it means that the organization does not measure the related driver or does not have any experience to evaluate the related driver.

d) The outsourcing customers and the firms which are both outsourcing vendor and outsourcing customer were evaluated in terms of strategic drivers.

Comments about the Table of Strategic Drivers

Outsourcing affected the focus on core business in Organization F and I in a significantly positive manner. After outsourcing usage, no changes occured about focus on core business objectives in Organization M. On the other hand, outsourcing affected negatively the focus on core business in Organization N. The innovativeness level was low in Organization M and N. The innovativeness level of Organization I cannot be represented with the related levels in the table. Organization M achieved knowledge acquisiton, but Organization F, I and N did not achieve knowledge acquisition. Organization F and I were not necessary to achieve knowledge acquisition as outsourcing customers, on the other hand,

Organization N could not achieve knowledge acquisiton. Organization F, I and M have strategic alliances about outsourcing services, but Organization N does not have strategic alliances about outsourcing services. Organization F and I have medium level flexibility.

Abbreviations in the Table of Strategic Drivers

SGI: Significant Improvement

SI: Some Improvement

NC: No Change

W : Worse

H : High

M: Medium

L: Low

ACH: Achieved

NACH: Not Achieved

PR: Present

ABS : Absent

Table J.6 : Strategic Drivers

Organization N	Organization M	Organization I	Organization F		
		X	**X**	SGI	Focus on Core Business
				SI	
	X			NC	
X				W	
		—		H	Innovative Use of IS Functionality
		—		M	
X	**X**	—		L	
	X			ACH	Knowledge Acquisition
X		**X**	**X**	NACH	
	X	**X**	**X**	PR	Strategic Alliances
X				ABS	
				H	Flexibility
		X	**X**	M	
				L	

Table J.7 : Financial Drivers

Organization N	Organization M	Organization L	Organization K	Organization I	Organization H	Organization G		
< 0	—	—	—	7000$ (Year 2006)	—	—	Cost Reduction	
1%-1,5%	—	40	10%	—	16,67	2%-7%	IS Performance	
—	—	38	5%	—	2%	4%-5%	BOUTS	IS-Cost Structure
—	10%	40	15%	—	1%	—	AOUTS	
—	>0	—	—	—	—	—	Cost Saving Level	
100%	< 100%	50%	—	100%	20%	< 100%	Shared Risk Level	

Explanations about the Table of Financial Drivers

a) — shows that the value of the related financial driver could not be obtained .

Comments about the Table of Financial Drivers

The shared risk level of Organization I and N is 100%, on the other hand, shared risk level for Organization G, H, L and M is lower than 100%. Cost saving level for Organization M is always higher than 0. After outsourcing service, the information system cost structures of Organization H, K and L change. Organization N has a very low IS performance value. The cost reduction value of organization N indicates that IS outsourcing cost is higher than IS insourcing cost in Organization N.

Abbreviations in the Table of Financial Drivers

BOUTS: Before Outsourcing

AOUTS: After Outsourcing