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“IT-Outsourcing for four organizations”

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ABSTRACT

Introduction

IT-Outsourcing is a concept that describes the supply of part or all of Information Technology (IT) services by an external supplier company, known as IT-vendor, to a client company. The 'IS-Improvement' is one of the three strategic views of IT-Outsourcing for clients and involves advantages like focusing on core business, cost reductions and increase of IT-resources efficiency.

Objectives

The purpose of this project is to discover, describe and analyze the most critical aspects in implementing IT-Outsourcing and the critical aspects of the 'IS Improvement' view of IT-Outsourcing for clients, to further let IT-vendors know how they can improve on delivering their services to their customers.

Research Question

“Which are the most critical factors in implementing IT-Outsourcing and which are the critical aspects of the IS-improvement view of IT-Outsourcing for four organizations as clients?”

Method

This project follows an exploratory research method. It is mainly an action research but there is also an element of a realist research. The subject of IT-Outsourcing was chosen because it is part of IT-Management. The analysis is based on primary data collected from four organizations in the European Union (EU) that were chosen because they use IT intensively in their activities. Access to these organizations was because of convenience since it was enabled by personal contacts. Two organizations were in the shipping business, the third organization was an electronic-devices factory, and the fourth was a university. The data collection was based on three face-to-face interviews with the IT-Managers of the organizations, and one response was collected by electronic means since the fourth respondent (also IT-Manager) completed and sent the questionnaire by e-

mail. The interviews were based on a semi-structured questionnaire, that in turn was formed based on the content of the critical literature review. The critical literature review was formed from books and articles found at Mälardalens Högskola's library and databases, and interlibrary loans. The data were inserted in a table for content analysis that helped count the frequencies of the various factors of IT-Outsourcing. The results were drawn based on qualitative analysis and they were tested against dialectical critique.

Conclusions

The most critical factors in implementing IT-outsourcing for these four organizations are: Hardware maintenance is the most critical area to be outsourced. Low costs of services, supplier's stability and reputation are the most critical factors in selecting an IT-vendor. Supplier's understanding of client's objectives is the most critical factor for a successful relationship between clients and IT-vendors. Precise definition of costs is the most critical factor to be included in an IT-Outsourcing contract, and selective/partial IT-Outsourcing is the IT-sourcing solution preferred by these organizations. The 'IS-Improvement' view of IT-Outsourcing for these four organizations is not valid, but the respondents' words indicate ways that IT-Outsourcing can be improved to achieve increased IT-resources efficiency.

KEYWORDS: IT-Outsourcing, Strategic IT-Outsourcing, IT-Insourcing, SLA.

PROJECT SIZE: 35 pages of text + 13 pages of references and appendices.

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ABBREVIATIONS

BAFO – Best And Final Offer

CPU – Central Processing Unit

EU – European Union

ICT – Information and Communication Technologies

IP - Intellectual Property

IPR - Intellectual Property Rights

IS – Information Systems

IT – Information Technology

JIT – Just In Time

MB – MegaByte

RFP – Request For Proposal

SLA – Service Level Agreement

SLC - Service Level Clause

SWOT – Strength Weaknesses Opportunities Threats

1. INTRODUCTION

The purpose of this section was to define and give the background of IT-Outsourcing that would help the reader be familiarized with this concept.

1.1. Definition and background of IT-Outsourcing

IT-Outsourcing is a concept that describes the supply of part or all of the Information Technology (IT) services by an external supplier company, known as IT-vendor, to a client company (Yakhlef 1997, p.10). It began in the 1960's when mainframe computers were very large in size, required a lot of space and required a special environment with reference to temperature, humidity and dust conditions. (Yakhlef 1997, p.11; Sparrow 2003, p.2).

IT-Outsourcing was considered to be a response to recessionary pressures, global competition, the need for short product life-cycles, the rapidly changing customers' needs, as well as a response to demands for leaner and more flexible forms of organizing and producing (Yakhlef 1997, p.12). IT-Outsourcing in the 1970's and 1980's was negatively influenced by the fact that mini and micro computers became cheap and affordable to companies that started to maintain IT internally (Weinert and Meyer 2005, p.10).

The main drivers for IT-Outsourcing for clients during the 1980's were: a) transferring responsibility to a third-party, b) cost-effective access to occasionally needed or specialized skills and computing power, c) avoidance of building an in-house IT department, and d) access to special functional needs (Lee et al. 2003, p.89; Sparrow 2003, p.4).

According to Kobayashi-Hillary (2005, p.165), strategic outsourcing gives managers the opportunity to do reengineering for companies that want to focus on other more important things like intelligence and intangibles. According to DiRomualdo and Gurbaxani (1998, pp.3-14), strategic IT-Outsourcing can be described by three views, which are: a) the 'IS-Improvement' with which companies look after better performance from their IS resources, b) 'business impact' with which clients look after improved business results, and c) 'commercial exploitation' with which clients look after improving return on IT investment.

IT-Insourcing, that is the opposite of outsourcing, describes the situation when an IT department is maintained by a firm internally, and it aims at achieving the same objectives (advantages) as IT-Outsourcing (Hirschheim and Lacity 2000, p.100). Selective IT-Outsourcing is about hiring some IT services while maintaining some others internally (Sparrow 2003, pp.6-7, p.14). Offshore outsourcing, that is, buying services from a vendor abroad, is the third era of globalization, while the first and the second eras introduced cross-border trading and manufacturing respectively; the main difference between [domestic] IT-Outsourcing and offshore-outsourcing is that the latter describes the situation when IT-services are outsourced to an IT-vendor in the same country, while in the case of the latter IT-services are outsourced to an IT-vendor in another country (Kehal and Singh 2006, p.19, p.283).

Nowadays, IT-Outsourcing is adopted by fifty-one out of one hundred largest global companies (Lijima 2006, p.41).

1.2. Objective

The purpose of this project is to discover, describe and analyze the most critical aspects in implementing IT-Outsourcing and the critical aspects of the 'IS Improvement' view of IT-Outsourcing for clients, based on four specific organizations that are clients of IT-Outsourcing, to further let IT-vendors know how they can improve on delivering their services to their customers.

The research question of this project is:

“Which are the most critical factors in implementing IT-Outsourcing and which are the critical aspects of the IS-Improvement view of IT-Outsourcing for four organizations as clients?”

1.3 Target audience

This project was primarily targeted for IT-vendors since the results were drawn from data gathered from clients of IT-Outsourcing, who reflected upon the critical aspects 'IS-Improvement' view of IT-Outsourcing and the critical aspects in implementing IT-Outsourcing. This project was also targeted for the academic audience of IT-Management

since IT-Outsourcing is part of IT-Management. The discussion included, the respondents' own words and results are what make this project important for the IT-vendors and the academic audience of IT-Management, and these are reasons why they should read it.

1.4 Thesis design

This project is designed according to the following:

Chapter 1 - Introduction

This chapter includes the definition and background of IT-Outsourcing along with the definitions of the other IT-sourcing solutions, as well as the purpose of this project.

Chapter 2 – Critical literature review

This chapter includes the theoretical framework that this project is based on that also helped design the questionnaire that was used to gather the empirical data for this project. The theoretical framework consists of the main themes of IT-Outsourcing that are the make-or-buy decision, selecting an IT-vendor, drawing an IT-Outsourcing contract, and the advantages and disadvantages of IT-Outsourcing for clients.

Chapter 3 – Conceptual framework

This chapter summarizes the themes that were analyzed and developed in the critical literature review and shows how they are connected.

Chapter 4 – Method

This chapter describes how this project was designed and conducted, by developing the choice of topic, target audience, research process, data source, data collection, data analysis, validity and reliability and method critique.

Chapter 5 - Findings

This chapter demonstrates the empirical data collected in a table that contains the frequencies of each factor around the themes.

Chapter 6 - Analysis

This chapter includes the analysis of the empirical data, and it is based and structured according to the conceptual framework.

Chapter 7 - Conclusions

This chapter includes the conclusions drawn from the analysis that contribute towards fulfilling the purpose of this project.

Chapter 8 - Recommendations

This chapter includes recommendations useful to IT-vendors and the academic audience of IT-Management, and suggestions for future research.

2. CRITICAL LITERATURE REVIEW

The purpose of this section was to gather information about IT-Outsourcing for clients from different literature and helped build the theoretical aspect of IT-Outsourcing. The secondary purpose was to describe and analyze the information extracted, so as to find agreeing or even conflicting opinions around the themes of IT-Outsourcing that was required to make the literature review critical.

The themes that this research is focused on are: a) the aspects in implementing IT-Outsourcing for clients, and it consists of the factors that contribute towards the make-or-buy decision, the criteria in selecting an IT-vendor and factors in drawing an IT-Outsourcing contract, and b) the IS-Improvement view of IT-Outsourcing (Kobayashi-Hillary 2005, p.166) that consists of the advantages and disadvantages of IT-Outsourcing for clients.

2.1. The aspects in implementing IT-Outsourcing for clients

The purpose of this sub-section was to describe and analyze the themes that comprised the aspects in implementing IT-Outsourcing for clients, which were the make-or-buy decision, selecting an IT-vendor and drawing an IT-Outsourcing contract for clients.

2.1.1. The make-or-buy decision for clients

The purpose of this sub-section was to discuss the make-or-buy decision that includes the steps of the make-or-buy process, the areas to outsource and insource, and criteria in choosing between outsourcing or insourcing.

2.1.1.1. Steps of the 'make-or-buy' process

This make-or-buy process (Belisario-McGrath 2000, pp.28-30) consisted of: a) Defining organizational goals, taking into considerations how available technology can assist in achieving these goals, b) Assessing the current situation of your IT and defining requirements, and it required good understanding of IT and it involved feasibility study, c) Conduct an strengths-weaknesses-opportunities-threats (SWOT) analysis of your IT-operations, that will help in identifying the potential benefits and risks of IT-Outsourcing, and d) Take the decision based on the results of the analysis. A more in-depth analysis

about the 'make-or-buy' process included additional considerations like the selection of more than one vendor, staff transfer approach, asset ownership including Intellectual Property (IP), giving IP Rights (IPR) to the supplier to allow for innovation and risk-reward program (Cullen and Willcocks 2003, pp.33-40).

The process of selecting the suitable IT-areas to be outsourced consisted of categorizing the services and determining the requirements for the outsourcing solution, that involved having detailed description of their current condition (Cullen and Willcocks 2003, pp.58-66).

According to Kobayashi-Hillary (2005, p.109), the make-or-buy process consisted of: a) mapping the services by defining what is performed and where, b) establishing the criteria by identifying the short and long term benefits from IT-outsourcing, c) applying each criterion on each area/service, d) putting the results in a grid, and e) organizing the information so as to create outsourcing phases.

2.1.1.2. Areas to outsource

The various IT-areas that could be outsourced were network ownership, asset transfer, planning and design studies (Takac 1993, pp.26-27), data center operations, help desk, desktop services (Hurley and Shaumann 1997, pp.128-129), internet services, voice network management, user support, data network management, disaster recovery, application hosting, IT strategy planning (Lackow 2001, p.6), applications system development, ICT application maintenance and support, website hosting, and security policy (Aalders 2001, p.49; Syaripah et al. 2008, p.3).

2.1.1.3. Areas to insource

Areas to remain in-house were the ability to track, interpret and assess the changing IT capabilities and relating them to the needs of the firm, the ability to work with business management to define the IT requirements successfully and the ability to identify the appropriate ways to use external market (Willcocks 1996, pp.351-352).

2.1.1.4. Choosing between IT-Outsourcing or IT-Insourcing

Selecting the proper vendor was another process that had to be made and it included a number of considerations that had to be taken into account.

The criteria in software outsourcing or insourcing were the degree of systems integration, vendor reliability, cost, speed of delivery, the existing investment and availability of IT staff (Ford and Farmer 1986, cited in Willcocks 1996, p.85).

A comparison between the firm's own resources skills level (internal skills) and the available supplier's skills level (external skills) was suggested by Willcocks (1996, pp.94-96, pp.342-343), Cullen and Willcocks (2003, pp.25-26) and Kehal and Singh (2006, pp.5-6). This comparison suggested that when both the skills of the internal and external resources were high, then the firm had to use the external resources. If the skills of both the supplier and the client were low, then the firm had to develop the application internally. If the firm's own resources were low for an application while the supplier's skills were high, then the firm had to use the external resources. If the internal skills level was high while external skills level was low, then the firm had to develop the application internally.

A different approach was based on the impact of IT on the firm's strategy and operations (McFarlan, cited in Applegate et al. 2007, pp.35-37, p.445). Insourcing was recommended for firms that would fall in the 'strategic' quadrant (figure 1) if that was the way to access the skills required or when there was a mass of potential differentiator activities. Firms that would fall in the 'turnaround' quadrant could outsource if this was the only way to gain those activities. Firms that would fall in the 'factory' quadrant could outsource if the firm's internal department was well managed. Outsourcing was suggested for firms that would fall in the 'support' quadrant.

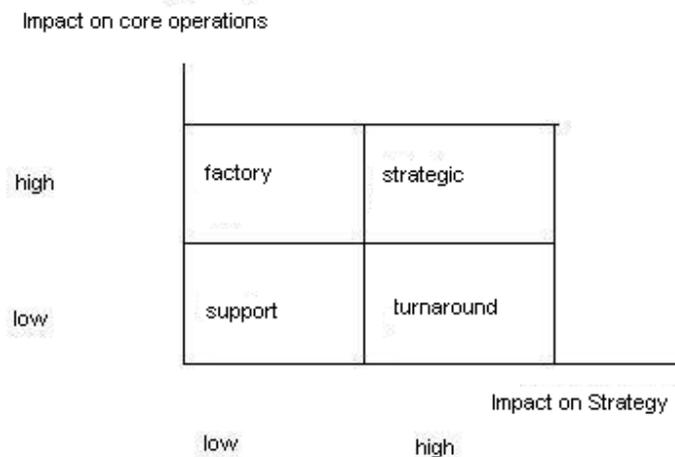


Figure 1: The strategic grid (Applegate et al. 2007, p.37)

A more comprehensive approach (Willcocks 1996, pp.338-346; Kehal and Singh 2006, pp.5-6) included factors like:

- Identifying an IT activity as a differentiator that contributed towards competitive advantage, or a commodity that would not contribute towards differentiation.
- Determining the relationship between the IT activity and the business strategy that required distinguishing the activity as strategic or useful; a strategic activity was the one critical to the company's existence and achievement of goals but did not necessarily differentiate the firm from other firms. A useful activity was the one that contributed to economical efficiency but did not necessarily affect the firm's competitiveness.
- The degree of uncertainty about the future business environment and business need.
- The degree of technological maturity of the specific activity; it was suggested that IT should be outsourced only if it was well understood and not problematic to the organization.
- The level of IT integration; simple technical interfaces could be outsourced while complex and highly integrated systems should have not been outsourced easily.

The level of integration and maturity were referred to as the 'technical matrix' (figure 2). IT would remain in-house when there was high business positioning impact, high impact on business strategy, high future business uncertainty, high technological

maturity, high level of IT integration and high in-house expertise in comparison to the expertise available in the market. Outsourcing was suggested when the impact on the above factors was low (Willcocks 1996, pp.338-346; Yakhlef 1997, pp.115-119).

		Degree of integration	
		high	low
high	preferred supplier	strategic partnership	technological maturity
	buy-in	contract out	
low		high	

Figure 2: The technical matrix (Kehal and Singh 2006, p.173)

IT-Outsourcing had to be chosen only when it was profitable in comparison to maintaining an internal IT department (Weihua 2006, p.787).

The criteria used for the make-or-buy decision as described by Ford and Farmer (1986, cited in Willcocks 1996, p.85) were fewer in comparison to the factors mentioned by other authors in the years following; IT-Outsourcing had become a complex issue that required good management skills and alignment with the business objectives. The work of Yakhlef (1997) was comparable to Willcocks's (1996) in the aspects mentioned in this paragraph. Their work has contributed to the objectives of this project since it included information that was necessary in designing the survey that this project was based on.

2.1.2. Selecting an IT-vendor

The purpose of this sub-section was to discuss the criteria that clients had to consider in selecting an IT-vendor.

2.1.2.1. Criteria in selecting an IT-vendor

Determining which IT-vendor to work with was a complex process that involved a number of criteria that the vendor had to satisfy, such as the supplier's capabilities in satisfying the client's core competencies and ensuring that the supplier was looking for long-term relationships instead of quick profits to ensure stability (Willcocks 1996, p.350). Common interpretive grids between the client and the supplier, supplier's previous experience, social and interpersonal compatibility were required (Yakhlef 1997, p.152). The supplier's market share, checking if the supplier had the appropriate infrastructure to support the services needed, checking whether the vendor used subcontractors or not that could lower the timeliness of offered services were added by Cullen and Willcocks (2003, p.21). A wider and in-depth description of such criteria was given by Syaripah et al. (2008, p.5) and it included evaluating the vendor's financial situation (stability), reputation, staff number that could affect the effectiveness of the services, trustworthiness, vision as well as implementation methodology that could affect the quality of services provided.

The criteria in selecting an IT-vendor were good corporate ethics and commitment to teamwork. Conducting interviews was also suggested, and its purpose was to discover the candidate IT-vendor's goals, history, financial reports, organization structure, staff composition, standards, strengths and weaknesses, current and past customers and pricing models (Aalders 2001, p.30, pp.83-84).

According to Cullen and Willcocks (2003, pp.136-146) '*IT-Outsourcing is not an auction*' and it was explained that the decision had to be based on getting the lowest price with a superior supplier instead of just getting the lowest prices. IT-Outsourcing was an ongoing relationship with economic and strategic consequences instead of just a one-off economic transaction.

This issue was called 'due-diligence strategies' (Hurley and Schaumann 1997, p.130; Cullen and Willcocks 2003, pp.141-146; Kehal and Singh 2006, pp.413-416; Syaripah et al. 2008, p.5), and included more criteria like checking for other customers' references, identifying areas of supplementary services that might have been needed, policies and procedures related to internal controls, facilities' management, assessment of supplier's security precautions, determining the provider's ability to detect and respond to

intrusions and service disruptions. Contractual assessment was part of the due-diligence strategies too, and it included checking for evidenced representations and contractual agreements, and obtaining copies of insurances, guarantees and subcontractor agreements. Due-diligence included on-site inspection to check on the IT-vendor's company's environment, checking staff knowledge, ensuring for software licenses, disaster recovery, hardware like PCs, mainframe and telecommunications equipment (Aalders 2001, pp.126-138).

2.1.2.2. The process of selecting an IT-vendor

Client had to request about twelve 'request-for-proposals' (RFP) from vendors, so as to allow for competition and make better deals; RFPs had to specify the company's objectives through IT-Outsourcing (Sparrow 2003, p.79). RFPs could be tailored to encourage responses from the right providers, thus avoiding receiving responses from non-suitable vendors, and their purpose was to bridge the clients' business objectives and the outsourcing contract (Aalders 2001, p.75, p.87). Evaluating the offers to select the preferred vendor was conducted by comparing the key criteria that contributed towards meeting the project's objectives (Sparrow 2003, pp.83-92).

The process of selecting an IT-vendor consisted of defining the pre-selection criteria like financial and organizational strength, preparing the RFPs, then preparing a list of the potential IT-vendors and deciding upon which are the most likely of providing the services required, and finally issuing the RFPs. The process included a quantitative analysis summary that contained the scores for each candidate, a qualitative analysis summary that was the result of interviews and visiting vendor sites, risk analysis report, comparative financial models and comparison against the original business case, and finally giving the finding to the selection team. Conducting interviews would allow for understanding the candidate's organization, culture and capabilities, and visiting sites would allow for evaluation between potential fit (Aalders 2001, pp.80-82; pp.119-124).

The 'competitive tendering selection' technique was suggested to select an IT-vendor. It was about putting pressure on the suppliers to deliver best value for money against other vendors and it allowed for an informed decision to evolve. It involved sending an RFP and selecting the 'best and final offer' (BAFO). The 'multi-staged

tendering' approach filtered the suppliers at the end of each stage, and the use of scoring bids was suggested to assess the received offers. Avoiding the multi-staged approach was only suggested when there was only one available supplier, when the supplier was well known, when the client sought for fast solutions by avoiding comparing alternative solutions and when the organization was experienced in IT-outsourcing. Additional activities were conducting interviews to check if requirements were understood and visiting the sites and workshops to see the vendor's equipment, working environment that can affect the quality of their work (Cullen and Willcocks 2003, pp.115-125, pp.137-138). This process was called 'culling' (Aalders 2001, p.33, p.118).

The work of Aalders (2001) and Cullen and Willcocks (2003) was a considerable contribution on this issue and it covered many of the aspects in selecting an IT-vendor in detail, and it was very useful to meeting the objectives of this project since much of the information given was used in the survey.

2.1.3. Drawing the IT-Outsourcing contract for clients

This sub-section intended to describe the process of preparing an IT-Outsourcing contract and describe and analyze their content.

2.1.3.1. The content of an IT-Outsourcing contract

An IT-Outsourcing contract had to contain technical clauses like cost per Central Processing Unit (CPU) second, cost per megabyte (MB) of storage, access time and support time (Yakhlef 1997, p.147). Contracts had to contain detailed information such as service output levels and prices, unspecified services, performance reporting, responsibilities, staff and asset transfer issues, contract termination conditions, recovery plans and Service Level Agreements (SLA)(Sparrow 2003, pp.167-185). The term Service-Level-Clause (SLC) was introduced by Kehal and Singh (2006, pp.315-316) and it was mentioned that an SLA consists of SLCs, and that they were used as parameters. Offshore contracts dealt with more issues like choosing a governing law and regulations applied in case of a breach of contract, resolving software licenses, data protection and security issues, assuring that IPR and trade secrets were protected so they were not violated in the foreign country, and covering for insolvency and change of control of the

supplier. Clients had to demand service levels achievable by the supplier within the possibilities of hardware, software and third-party suppliers (Kehal and Singh 2006, p.411, p.415, pp.420-425). Contracts had to be irreversible and had to include questions around staff transfer and asset ownership, as well as preparations for contract termination (Houghton 1991, cited in Willcocks 1996, p.349).

The most critical issues in contracts were maintaining focus on the purpose of the IT-Outsourcing project, including commercial, technical and organizational criteria to allow for evaluation, defining the critical criteria, and using lawyers to ensure the legality and correctness of the contract (Aalders 2001, pp.88-91).

The inclusion of contract termination could have been requested by the client, as the supplier may have not performed as good as expected, or because a problem was expected to be repeated many times. Contracts had to be comprehensive and had to be fair for both parties (Aalders 2001, p.207; Cullen and Willcocks 2003, p.7, p.88, pp.98-101, p.132; Kobayashi-Hillary 2005, p.220; Jinmei 2009, p.2).

Contracts had to be short-term and did not have to specify everything because of the continuously changing environment of the IT technology and the organizations (Yakhlef 1997, pp.147-148; Aalders 2001, p.49); this was conflicting to using of long-term contracts like from eight to ten years of length (Applegate et al. 2007, p.438), and conflicting to what has been mentioned about the contract being comprehensive (Cullen and Willcocks 2003, p.98; Parkhe 1993, cited in Barthelemy 2003, p.540).

Cash penalties (Aalders 2001, p.105; Guth 2008, pp.38-39) were referred to as 'the stick' and their purpose was to recover business costs and make vendors perform well. Rewards for over-performing were referred to as 'the carrot' and they served as drivers for achieving the clients' expected performance. Both of them were considered as mechanisms for controlling IT-vendors' behavior.

Penalization for service breaches and low performance and service credits also had to be included in a contract (Sparrow 2003, p.109, p.112; Kobayashi-Hillary 2005, pp.219-220). Contracts had to be based on shared understanding and costs, had to be unambiguous and comprehensive, had to include mechanisms for proposing, negotiating and incorporating changes, have clear contract management, alternative channels of communication and they required regular meetings (Cullen and Willcocks 2003).

The client had to be granted the right to access deposited material like the software source-code, manuals and maintenance tools, compilation instructions as well as the names and contact details of key technical personnel. Responsibilities when failures or delays occurred had to be specified too, as well as specifying if profits would be lost when damages would occur. Termination for convenience was granted for the client, but the vendor could also terminate the contract in cases like when the client would not pay on time (Kehal and Singh 2006, p.411, p.415, pp.420-425).

A contract had to allow for evolution according to technological and business needs, be reversible, and should contain termination and penalization clauses (Pistole and Bragg 2005, p.6; Reyez et al. 2005, pp.403-404). The irreversibility of the contract suggested here comes to conflict to what has been mentioned by Houghton (1991, cited in Willcocks 1996, p.349) who recommended that contracts had to be irreversible.

Contracts had to be very precise otherwise they would result high IT-costs and poor service levels (Saunders et al. 1997, cited in Barthelemy 2003, p.540). Contracts had to be as complete as possible so as to avoid possible opportunism on behalf of the IT-vendor and to avoid costly negotiations (Parkhe 1993, cited in Barthelemy 2003, p.540). Contract had to maintain balance – that is to be fair for both parties – so as to last long (Kern et al. 2002, cited in Barthelemy 2003, p.540). The use of contracts according to Barthelemy (2003, pp.539-540) was called the ‘hard’ side of IT-Outsourcing, while the ‘soft’ side referred to the development of relationships based on trust.

2.1.3.2. Service Level Agreements (SLA)

SLAs were the most important parts of a contract and had to include general terms and conditions, the duration of the contract, termination clauses, change control, audit rights, confidentiality and data protection, security provisions, managing poor performance issues and warranties (Sparrow 2003, pp.154-159). SLAs had to define corrective actions, set the measure and agree on reporting measures, and agree how issued would be managed; the scope of SLAs should define the outputs that contribute to the objectives of the project (Aalders 2001, pp.160-175).

Critical issues (Willcocks 1996) like mainframe production processing, applications software support and desktop service had to be included. An SLA had to

include different contents for each service, and had to be focused on short and important issues. Service targets had to be measurable so they could be reported. SLAs had to include ‘what’ and at ‘what level’ the service was to be like, but not ‘how’ as this was considered to be a supplier’s issue. Indicative terms that an SLA had to include in some specific occasions according to Willcocks (1996, pp.295-302) were:

- On-line service targets like the percentage of hours that a service was usable, incident frequency, and maximum incident duration.
- Batch service targets like input and output deadlines.
- Documentary items like signatures, validity period.
- Application support like error fixes, small and large enhancements.
- Desktop and helpdesk like scope and security, service targets like support hours.

The discussion about drawing a contract showed that technical issues, the use of short-term contracts and requesting for services accomplishable within the strengths of the vendor were mentioned only during the 1990’s, while the use of long-term contracts, management and legal issues were more of concern after the year 2000. Each of the literature discussed in this paragraph contributed towards creating the image on how contracts had to be drawn, and each one was complementary to the issue of contracting. The work of Yakhlef (1997) was specific about technical issues, while the work of Kehal and Singh (2006) was about offshore-outsourcing. A comprehensive description of the steps to consider in contracting were given by Syaripah et al. (2008). Their work was useful to meeting the objectives of this project since the information extracted took part in the survey.

2.2 IS-Improvement view

This sub-section demonstrated, analyzed and compared the advantages and disadvantages of IT-Outsourcing for clients as those had been mentioned by various authors. Besides the numerous advantages of IT-Outsourcing, many disadvantages of IT-Outsourcing for clients had been mentioned as well, some of which are conflicting to the advantages, and it is the purpose of this paragraph to discuss about them so as to develop the IS-Improvement view of IT-Outsourcing for clients.

2.2.1. Advantages of IT-Outsourcing for clients

The purpose of this sub-section was to describe and analyze the advantages of IT-Outsourcing for clients.

Cost advantages of IT-Outsourcing for clients included lower costs in comparison to maintaining an in-house IT-department (Williamson 1975, cited in Yakhlef 1997, p.71; McLellan et al. 1995, p.309; Aalders 2001, p.11, pp.221-222; Lackow 2001, p.7, p.9). Cost improvements (cost reductions) through IT-Outsourcing were assigned to lower prices of the IT services, staff reductions, buying services only occasionally needed and keeping capital for key business areas (Willcocks 1996, p.333). Cost reductions used to come through selling equipment to the supplier and by avoiding investment in technologies that would quickly become obsolete (Yakhlef 1997, p.16). Tax advantages were described to emerge because outsourcing fees were deductible as business expenses (Takac 1993, pp.33-34).

Focus on core business that was about focusing on activities that contribute towards differentiation and strategic advantage, was mentioned by authors like Takac (1993, p.33), Willcocks (1996, p.333), Aalders (2001, p.10, p.223), and Lackow (2001, p.9). Focusing on core business would come because of the ability to free-up resources and pay less attention to IT-matters since the responsibility for a company's IT services was given to the IT-vendor (Ford and Farmer 1986, cited in Willcocks 1996, p.80; Yakhlef 1997, p.16; Belisario-McGrath 2000, p.17; Cullen and Willcocks 2003, p.16; Sparrow 2003, pp.18-19; Tafti 2005, p.549).

Flexibility was enabled by assisting moves to distributed systems and allowing for systems replacement (Ford and Farmer 1986, cited in Willcocks 1996, p.80). Internal flexibility was the result of freeing-up resources (Lackow 2001, p.9). Flexibility was facilitated because IT-Outsourcing was considered to be a way for restructuring an organization as it allowed for downsizing, turning the organization into a leaner, timelier, more responsive and proactive, and it assisted in fulfilling periodic customer demands (capacity)(Yakhlef 1997, pp.16-17; McLellan et al.1995, pp.313-314). Flexibility was also enabled since IT-Outsourcing used to give greater ability to handle fluctuations in the workload and increased collaboration (Belisario-McGrath 2000, p.8, pp.16-19).

According to Aalders (2001, p.11, p.225), flexibility was due to the fact that IT-Outsourcing allowed for overcoming shortage of resources.

Access to appropriately trained staff and high-quality services and accomplishing competitive edge was mentioned by Takac (1993, p.34), McLellan et al. (1995, pp.314-315) Hurley and Schaumann (1997, p.127), Belisario-McGrath (2000, p.18), Aalders (2001, p.10, pp.226-227), Lackow (2001, p.9), Cullen and Willcocks (2003, p.16), Sparrow (2003, p.44), Weinert and Meyer (2005, p.15), Weihua (2006, p.785), and Syaripah et al. (2008, p.3) under the conditions that limited resources were available.

Political drivers like career enhancement for the IT-Managers because of enhancing the reputation as business-persons, realization of benefits through IT, organizational politics like simplifying management's agenda, facilitating mergers, elimination of politics after acquisitions and vendors' immunity to political pressures, appeared between the years 2000-2005 (Belisario-McGrath 2000, pp.19-20; Hirschheim and Lacity 2000, p.102; Weinert and Mayer 2005, p.12, p.14). The emergence of such political advantages may indicate an IT era that could be called the 'political' era. IT-Outsourcing also used to assist in achieving cultural change as it used to introduce a different way of thinking about the delivery of services (Aalders 2001, p.224).

Accelerating reengineering benefits was mentioned by Lackow (2001, p.7).

Advantages of offshore-outsourcing were entry to large and international markets, dealing with the inadequacy of domestic resources, improved offshore production, round the clock operations because of the different time-zones in each country, customization of services according to local standards and staff scalability according to demand. Partnering with other firms would offer more financial benefits because of decreasing risks through sharing experience, shortening cycle times by increased collaboration, lowering investments and creating better responsiveness (Apte and Mason 1995, p.1252; Thondavadi and Albert 2004, pp.3-18; Dibbern et al. 2004, p.33, p.90 cited in Kehal and Singh 2006, pp.250-251; Kobayashi-Hillary 2005, p.108; Kehal and Singh 2006, pp.94-95, pp.122-124; Weihua 2006, p.786). Career enhancement for project managers was because of managing relationships and globally dispersed teams and the fact that the suppliers' processes could make the client's processes improved because of

proceduralizing and by documenting them (Zweig et al. 2006, cited in Lacity and Rottman 2009, p.10).

The advantages of IT-Outsourcing in the 1980's were financial improvements. During the 1990's the advantages were increased and included focus on core, tax advantages and various flexibility issues; offshoring has been incorporated in the 1990's as well. During the 21st century the advantages have evolved to political by including networking, career enhancement for managers and world-wide collaboration by offshoring.

2.2.2. Disadvantages of IT-Outsourcing for clients

The purpose of this sub-section was to describe and analyze the disadvantages of IT-Outsourcing for clients, many of which were conflicting to the advantages.

The costs needed to rebuild an internal IT department (back-sourcing) and requiring attention to particular IT-needs of a specific company were sources of hidden costs for clients (Lackow 2001, p.10; Sparrow 2003, p.163, p.202) and they were assigned to purchasing computers and software and hiring back staff (Hirschheim and Lacity 2000, p.102, p.106). According to Earl (1996, p.29), Aubert et al. (2001, pp.8-9), Gopal et al. (2003), Barthelemy (2001, cited in Tafti 2005, p.556) hidden costs were assigned to exceeding deadlines, transition and post-outsourcing costs for the client (also cited in Belisario-McGrath 2000, pp.20-21; Sparrow 2003, p.202; Willcocks and Currie 1997, cited in Kehal and Singh 2006, p.380). According to Tafti (2005, p.556), hidden costs also included transaction costs like searching costs, and performance monitoring. For Aalders (2001, p.19, p.49), hidden costs were assigned to additional working hours (overtime) and the use of consultants. The numerous hidden costs described here come into contradiction with the idea that IT-Outsourcing reduces costs discussed in the previous sub-section.

Focus on core business was questioned as it was stated that IT-matters were brought into the attention of the client's management and integrated into the business when IT-Outsourcing was involved. This situation was assigned to difficulties in identifying the importance of IT to the business, in the case when IT was wrongfully estimated to be appropriate for outsourcing. This statement is conflicting to freeing-up

resources and focusing on core business as previously mentioned, and it was the reason why it was mentioned that IT-Outsourcing would increase complexity instead of decreasing it (Yakhlef 1997, p.84, p.106).

Flexibility was also negatively influenced since companies' business kept changing (Lackow 2001, p.10) and because the knowledge-gap between IT-staff and marketers would become greater. The fact that IT-Outsourcing arrangements had to be at a formal level with the use of contracts was a negative because it was complicated and time consuming, and it resulted in increase of bureaucracy, increase of the procedures for acquiring new technologies and applications, and it led to more rules and regulations (Yakhlef 1997, p.112; Lackow 2001, p.10). The time-consuming examination periods of the Request For Proposals (RFP) could allow for change of technology, thus not buying the newest IT products (Belisario-McGrath 2000, p.27). This was conflicting to the idea that IT-Outsourcing contributed towards flexibility by turning on organization to a more timely one as suggested by Yakhlef (1997, pp.16-17), and also conflicting to Belisario-McGrath (2000, p.8, pp.16-19) as it was mentioned increased efficiency through less hierarchy. Long-term contracts would make other suppliers stop considering a firm as a potential client, so the client would lose the opportunity to be informed about other deals possibly better than the one they already had (Yakhlef 1997, pp.161-162). This used to leave the client at the mercy of the supplier (Takac 1993, p.34; Aalders 2001, p.19) and possibly exposed to opportunistic behavior, in contrast to the idea that IT-Outsourcing would decrease risks by partnering and offer stability in a turbulent world as stated by Applegate et al. (2007, pp.440-447); opportunistic behavior was defined as being provided standardized services instead of unique ones, and it was the result of badly drafted contracts (Jinmei 2009, p.2). Stability could also be negatively affected when the supplier was acquired by another company that could be indifferent to a particular service (Lackow 2001, p.10; Sparrow 2003, p.30) or if the vendor would go bankrupt (Takac 1993, p.34). Flexibility was also negatively influenced because of difficulties in back-sourcing and ability to evolve its own technology or change technological direction (Belisario-McGrath 2000, pp.22-24).

Access to advanced technical skills, just-in-time (JIT) delivery and new technology were also questioned as it was stated that IT-Outsourcing usually involved

staff transfer from the client to the supplier meaning that activities were being performed by the same staff like before, without any improvements in the quality of services, but actually reduction in the quality of service (Earl 1996, pp.27-28; Yakhlef 1997, p.160; Hirschheim and Lacity 2000, p.107; Aubert et al. 2001, pp.8-9; Lackow 2001, p.10; Tafti 2005, pp.555-556). This was conflicting to the idea that IT-Outsourcing enabled access to advanced skills and knowledge. Other possible reasons were suppliers' internal problems or lack of responsiveness (Sparrow 2003, p.30). Vendors' systems failure could result in delaying deliveries and shutting down critical operations affecting the client's productivity, coming into contradiction to offering round-the-clock operations and stability (Aalders 2001, p.19; Lee et al. 2003, p.88). Access to new technology was also not guaranteed, since the supplier could not necessarily be providing IT-products of the latest technology (Earl 1996, pp.28-29; Belisario-McGrath 2000, p.23; Hirschheim and Lacity 2000, p.101). These are conflicting to the idea that IT-Outsourcing enabled access to advanced technical skills and expertise as previously mentioned by various authors.

Staff related problems for clients, dealt with the fact that IT-Outsourcing involved staff transfer to the IT-vendor, that meant losing experience, organizational relationships and understanding. Losing human feelings, intuitions, value-based interpretations and cultural interchanges could result losing long-term benefits such as trust and knowledge, for gaining short-term ones like immediate cost reductions (Earl 1996, pp.29-30; Yakhlef 1997, p.161; Aubert et al. 2001, pp.8-9; Lackow 2001, p.10; Sparrow 2003, p.31).

Risks could arise due to an unclear contract, bad contract governance, bad account management on behalf of the vendor that could let the customer dissatisfied (Lackow 2001, p.10), and because of because relationships were often handled by marketers instead of technologists who did not have the appropriate knowledge (Yakhlef 1997, pp.165-167)

A wide description of the offshore-outsourcing disadvantages included language and cultural differences that could lead to misunderstandings, lack of trust, lack of domain knowledge of the offshore unit, lack of control over quality and schedule, possible violation of Intellectual Property Rights (IPR) because of different regulations regarding IPR and confidentiality of information in the foreign country, geopolitical instability in the foreign country, threat to security, availability and integrity of the

system resources; all these could also be the cause of extra charges (Kehal and Singh 2006, p.380, pp.411-412). Hidden costs of offshore IT-Outsourcing were assigned to the management's time devoted to the vendor's management, supervision costs like data and IPR security and paying for staff training; additionally, the client's company image could have been damaged in the case when the offshore IT-vendor would lose good-will to deliver on services (Thondavadi and Albert 2004, pp.23-26). The increase of complexity in offshore-outsourcing was analyzed in-depth and it was assigned to the different time-zones, the increased efforts of knowledge coordination and the need for more controls, and difficulties in transferring knowledge because of time-consuming structures (Koh et al. 2004, p.366; Carmel 2006, cited in Lacity and Rottman 2009, p.5; Lacity and Rottman 2009, pp.13-16). Lack of control over quality and schedule was also analyzed in-depth and it was described to be a result of delays due to underestimation of projects' length, the time needed to prepare visas for staff who needed to travel, staff vacations and other staff events (Lacity and Rottman 2009, pp.13-21). Cultural differences had impact on various issues like using different software development processes, the need for more detailed definition of requirements and the need for documenting changes.

Disadvantages of IT-Outsourcing were hidden costs, no focus on core business, no flexibility, no access to advanced skills and knowledge, and low security. A wide picture on the advantages of IT-Outsourcing was given by Willcocks (1996), while an opposition to them was given by Yakhlef (1997) and Aubert et al.(2001) by describing the negative aspects of IT-Outsourcing. A wide description of the advantages and disadvantages of offshore-outsourcing was given by Kehal and Singh (2006). Their work was useful to the objectives of this project because the positive and negative effects mentioned were used in the survey that was partially intended to gather information about the IS-Improvement view (advantages and disadvantages) of IT-Outsourcing for clients.

3. CONCEPTUAL FRAMEWORK

The purpose of this section was to summarize the themes that this project was based on and show how they are connected to each other.

The themes that this research is focused on are:

a) Implementing IT-Outsourcing for clients that involves the factors that contribute towards the make-or-buy decision, the criteria in selecting an IT-vendor and factors in drawing an IT-Outsourcing contract. The make-or-buy decision involves choosing which IT areas to insource, outsource, and deciding upon vendor selection criteria like comparing the firm's skills against the skills of the vendors (Kehal and Singh 2006, pp.5-6). Selecting an IT-vendor is based on the offers returned and other criteria like the IT-vendor's stability (Syaripah et al. 2008, p.5). Drawing the proper IT-Outsourcing contract involves the definition of clauses about costs of IT-services that will be offered and the duration period (Sparrow 2003, p.167, p.179).

b) The 'IS-Improvement view' of IT-Outsourcing that involves the advantages of IT-Outsourcing for clients like focusing on core business (Cullen and Willcocks 2003, p.16) and driving to profitable growth (Willcocks 1996, p.333), and disadvantages like lack of control over quality and schedule (Lacity and Rottman 2009, pp.14-15).

The relationship between these two themes is that implementing IT-Outsourcing for clients allows for IS-Improvements (increased IT-resources efficiency)(DiRomualdo and Gurbaxani 1998, pp.4-7).

4. METHOD

The purpose of this section was to explain how this project was conducted, by describing how the topic was chosen, the research process, the data source and collection, how data were gathered, how the analysis was performed, method critique and validity and reliability.

4.1. Choice of topic

The researcher was motivated to conduct this research because IT-Outsourcing is a part of IT-Management, because of his experience in IT, the conflicting ideas expressed in the literature about the themes of IT-Outsourcing and his wish to learn more about IT-Outsourcing in an empirical way that will be useful for his future career as an IT-Manager.

4.2. Research process

According to Fisher (2007, pp.153-154), an exploratory research was the research with which the researcher had no preconceptions about what was to be found, it required an open or semi-structured approach, and conceptual frameworks could be used. Action research (Fisher 2007, pp.53-54) was the type of research with which an issue could be improved or changed by taking action and learning from experience, and this was accomplished by changing ones values by testing them in action. Action research involved learning through reflection and action, and monitoring the consequences of the action by the people who were affected by the change. An action research was focused on small-scale but important issues like managerial practices, and it was characterized by confronting data from different perspectives, linking reflection and action, incorporating reflection and developing values, and testing findings through critical professional discussion. Realist researchers' research material could be qualitative, and they used to analyze data by counting frequencies thus adding a quantitative element in their material, that used to be called 'content analysis' (Fisher 2007, pp.18-20, p.43, p.47, pp.183-185).

The fact that this research was open to the ideas of various authors and respondents, the fact that it included a conceptual framework and the fact that it was based on a semi-structured interview/questionnaire made it called an exploratory semi-

structured approach. This research followed an action methodological stance because it aimed at improving IT-Outsourcing that is an IT-Management issue, and it was conducted by acquiring the experience of four respondents, that was done by asking them to reflect on IT-Outsourcing (questionnaire in appendix I) based on the conflicting discussion of IT-Outsourcing themes as those had been described by the various authors' perspectives, and then linked the respondents' reflections with the authors' ideas. This research also has an element of a realist stance, as the analysis was qualitative following a content analysis.

4.3. Data source

This project was based on both primary and secondary data. The primary data came from four organizations, two of which were established in the southern EU and two in the northern EU. Two of these organizations were in the shipping business that transports items from one country to another, the third was an electronic-devices factory that used to produce technological products for consumers, and the fourth was a university. These specific organizations were chosen because they intensively used to use IT in their activities, and because of the access allowed through personal contacts. The secondary data helped build the critical literature review that was formed from the content of books and articles found at Mälardalens Högskola's library and databases, and interlibrary loans.

4.4. Data collection

4.4.1. Interviews

Semi-structured interviews were conducted and they were based on a questionnaire (see paragraph 4.4.2). A semi-structured interview was the type of interview that was controlled by the interviewer using prepared options, but at the same time the respondent was also given the opportunity to use his/her own words to complete an answer (Fisher 2007, p.159). Three interviews were conducted for the data gathering, they lasted about forty-five minutes each and they were held at the organizations' premises. The reflections were given by the director of the IT-division of the university, and the IT-Managers of the two shipping organizations.

4.4.2. The questionnaire

Questionnaires had to be short, attractive, divided by issue (Fisher 2007, pp.192-199). The questionnaire was sent by e-mail to the electronic-devices factory IT-Manager who had a 12-year experience in the field. The questionnaire was logically and sequentially structured as the questions followed the sequence of themes of the conceptual framework. The content of each question was derived from the critical literature review. The questionnaire consisted of eleven questions but there was space for the respondent to write his/her own words.

The questions were of various types like checklist and ranking questions that gave the respondent the opportunity to select many options and prioritize statements. This kind of questions were used for questions 1, 4, 5, 6, 10 and 11 where the respondents were asked to choose and prioritize the areas to outsource, the criteria in choosing an IT-vendor, the factors for a successful relationship, the contents of a contract and the advantages and disadvantages of IT-Outsourcing for clients. The purpose of question-1 was to gather data to check which IT-areas were the most critical ones for outsourcing for these organizations. Questions 4, 5 were needed to gather data to analyze the factors in selecting an IT-vendor and the factors for a successful IT-Outsourcing relationship. Question 6 was necessary to gather data to analyze the factors in drawing a contract. Questions 10 and 11 were needed to gather data to analyze the IS-Improvement view of IT-Outsourcing for clients, by identifying and discussing about the advantages and disadvantages of IT-Outsourcing that organizations used to experience.

A dichotomous question that was necessary when a clear answer was needed, was used for question-2 where the respondent was asked to choose between high or low impact of IT on strategy and operations.

A multiple-choice question that provided with certain answers and the respondent was asked to select one, was used for question-3 where the respondent had to choose the IT-sourcing solution that his/her company used to use, and its purpose was to help identify which IT-sourcing solution each organization used to use that would help identify which IT-sourcing solution was the most critical. The purpose of questions 2-3 was to check which IT-sourcing solution was being used by these organizations in

conjunction with the position of IT on the strategic grid (figure 1), that would further help identifying the critical aspects in implementing IT-Outsourcing.

The answers to questions 1-6 would help identify the critical factors in implementing IT-Outsourcing for clients.

Open questions were used for the questions 7, 8 and 9 with which the respondents were asked to express their opinion on focusing on core business, driving to profitable growth, and access to improved quality of services and specialized skills respectively. The purpose of these questions was to check what the respondents' opinions about those theoretical benefits of IT-Outsourcing were, to further test their validity. The respondents were prompt to write their own words on these three critical issues, something that allowed for deeper understanding on how they perceived the IS-Improvement view of IT-Outsourcing, or explain why agree or disagree with them. Their words could possibly help identify how these issues could be improved.

4.5. Data analysis

The data collected from the survey were inserted in a table in the findings section and they were qualitatively analyzed, which was suitable to semi-structured approaches. Content analysis was used to count the frequencies of the various elements that helped identifying the most critical factors for each question (Fisher 2007, pp.183-185). Qualitative methods were based on inductive logic and allowed for in depth analysis. Inductive logic was based on inductive analysis, that is the analysis based on data (Patton 1990, pp.13-14, p.44, p.390). Such a theoretical approach required that the analysis had to be structured with subheadings according to the conceptual framework. For the sake of the simplicity of the analysis, the organizations' interviewees were coded as follows:

- The interviewee of the shipping organization 1, as 'SH1'
- The interviewee of the shipping organization 2, as 'SH2'
- The interviewee of the electronic devices factory, as 'EDF'
- The interviewee of the university, as 'UNS'

4.6. Validity and reliability

Improvements on the validity of the findings followed a dialectical critique that was about looking for contradictions in the research material, and plural structure that would recognize that there were different opinions on an issue by different stakeholders (Fisher 2007, pp.296-300). Validity for Patton (1990, p.14) depended on the skills of the researcher. Validity and reliability took part in the analysis and conclusions sections where the findings were analyzed and connected to the literature.

4.7. Method critique

The results of this research might not be generalizable as for Cronbach (1975 p.122, cited in Patton 1990, p.487) generalizations from qualitative analyzes that are based on a small number of responses should not be made.

5. FINDINGS

The purpose of this section was to demonstrate the data gathered. The data were input in a table to help conduct the content analysis.

The data collected from the four organizations are shown in table 1.

Number of responses	4
Type of gathering	Interviews: 3 By e-mail: 1
Q1. Areas to outsource	- End-user support: 2 - Software development and maintenance: 3 - Hardware maintenance: 4 - Staff training: 3 - Networking: 3 - e-business solutions: 3 - Security: 2 - Systems implementation: 0
Q2. Impact of IT on:	
Strategy	High: 3 Low: 1
Operations	High: 4 Low: 0
Q3. IT-sourcing solution used	- Total outsourcing: 0 - Total insourcing: 0 - Selective/partial outsourcing: 4
Q4. Criteria in choosing a supplier	- Low costs of services: 4 - Common culture, interpretive grids and shared values: 2 - Supplier's stability (financial condition): 4 - Management style and strategic orientation: 1 - Supplier's reputation: 4 - Supplier's vision: 1 - Chemistry, interpersonal relations: 0
Q5. Factors for a successful IT-Outsourcing relationship	- Supplier's understanding of client's objectives: 4 - Choosing the right supplier: 2 - Supplier's attention to client's specific problems: 2 - Frequent client-provider contacts: 2 - A good value-for-money relationship: 0 - Top management's support and understanding: 3 - Proper contract structuring: 2
Q6. Clauses in an IT-Outsourcing contract/Service Level Agreement	- Precise definition of costs: 4 - The duration of the contract: 0 - Penalization for non-performance: 1 - It should allow for evolution due to the continuously changing environment of IT and business needs: 3 - Termination clauses because of dissatisfaction between one of the two parties or security breach or intellectual property violation: 3
Q7. IT-Outsourcing enables focusing on core business (Agree/disagree)	Agree: 1 Disagree: 3 Words:

	<p><i>Shipping 1:</i> “Can be achieved by creating your own local team that is loyal, experienced, dedicated, with proper and updated knowledge and experience of your systems and environment”.</p> <p><i>Shipping 2:</i> “I believe that outsourcing would never fully cover an organization’s requirements especially medium to large size organizations. Business requirements evolve all the time that requires changes to software implementations and even hardware. If everything is outsourced implementation will be much more costly”.</p> <p><i>University:</i> “It takes 1-2 years to understand the contract”.</p> <p><i>Electronic devices factory:</i> “IT is important part of the production. Firms/organizations are the only ones, who know absolutely what they need and want. They need to understand the big pictures, and how the IT is involved to keep business up and running. Outsourcing-companies are more or less focused on keeping agreements, which are written to the official contract. They are not too interested in IT related cost-saving activities, because it’s out of their own business. The company has to have IT knowledge inside, otherwise they cannot manage and understand the whole IT properly. And they are conditional on the company, which has they own (different) business targets”.</p>
<p>Q8. IT-Outsourcing drives to profitable growth (Agree/disagree)</p>	<p>Agree: 1 Disagree: 3</p> <p><u>Words:</u> <i>Shipping 1:</i> “Standardized contracts can increase costs for the long run and reduce service levels”.</p> <p><i>Shipping 2:</i> “Unless you have instant support for outsourced software immediate changes that are essential for business cannot be implemented”.</p> <p><i>University:</i> “Only if you control your own IT department before outsourcing it”.</p> <p><i>Electronic devices factory:</i> “This was understanding a few years ago. But it’s important for company to have key IT-teams inside. It’s has also seen, that outsourcing won’t give any benefits on a long run. Own IT staff are the persons, who knows company’s IT systems; they are ready to do everything without separate bill. It’s very difficult to write a contract with an outsourcing-company, which includes all the needed tasks. Outsourcing-company will do only tasks, which are agreed and written down. Of course they can do something more, but then the company must pay something more, which is very often a big amount of money. Outsourcing-companies are not interested in to do development work, which might lay down their business numbers, like cost-saving activities, ramp down low-utilized services/servers, do consolidation work, etc.”</p>
<p>Q9. IT-Outsourcing enables access to improved quality/skills (Agree/disagree)</p>	<p>Agree: 2 Disagree: 2</p> <p><u>Words:</u> <i>Shipping 1:</i> “Outsourced IT personnel leaves/abandons knowledge and service can’t be controlled by the organization and personnel turnover can create overheads, reduce service quality and lose of knowledge and experience with the org systems”.</p>

	<p><i>Shipping 2:</i> “I believe it is advantageous during hardware installations and network implementations. Knowledge can also be transferred by training in-house IT departments”.</p> <p><i>Electronic devices factory:</i> “IT-Outsourcing is not the way to gain specialized technical skill/etc. You can whenever pay consultant service, technical experts, etc. whatever you occasionally need. Like I wrote before, IT-Outsourcing Company will deliver only the things/tasks/works what is written down to the contract. If you write down ‘improved quality of services, specialized technical skills/knowledge/expertise’, you must pay for it. And it’s very often difficult to know beforehand, what kind of skill/knowledge/etc. it will be needed in the future. The company is also tied to use this one company instead of the best in that specialized area”.</p>
Q10. The advantages of IT-Outsourcing	<ul style="list-style-type: none"> - The fact that it enables downsizing: 2 - The fact it offers lean programs and streamlining of operations: 1 - Networking in the market: 1 - It refreshes the IT infrastructure: 2 - The fact that offshoring offers full-time operations and customization of customer needs according to their local standards: 0 <p><u>Words:</u> <i>Shipping 1:</i> “Marked two. Don’t agree with the rest.”</p> <p><i>Electronic devices factory:</i> “I cannot see any important advantages of IT-Outsourcing. This is my personal opinion, and based on my experience what I have seen.”</p>
Q11. The disadvantages of IT-Outsourcing	<ul style="list-style-type: none"> - The client has no control over the quality and schedule of service: 2 - The client remains at the mercy of the supplier and might be exposed to negative opportunism: 4 - Loss of internal expertise, capabilities and ability to innovate: 4 - It may include hidden costs as additional services: 4 - The fact that in many cases the relationships are managed by marketers instead of technologists without enough training: 4 - It erases feelings, intuition, personal interrelations and culture: 2 - The supplier may lack of domain knowledge: 2 - Increases bureaucracy by requiring contracts/Service Level Agreements: 2 - Possible violation of intellectual property and other security issues: 0

Table 1: Findings

Explanation: The left column includes a short version of the questions given to the respondents, and the right column includes the options provided to the respondents, their frequencies (counts) and the respondents’ own words.

6. ANALYSIS OF DATA

The purpose of this section was to demonstrate and analyze the primary data gathered and connect it to the literature, and it is structured according to the framework of reference.

6.1. The aspects in implementing IT-Outsourcing for clients

‘Hardware maintenance’ had the highest frequency since it was selected by all four organizations. ‘Software development and maintenance’, ‘staff training’, ‘networking’ and ‘e-business solutions’ were selected three times each. ‘End-user support’ and ‘security’ were selected twice each, and ‘systems implementation’ was not selected at all.

IT had a high impact on strategy for the three organizations (SH1, SH2 and EDF) and low impact for the UNS, and had high impact on the operations of all four organizations. This means that IT was ‘strategic’ for the three organizations, and for the UNS IT was ‘factory’, according to the diagram of figure 1.

‘Selective/partial IT-Outsourcing’ was the only option selected as it was selected by all four organizations, coming into agreement with Hirschheim and Lacity (2000, p.100) who mentioned that selective IT-Outsourcing is the most commonly used IT-sourcing solution. ‘Total IT-Outsourcing’ and ‘Total IT-Insourcing’ were not selected at all. One observation is that although IT was ‘strategic’ for three organization, they adopted selective/partial IT-Outsourcing, that is conflicting to the suggestions shown in figure 1.

‘Low costs of services’, ‘supplier’s stability’ and ‘supplier’s reputation’ had the highest frequency as they were selected four times each by all four organizations. ‘Common culture, interpretive grids and shared values’ was selected twice, and one observation is that this factor was selected by none of the two shipping organizations. ‘Management style and strategic orientation’ and ‘supplier’s vision’ were only selected once each. ‘Chemistry, interpersonal relations’ was not selected at all.

‘Supplier’s understanding of client’s objectives’ had the highest frequency of four, since it was selected by all four organizations. ‘Top management’s support and understanding’ had a frequency of three. ‘Choosing the right supplier’ was selected twice

by SH1 and SH2, 'supplier's attention to client's specific problems' and 'proper contract structuring' were selected twice each. 'Frequent client-provider contacts' was selected once by UNS. 'A good value-for-money relationship' was not selected at all. One observation is that 'supplier's understanding of client's objectives' was the number-1 option by SH2, EDF and UNS.

'Precise definition of costs' had the highest frequency of four, and 'it should allow for evolution due to the continuously changing environment of IT and business needs' and 'termination clauses because of dissatisfaction between one of the two parties or security breach or intellectual property violation' had a frequency of three each. 'Penalization for non-performance' was selected only once, and 'the duration of the contract' was not selected by any of these organizations. One observation is that 'precise definition of costs' was the number-1 selected option by all four respondents.

6.2. IS-Improvement view: The advantages and disadvantages of IT-Outsourcing for clients

Three respondents (SH1, SH2, EDF) disagreed with the statement that IT-Outsourcing enabled focusing on core business. SH1 mentioned that focusing on core business would come through the development of the organization's own internal IT department that would be dedicated and experienced and with proper knowledge about the company's own systems. SH2 mentioned that focusing on core business could not be accomplished because of the continuously changing business needs that require changes in software and hardware. EDF mentioned that only an internal IT department would satisfy the organization's needs and enable focusing on core business, because it would be close enough to understand their own needs and how IT facilitates their business; the same respondent also mentioned that IT-vendors were mainly focused on official contractual agreements and were not usually interested in the customer's cost saving goals. Individualized contracts in contrast to standardized ones according to one respondent, are expected to reduce costs and increase quality of services. UNS mentioned that focusing on core business through IT-Outsourcing is true, but it requires one to two years to understand the contract. Most of the respondents' words come into agreement with Yakhlef (1997, p.84) who questioned focusing on core business.

Three respondents (SH1, SH2, EDF) disagreed with the statement that IT-Outsourcing drove to profitable growth. This idea was rejected by SH1 based on the claim that vendors' standardized contracts increase costs in the long run and reduce service levels. SH2 claimed that profitable growth could only be achieved if they were provided with instant support from their IT-vendor on critical activity changes. EDF mentioned that driving to profitable growth was an idea that belonged to the past and it was further explained that IT-Outsourcing involved additional costs because of services needed but not specified in the contract, as mentioned by Sparrow (2003, p.163); EDF also added that an internal IT department would do anything necessary to satisfy the organization's needs without extra charges. UNS mentioned that driving to profitable growth was true, but it could only happen if you were capable of controlling your own IT-department before outsourcing it. The negative opinions around driving to profitable growth come into agreement with Sparrow (2003, p.163, p.202), Willcocks and Currie (1997, cited in Kehal and Singh 2006, p.380) who wrote about hidden costs, that is conflicting to driving to profitable growth.

One observation is that SH1, SH2 and EDF disagreed on both focusing on core business and driving to profitable growth.

Two respondents (SH2 and UNS) agreed with the statement that IT-Outsourcing was a way for firms/organizations to gain access to improved quality of services and specialized skills, and the other two respondents (SH1 and EDF) disagreed. SH1 disagreed based on the fact that IT-Outsourcing involved staff transfer from the client to the IT-vendor that meant loss of control of IT, as stated by Lackow (2001, p.10) and Tafti (2005, pp.555-556); staff transfer meant 'abandoning' IT, reduction of service quality and loss of knowledge because of alienation with the company's systems. For the same respondent (SH1), access to improved quality of services and specialized skills could be achieved by familiarizing the IT-vendor with the company's IT systems, while developing the capability to forecast the IT needs of a company would allow for more detailed contracts by the inclusion of those services in the contract, thus satisfying more areas; predicting future IT needs would allow for more detailed contracts by allowing for those services to be specified and provided. SH2 agreed with this statement, but specified that this was only true during hardware and network installations. EDF mentioned that

IT-Outsourcing was not a way to gain access to advanced skills and knowledge, and that this was something that could occasionally be done; the same respondent also mentioned that advanced skills and knowledge should have been specified and paid for in the contract, but this is difficult because it would require predicting the organization's future needs, and added that cooperating with one specific IT-vendor would lower the opportunity to cooperate with other IT-vendors possibly better than the existing one, thus, losing a real opportunity to access advanced skills.

One observation is that the three statements analyzed above were all supported by UNS, and that SH1 and EDF rejected all three of them.

'The fact that IT-Outsourcing enables downsizing' and 'it refreshes the IT infrastructure' were selected two times each and they have the highest frequency among the rest. 'The fact it offers lean programs and streamlining of operations' and 'networking in the market' were selected one time each. 'The fact that offshoring offers full-time operations and customization of customer needs according to their local standards' was not selected at all. One observation is that EDF did not select any of the advantages. Another observation is that SH1 selected one option only, SH2 and UNS selected two options only.

The fact that 'it may include hidden costs as additional services', the fact that 'the client remains at the mercy of the supplier and might be exposed to negative opportunism', 'loss of internal expertise, capabilities and ability to innovate' and 'the fact that in many cases the relationships are managed by marketers instead of technologists without enough training' were selected all four respondents. The fact that 'the client has no control over the quality and schedule of service' was selected 2 times by SH1 and SH2, and 'the supplier may lack of domain knowledge' were selected two times by SH2 and EDF. 'It erases feelings, intuition, personal interrelations and culture' was selected twice by SH1 and UNS. 'Increases bureaucracy by requiring contracts/Service Level Agreements' was selected twice by UNS and EDF, and 'Possible violation of intellectual property and other security issues' was not selected at all. One of the observations is that 'loss of internal expertise, capabilities and ability to innovate' was the number-1 disadvantage by UNS and EDF.

7. CONCLUSIONS

The purpose of this section is to show the outcomes that resulted from the analysis of data that meet the objectives of this project.

The critical aspects in implementing IT-Outsourcing for these four organizations were: 'Hardware maintenance' is the most critical areas to be outsourced. Selective/partial IT-Outsourcing is the IT-sourcing solution preferred by these organizations although IT was strategic for them, and this makes 'selective/partial IT-Outsourcing' the critical IT-sourcing solution. 'Low costs of services', 'supplier's stability' and 'supplier's reputation' are the most critical factors in selecting an IT-vendor, and 'supplier's understanding of client's objectives' is the most critical factor for a successful relationship between clients and vendors. 'Precise definition of costs' is the most critical factor in drawing an IT-Outsourcing contract.

The critical aspects of the 'IS-Improvement view' of IT-Outsourcing for clients are: Focusing on core business was not true for three out of the four organizations, that is the reason why it can be said that focusing on core business is not a real advantage of IT-Outsourcing. Achieving focus on core business requires having an internal IT-department and it takes one or two years to understand the contract. Driving to profitable growth was not directly obvious for these four organizations. The fact that the three organizations have arguments against it and the other one organization mentioned that this is only possible under certain circumstances (being provided with immediate support when required), shows that driving to profitable growth is not an IT-Outsourcing advantage for these organizations. Profit, according to the respondents, can be achieved by using individualized contracts, by being provided with immediate support when required, by limiting hidden costs, having an internal IT-department, and by being capable of controlling your own IT-department before outsourcing it. Gaining access to improved quality of services and specialized skills is neutral, since half respondents agreed with this statement while the other two disagreed; it can be achieved by giving clients staff to help eliminate the sense of 'abandoning' IT, by familiarizing the vendor with the clients' IT-environment, forecasting IT needs, by including them in a contract, and by using individualized contracts. 'The fact that it enables downsizing' and 'it refreshes the IT

infrastructure' are the most critical advantages of IT-Outsourcing for clients. The fact that IT-Outsourcing 'it may include hidden costs as additional services', 'the client remains at the mercy of the supplier and might be exposed to negative opportunism', 'loss of internal expertise, capabilities and ability to innovate' and 'the fact that in many cases the relationships are managed by marketers instead of technologists without enough training' are the most critical disadvantages of IT-Outsourcing for clients. Based on the above, the conclusion is that IT-Outsourcing according to the 'IS-Improvement' view did not contribute towards increased IT resources efficiency for these four organizations, that is conflicting to Kobayashi-Hillary's (2005, p.165) statement that the 'IS-Improvement' view of IT-Outsourcing for clients leads to increased IT-resources efficiency.

8. RECOMENDATIONS

The purpose of this section was to give recommendations to the academic audience of IT-Management about their career, and recommendations for future research.

It is recommended that IT-vendors take the results of this project seriously into account because they can possibly be generalizable, because the responses were given from organizations of different businesses in different geographic locations although within EU, so as to know the critical aspects in implementing IT-Outsourcing and the critical aspects of the IS-Improvement view of IT-Outsourcing for clients, and further improve on the services they offer to their clients. The academic audience of IT-Management should also take the results of this project into account to help them with their future career.

Future research could describe and analyze the ‘commercial exploitation’ and ‘business impact’ views of IT-Outsourcing for clients, as well as identify the critical factors in performance monitoring and evaluations for clients, so as to give a more in-depth understanding of IT-Outsourcing for clients. Knowing more about these issues would help further improve on them and increase the level of satisfaction about IT-Outsourcing for clients.

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APPENDICES

Appendix I - The questionnaire

Questionnaire on IT-Outsourcing

This questionnaire will be given to firms/organizations that use the IT-technology in their activities. The objective of this survey is to collect data regarding the concept of IT-Outsourcing, that is buying services and support from an external provider, instead of insourcing that is keeping an internal IT department, and analyze it in order to identify its critical aspects about the 'IS-Improvement view' and critical factors in implementing IT-Outsourcing for clients. The conclusions of this survey will be used for a Master's thesis of the IT-Management program at Mälardalens University in Västerås, Sweden, that is focused on a review of IT-Outsourcing. Your firm/organization's name will not be exposed or used. Your answers can be sent by e-mail to kds08001@student.mdh.se .

Researcher:

Konstantinos Derventzas,

Student at Malardalen University, Sweden.

Firm/organization's information

Firm/Organization's name:

Location:

E-mail address:

Contact telephone number:

QUESTIONS

Note: IT-Outsourcing includes Offshore-Outsourcing, and IT-Insourcing includes Offshore-Insourcing.

Please read the questions carefully before giving your answer.

Question 1

Which of the following do you consider as the five most important IT-areas to outsource?

You can use numbers to prioritize your choice.

- End-user support __
- Hardware maintenance __
- Networking __
- Security __
- Software development & maintenance __
- Staff training __
- e-Business solutions __
- Systems implementation __

Others (please specify):

.....
.....

Question 2

What is the impact of IT on your firm/organization's

- Strategy: High __ Low __
- Operations: High __ Low __

Question 3

Which one of the following IT-sourcing solutions does your firm/organization use?

- Total Outsourcing __
- Total Insourcing __
- Selective/partial Outsourcing __

Question 4

Which are in your opinion, the four most important criteria when choosing a supplier?

You can use numbers to prioritize your choice.

- Low costs of services __
- Supplier's stability (financial condition) __
- Supplier's reputation __
- Common culture, interpretive grids and shared values __
- Management style and strategic orientation __
- Supplier's vision __

- Chemistry, interpersonal relations __

Others (please specify):

.....

.....

Question 5

Which of the following factors do you consider as the four most important ones for a successful IT-Outsourcing relationship between a client and the supplier? You can use numbers to prioritize your choice.

- Supplier’s understanding of client’s objectives __
- Proper contract structuring __
- Frequent client-provider contacts __
- Top management’s support and understanding __
- Choosing the right supplier __
- Supplier’s attention to client’s specific problems __
- A good value for money relationship __

Others (please specify):

.....

.....

Question 6

Which do you consider as the three most important clauses in an IT-Outsourcing contract/Service Level Agreement? You can use numbers to prioritize your choice.

- Precise definition of costs __
- Penalization for non-performance __
- Termination clauses because of dissatisfaction between one the two parties or security bridge or intellectual property violation __
- The duration of the contract __
- It should allow evolution due to the continuously changing environment of IT and business needs __

Others (please specify):

.....
.....

Question 7

According to many authors, one of the benefits of IT-Outsourcing is that it enables firms/organizations to focus on their core business. At the same time other authors claim that IT matters come right into the center of management’s attention when IT-Outsourcing is involved.

What is, according to your experience, your opinion on the following statement?

“IT-Outsourcing enables firms/organizations to focus on their core business”.

Agree ___ Disagree ___

You can also write your own comments if you wish to:

.....
.....

Question 8

According to many authors, one of the benefits of IT-Outsourcing is that it enables firms/organizations to get benefited from an economical point of view because of increased efficiency of operations, increased productivity, selling equipment to the supplier, staff reductions, avoiding building an in-house IT-department and because it transforms fixed IT costs into variable costs.

What is, according to your experience, your opinion on the following statement?

“IT-Outsourcing drives firms/organizations to profitable growth”.

Agree ___ Disagree ___

You can also write your own comments if you wish to:

.....
.....

Question 9

According to many authors, one of the benefits of IT-Outsourcing is that it enables firms/organizations to gain access to improved quality of services, advanced technical skills/knowledge/expertise occasionally needed. Some other authors doubt this idea based on the fact that IT-Outsourcing usually involves staff transfer from the client to the supplier, meaning that services are performed by staff that used to work for the client, so there might not be actual improvements.

What is, according to your experience, your opinion on the following statement?

“IT-Outsourcing is a way for firms/organizations to gain access to improved quality of services and specialized skills”.

Agree ___ Disagree ___

You can also write your own comments if you wish to:

.....
.....

Question 10

Which of the following do you consider as the three most important advantages of IT-Outsourcing? You can use numbers to prioritize your choice.

- It refreshes the IT infrastructure ___
- The fact that it enables downsizing ___
- The fact that it offers lean programs and streamlining of operations ___
- The fact that offshoring offers full-time operations and customization of customers’ needs according to their local standards ___
- Networking in the market ___

Others (please specify):

.....
.....

Question 11

Which of the following do you consider as the six most important disadvantages of IT-Outsourcing? You can use numbers to prioritize your choice.

- The client has no control over the quality and schedule of services __
- Loss of internal expertise, capabilities and ability to innovate __
- The fact that in many cases relationships are managed by marketers instead of technologists without enough training __
- The client remains at the mercy of the supplier and might be exposed to negative opportunism __
- It may include hidden costs as additional services __
- It erases feelings, intuition, personal interrelations and culture __
- The supplier may lack the domain of knowledge __
- Possible violation of intellectual property and other security issues __
- Increases bureaucracy by requiring contracts/Service Level Agreements __

Others (please specify):

.....
.....

Appendix II – The four responses

Note: The respondents' extra words appear only in the Findings (chapter 5)

Respondents' answers	Organization 1	Organization 2	Organization 3	Organization 4
Business	Shipping (1)	Shipping (2)	University	Electronic devices factory
Form of gathering	Interview	Interview	Interview	By e-mail
Interviewee	IT-Manager	IT-Manager	Director of IT systems	Factory IT-Manager (12 years experience)
Location	Southern EU	Southern EU	Northern EU	Northern EU
Q1. Areas to outsource	<ul style="list-style-type: none"> - end user support - s/w - h/w - networking - security 	<ul style="list-style-type: none"> - staff training - h/w - networking - security - e-business solutions <p>(numbered)</p>	<ul style="list-style-type: none"> H/w staff training s/w e-business solutions networking <p>(numbered)</p>	<ul style="list-style-type: none"> - end user support - h/w - staff training - s/w - e-business solutions <p>(numbered)</p>
Q2a. Impact of IT on strategy	High	High	Low	High
Q2b. Impact of IT on operations	High	High	High	High
Q3. IT-sourcing solution selected by the organization	Selective	Selective	Selective	Selective
Q4. Criteria in choosing a supplier	<ul style="list-style-type: none"> - management style - low costs - supplier's reputation - supplier's stability <p>(numbered)</p>	<ul style="list-style-type: none"> - supplier's reputation - supplier's vision - supplier's stability - low costs <p>(numbered)</p>	<ul style="list-style-type: none"> - supplier's stability - supplier's reputation - low costs - common culture <p>(numbered)</p>	<ul style="list-style-type: none"> - common culture - supplier's reputation - supplier's stability - low costs <p>(numbered)</p>
Q5. Factors for a successful relationship	<ul style="list-style-type: none"> - choosing the right supplier - contract structuring 	<ul style="list-style-type: none"> - understanding client's objectives - choosing the right supplier 	<ul style="list-style-type: none"> - understanding client's objectives - contract structuring 	<ul style="list-style-type: none"> - understanding client's objectives - attention - clear idea

	<ul style="list-style-type: none"> - understanding client's objectives - attention <p>(numbered)</p>	<ul style="list-style-type: none"> - top management's support <p>(numbered)</p>	<ul style="list-style-type: none"> - frequent contacts - top management's support <p>(numbered)</p>	<ul style="list-style-type: none"> - top management's support <p>(numbered)</p>
<p>Q6. Important clauses in an ITO contract</p>	<ul style="list-style-type: none"> - precise definition of costs - penalization <p>(numbered)</p>	<ul style="list-style-type: none"> - precise definition of costs - allowing for evolution - termination clauses <p>(numbered)</p>	<ul style="list-style-type: none"> - precise definition of costs - termination clauses - allowing for evolution <p>(numbered)</p>	<ul style="list-style-type: none"> - precise definition of costs - allowing for evolution - termination clauses <p>(numbered)</p>
<p>Q7. ITO enables focusing on core business</p>	Disagree (words)	Disagree (words)	Agree (words)	Disagree (words)
<p>Q8. ITO drives to profitable growth</p>	Disagree (words)	Disagree (words)	Agree (words)	Disagree (words)
<p>Q9. ITO enables access to improved quality/skills</p>	Disagree (words)	Agree (words)	Agree	Disagree (words)
<p>Q10. Advantages of ITO</p>	<ul style="list-style-type: none"> - downsizing <p>(numbered) (words)</p>	<ul style="list-style-type: none"> - Refreshes infrastructure - Networking <p>(numbered)</p>	<ul style="list-style-type: none"> - Downsizing - Refreshes infrastructure <p>(numbered)</p>	No selections (words)
<p>Q11. Disadvantages of ITO</p>	<ul style="list-style-type: none"> - no control over quality - hidden costs - relationship may be handled by marketers - remaining at the mercy of the supplier - loss of internal capabilities - erases feelings <p>(numbered)</p>	<ul style="list-style-type: none"> - Lack of knowledge - No control over quality - remaining at the mercy of the supplier - hidden costs - loss of internal expertise <p>(numbered)</p>	<ul style="list-style-type: none"> - loss on internal expertise - hidden costs - relationship may be handled by marketers - remaining at the mercy of the supplier - increases bureaucracy - erases feelings <p>(numbered)</p>	<ul style="list-style-type: none"> - loss of internal capabilities - remaining at the mercy of the supplier - hidden costs - increases bureaucracy - lack of knowledge - relationship may be handled by marketers <p>(numbered)</p>