

SUCCESS FACTORS IN PUBLIC INFORMATION SYSTEMS OUTSOURCING:
A CASE STUDY

A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF INFORMATICS
OF
THE MIDDLE EAST TECHNICAL UNIVERSITY

BY

İL KAY VURAL

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE
IN
THE DEPARTMENT OF INFORMATION SYSTEMS

JULY 2004

Approval of the Graduate School of Informatics

Prof. Dr. Neşe Yalabık
Director

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

Assoc. Prof. Dr. Onur Demirörs
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

Prof. Dr. Semih Bilgen

Assoc. Prof. Dr. Onur Demirörs

Assoc. Prof. Dr. Zeynep Onay

Assist. Prof. Dr. Cemal Akyel

Dr. Altan Koçyiğit

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Ilkay Vural

ABSTRACT

SUCCESS FACTORS IN PUBLIC INFORMATION SYSTEMS OUTSOURCING: A CASE STUDY

Vural, İlkey

M.Sc., Department of Information Systems

Supervisor: Prof. Dr. Semih Bilgen

July 2004, 94 pages

In this thesis, a public IS outsourcing case in Turkey is examined. The case is selected because of its unique characteristics that differentiate it from the other cases studied in the literature. The aim of this study is to understand the success factors in public IS outsourcing and to reveal which ones were applied in this specific case.

Keywords: CHRMS, Outsourcing, IS outsourcing, Public IS Outsourcing, Success Factors in Outsourcing

ÖZ

KAMU SEKTÖRÜNDEKİ BİLİŞİM PROJELERİNDE DIŞKAYNAK KULLANIMI BAŞARI FAKTÖRLERİ: ÖRNEK OLAY İNCELEMESİ

Vural, İlkey

Yüksek Lisans, Bilişim Sistemleri Bölümü

Tez Yöneticisi: Prof. Dr. Semih Bilgen

Temmuz 2004, 94 Sayfa

Bu tezde Türkiye'deki bir kamu bilişim projesindeki dışkaynak kullanımı incelenmektedir. Örnek, literatürdeki şu ana kadar incelenmiş olan diğer projelerden ayrılan özellikleri nedeni ile seçilmiştir. Bu çalışmanın amacı kamu bilişim projelerinde dışkaynak kullanımı başarı faktörlerini anlayarak, bu faktörlerden hangilerinin bu örnekte etkili olduğunu ortaya çıkarmaktır.

Anahtar Kelimeler: ÇKYS, Dışkaynak Kullanımı, Bilişim Sistemlerinde Dışkaynak Kullanımı, Kamu Bilişim Sistemlerinde Dışkaynak Kullanımı, Dışkaynak Kullanımı Başarı Faktörleri

To my family

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to Prof. Dr. Semih Bilgen, for his valuable guidance and constructive criticism throughout this study. He showed me being a successful academician is the result of knowledge, experience, hard work but most importantly willingness to share your knowledge and positive attitude towards the people who need your guidance.

I am also thankful to my parents and my brother, Güray, since they have encouraged me in all areas of my life and I know that they are always with me wherever and whenever I need them. I would like to thank Engin (for her morale and logistic support on my jury-day), Çağrı (my perpetual companion in my IS studies), Hande (my mentor), Gizem (my contact point with United Nations and an advisor in all areas of life) and all my friends at the Business Administration department, since they encountered the whole phases of this thesis and gave me a constant support. I express my sincere appreciation to Müge and Ayça since they always believe in my success more than I do.

I am also thankful to my interviewees without whom this thesis could not have been written. Finally, I express my gratitude to the examining committee members, since they helped me to improve my thesis by their vital suggestions and did this in a very positive manner.

TABLE OF CONTENTS

ABSTRACT.....	IV
ÖZ	V
ACKNOWLEDGEMENTS.....	VII
TABLE OF CONTENTS	VIII
LIST OF TABLES.....	XI
LIST OF ABBREVIATIONS.....	XII
CHAPTER	
1) INTRODUCTION.....	1
1.1) RESEARCH QUESTIONS.....	2
1.2) OUTLINE OF THE THESIS	3
2) LITERATURE SURVEY	5
2.1) IS OUTSOURCING	5
2.1.1) <i>DEFINITION AND TYPES OF IS OUTSOURCING</i>	5
2.1.2) <i>REASONS BEHIND IS OUTSOURCING</i>	6
2.1.3) <i>RISKS OF IS OUTSOURCING</i>	8
2.2) PUBLIC IS OUTSOURCING.....	11
2.2.1) <i>DIFFERENCES IN PUBLIC AND PRIVATE SECTOR IT ENVIRONMENTS</i>	11

2.2.2)	<i>REASONS BEHIND PUBLIC IS OUTSOURCING</i>	13
2.2.3)	<i>ADDITIONAL RISKS OF PUBLIC IS OUTSOURCING</i>	14
2.2.4)	<i>SITUATION IN TURKEY</i>	16
2.3)	MULTI-VENDOR IS OUTSOURCING	22
2.3.1)	<i>TYPES OF MULTI-VENDOR IS OUTSOURCING</i>	22
2.3.2)	<i>REASONS BEHIND MULTI-VENDOR IS OUTSOURCING</i>	23
2.3.3)	<i>RISKS OF MULTI-VENDOR IS OUTSOURCING</i>	24
2.4)	MULTI-VENDOR ARRANGEMENTS IN PUBLIC IS OUTSOURCING	
	26	
2.5)	SUCCESS FACTORS IN IS OUTSOURCING.....	28
3)	CASE DESCRIPTION	36
3.1)	REASONS BEHIND THE SELECTION OF THIS CASE	36
3.2)	HISTORY OF THE PROJECT AND ITS MAIN COMPONENTS	37
3.3)	CUSTOMER SIDE OF THE PROJECT:	40
3.4)	VENDOR SIDE OF THE PROJECT:	42
3.5)	OTHER ACTORS OF THE PROJECT	46
4)	METHODOLOGY AND CASE ANALYSIS	49
4.1)	SITUATION OF THE CASE IN THE CASE STUDY LITERATURE:	49
4.2)	QUALITATIVE VERSUS QUANTITATIVE RESEARCH METHODS IN	
	IS FIELD:.....	51
4.3)	APPLICATION OF QUALITATIVE RESEARCH	53
4.3.1)	<i>CONCEPTUAL CONTEXT</i>	53
4.3.2)	<i>RESEARCH QUESTIONS</i>	54
4.3.3)	<i>DATA COLLECTION METHODS</i>	55
4.3.4)	<i>DATA ANALYSIS AND RESULTS</i>	59
4.3.4.1)	ANALYSIS OF THE CURRENT SITUATION	60
4.3.4.2)	ANALYSIS OF THE PAST AND THE CHANGE FROM	
	FAILURE TO SUCCESS	72

4.3.5) <i>VALIDITY</i>	79
4.3.6) <i>LIMITATIONS</i>	80
5) CONCLUSION	81
5.1) MAIN RESULTS OF THE THESIS	81
5.2) FURTHER RESEARCH OPPORTUNITIES	85
REFERENCES	87
APPENDIX.....	92

LIST OF TABLES

Table 1: Outsourcing Relationship Classification	6
Table 2: Vendors of SBS and their products and/or services used in CHRMS project.	45
Table 3: Interviewees and their roles in the project	57

LIST OF ABBREVIATIONS

- BHSM:** Basic Health Statistics Module
- CHRMS:** Core Health Resources Management System
- HIS:** Health Information Systems
- IS:** Information System
- IT:** Information Technology
- LCC:** Local Contracts Committee
- MoH:** Ministry of Health
- MSA:** Management Services Agreement
- NPPP:** National Professional Project Personnel
- PCU:** Project Coordination Unit
- PRAC:** Procurement Review and Advisory Committee
- RFP:** Request for Proposal
- SBS:** Siemens Business Services
- SNI:** Siemens Nixdorf
- TOR:** Terms of Reference
- UNDP:** United Nations Development Program
- UNOPS:** United Nations Office for Project Services
- WB:** World Bank

CHAPTER 1

INTRODUCTION

Many public sector organizations turn to outsourcing by considering different factors such as capital inventiveness of the technologies, tied market for IT talent, access to know-how and specific technological knowledge. However, outsourcing is not a risk-free process and those risks should also be taken into account for a successful arrangement. Possibility of weak management, business uncertainty, outdated technology and skills, and hidden costs are the most frequently mentioned ones in the literature. In case of public IS outsourcing, there are some other risks added to the previous list; such as, instability of the public administration sector, storage and transfer of data collected, and cultural differences between public and private sectors.

Emerging importance of IS outsourcing and its special types (e.g. single vendor, multi-vendor, public IS outsourcing) have led many researchers to study this subject. In the IS outsourcing literature, successful and unsuccessful outsourcing cases have been examined to determine the main success factors in different fields of the outsourcing arrangement (i.e. determination of objective, vendor selection, outsourcing contract, psychological contract, and organizational issues).

When it is compared with the other cases analyzed in the literature, the case selected for this thesis is interesting in the sense that very sharp turning points were experienced during its life-time (after a bright start, it was almost

terminated, lived a vendor change and then successfully finished). Although many projects can encounter changes in the success level, such big changes are very rare and deserve to be closely investigated.

Another difference is related with the actors of the outsourcing arrangement. Although the literature mentions the effect of third parties, it mainly focuses on the main actors (i.e. customer(s) and vendor(s)). However, this special case has very strong third parties, which actually became the other main actors of the outsourcing arrangement (i.e. World Bank, UNDP, and UNOPS).

Moreover, in public IS outsourcing literature, most of the researches were conducted on developed countries, while there was limited number of studies on developing countries. Although this study includes a single case with unique characteristics, it can be a good start to evaluate the public IS outsourcing environment of Turkey in the following researches.

1.1) RESEARCH QUESTIONS

In compliance with the success and failure periods of the project, the research questions of this study focus on the past, change and current (or final) situation of the project. “Is the current outsourcing arrangement a success or a failure in terms of different success criteria mentioned in the literature?” “What are the reasons behind the initial failure of the project?” and “If the project is accepted as a successful one now, what changes in which areas have contributed to this result?” are the main questions that this study aims to answer.

The criteria for success used in this evaluation have been compiled within the scope of this study. Related publications in the literature have been referred to for this purpose.

1.2) OUTLINE OF THE THESIS

By keeping the aims and main questions of the research in mind, the following chapter (Chapter 2) examines the literature on IS outsourcing. While doing this, general-to-specific approach is applied. Firstly, the definition and types of outsourcing, main reasons behind the outsourcing decision and possible risks of this decision are clarified. Then, “public sector IS outsourcing” is specifically examined by stressing its differences from the private sector outsourcing. In this section, current situation in Turkey is also reviewed by giving the historical development. Then, a special type of IS outsourcing arrangement, which is multi-vendor arrangement, is presented. After giving general information on this type of outsourcing arrangements, “multi-vendor arrangements in Public IS outsourcing” is the main subject of the next section. Finally, the focus of this thesis, “success factors of IS outsourcing”, is set by combining the different views in the literature.

The Case Description (Chapter 3) gives the details of the selected case. The reasons behind the selection of this case are specified by giving the unique characteristics that differentiate this case from the others in the literature. Then, the history of the project and its main components are clarified. The subsequent parts of Chapter 3 deal with the main actors of the project. The customer, vendors, and third parties involved in the project are stated and their roles in this project are clarified.

The Methodology and Case Analysis (Chapter 4) starts with the situation of the case in the case study literature. Then, qualitative and quantitative research methods are compared and the rationale behind the selection of qualitative method for this specific case is stated. The next part applies qualitative research to analyze the case and presents the findings of this thesis. Then, validity issue is examined by considering the main threats and how they are

dealt with in this study. Moreover, the main limitations of the study are stated by focusing on the generalizability issue.

Finally, the Conclusion (Chapter 5) summarizes the study, states the main results of the thesis and clarifies further research opportunities in this area.

CHAPTER 2

LITERATURE SURVEY

2.1) *IS OUTSOURCING*

2.1.1) DEFINITION AND TYPES OF IS OUTSOURCING

Outsourcing can be defined as the purchase of goods or services instead of providing them internally (Saunders, Gebelt & Hu, 1997). IS Outsourcing is a special type of this activity, which enables organizations to use vendor(s) for their information system related operations.

Different classifications of IS outsourcing exist in the literature. In *Body Shop*, management uses outsourcing as a way to meet short-term demand. The most common type of body shop outsourcing is the use of contract programmers/personnel that is managed by company employees. In *Project Management*, management outsources for a specific project or portion of IS work. The uses of vendors to develop a new system, support an existing application, and handle disaster recovery are some examples of this type of outsourcing. Finally, in *Total IS Outsourcing*, the vendor is in total charge of a significant piece of IS work. The most common type is the total outsourcing of the hardware operations. (Lacity and Hirschheim, 1993; Lacity, Willcocks & Feeny, 1996).

Another classification is based on the outsourcing relationship (Gallivan, 1999). Number of outsourcing firms and vendors determine the type of the relationship. According to this classification, four main types of outsourcing are provided in the following table:

Table 1: Outsourcing Relationship Classification

Outsourcing relationship	Number of clients	Number of vendors
Simple Dyadic	One client	One vendor
Multi-Vendor	One client	Many vendors
Co-sourcing	Many clients	One vendor
Complex	Many clients	Many vendors

2.1.2) REASONS BEHIND IS OUTSOURCING

Different reasons exist behind the outsourcing decision of an organization. According to a research conducted by University of California and CSC research services, three strategic intents of IS outsourcing are: (DiRomualdo and Gurbaxani, 1998).

- 1) *IS Improvement (Do IS better)*: organizations that want better performance from their core IS resources- hardware, software, networks, people, processes involved in managing and operating the technology and supporting users- have the strategic intent of IS improvement. ‘Cost reduction’, ‘service quality improvement’, and ‘acquisition of new technical skills and management competencies’ are typical objectives resulting from this intent.

Organizations believe that outside specialist who are better able to keep pace with new technologies and skills, and who use superior processes and management methods, should manage some or all of their IT services.

- 2) *Business Impact (Use IT to achieve better business results)*: with this intent, organizations try to develop right mix of technical and business skills for improving critical aspects of business performance. This requires a clear understanding of the linkage between IT and business processes, and the ability to implement new systems and business changes simultaneously. ‘Development of new IT-based business capabilities and/or competencies’, ‘creation of innovative information systems’, and ‘usage of technology to reengineer business processes’ are some example objectives.

Organizations with this intent must simultaneously create a new IT capability while maintaining and improving their status quo. However, most of them may lack the necessary technical talent, management skills and financial resources. In such cases, outsourcing is a good solution to achieve these objectives by supplying required technical and business know-how, or sharing some of the burden on the organization.

- 3) *Commercial Exploitation (Exploit IT assets externally)*: the final strategic intent focuses on improving return on IT investment by generating new revenue and profit or by offsetting cost.

The most common aims are ‘to gain revenue by selling exiting IT assets to other companies’, ‘developing and commercially exploiting new IT products and services’, and ‘creating entirely new IT businesses’.

Regardless of their strategic intent, all companies considering IT outsourcing should be aware that its vendor(s) might seek ways to commercially leverage the assets acquired (people, systems and technology) by using them to service other firms. For this reason, each organization should assess the potential commercial value of outsourced IT assets and understand how the vendors intend to use them.

In spite of its advantages, outsourcing is not a risk-free process and those risks should also be taken into account for a successful outsourcing application. The following section clarifies these risks stated in the literature.

2.1.3) RISKS OF IS OUTSOURCING

Main risks of IS outsourcing are stated as follows: (Earl, 1996)

- 1) **Possibility of Weak Management:** by outsourcing, an organization needs to deal with new type of management, i.e. outsourcing management, and it can be more difficult than internal management of an IS department.
- 2) **Inexperienced Staff:** one of the reasons for outsourcing can be to gain access to vendor's experienced IT staff. However, clients are usually supported by their own staff transferred to the vendor during the outsourcing process (Lacity and Hirschheim, 1993). This transfer brings additional risk of losing experienced IT staff of the organization to the vendor company (Earl, 1996).

- 3) **Business Uncertainty:** outsourcing organization's future direction and needs can change after the outsourcing decision. Even the view of IS can change and strategic intent must be restated according to this change.
- 4) **Outdated Technology and Skills:** an organization cannot be sure that its vendor(s)' skills stay up-to-date during the contract period. If the vendor cannot keep up with the changes in the IS sector, the organization may have outdated technology at the end of the contract term.
- 5) **Endemic Uncertainty:** apart from business uncertainty, other conflicts and problems may arise between the vendor(s) and the outsourcing company due to the concrete outsourcing contracts. For example, a systems project management regime that demands no changes to specifications with rigid time and budget controls can produce applications that do not achieve their full potential or can create user-specialist conflicts.
- 6) **Hidden Costs:** beside the major costs of outsourcing, organizations usually underestimate some additional costs of outsourcing process, which are named as hidden costs. According to Barthelemy, these costs have four sources; they are "vendor selection and contracting", "transitioning to the vendor", "managing the outsourcing effort", and "transitioning after outsourcing" (Barthelemy, 2001). In the same article, it is stated that about 14 percent of outsourcing operations failure in a survey of 50 companies resulted from the underestimate of hidden costs.
- 7) **Lack of Organizational Learning:** by outsourcing, organizations may lose the opportunity of organizational learning in the area of IS

operations. This can create a problem especially if the organization decides to insource its IS operations in the future due to the changes in its strategy.

- 8) Loss of Innovative Capacity: innovation capacity of the organization may be impaired after outsourcing due to its dependency on the vendor(s) in the area of IT developments.
- 9) Dangers of an Eternal Triangle: intermediaries between the organization and its vendor(s) can be used in some outsourcing arrangements with the aim of achieving better understanding among them. However, loss of direct contact can create additional problems and confusion by keeping parties apart.
- 10) Technological Indivisibility: this risk arises in the arrangements involving more than one vendor. Since much of the IT is not divisible, trying to divide it into its parts for different vendors can be problematical.
- 11) Fuzzy Focus: when organizations decide to outsource, they usually focus on the supply side of IT (how IT related tasks of the company can be performed) rather than the demand side (what the organization should want from its IT operations to achieve long term success). Vendors can provide IT operations, development service and training but may not provide innovative application ideas or IT enabled business change, which can create competitive advantage.

2.2) PUBLIC IS OUTSOURCING

Public sector outsourcing gain importance as time passes. By the end of 1990s, governments around the world had transferred more than \$1 trillion in assets to the private sector. A recent IDC report forecasts outsourcing spending in United States will grow at faster rates through 2005 than in any other industry segment by a rate of 15.7 percent. The projected growth in Europe is even higher, 17 percent per year through 2004 (Hunter and Healy, 2002)

2.2.1) DIFFERENCES IN PUBLIC AND PRIVATE SECTOR IT ENVIRONMENTS

In order to analyze the public sector outsourcing decisions, the differences between the public and private sector IT environments must be clarified. An argument of “IT management in public organizations differs from that of the private sector” has been discussed for many years.

Bretschneider empirically tested this argument by using a sample of 1005 public and private sector organizations (Beyah and Gallivian, 2001), his study revealed the following differences:

- 1) Public sector features greater interdependencies across organizational boundaries, which in turn, contribute to the increased accountability and coordination problems.
- 2) Public sector IT managers are confronted with greater external review and control by third parties, as well as being subject to a host of regulatory, legislative, and political influences.

- 3) Procedural delays and red tape exist in the public sector. Measured in the number of weeks to accomplish the same task, public sector IT organizations took longer in all cases. The political cycles that result in changes in top-level management can disturb programs and priorities.
- 4) Public sector IT programs tend to cover a wider scope, and can generate publicity when they fail, depending on the costs, and the significance of actions in the public interest.

Another research was conducted by De Looff by examining 23 outsourcing decisions in six Dutch (former) public sector organizations (De Looff, 1996). The research revealed that public sector information systems are often very critical, complex and volatile, due to the information intensity of the processes and the nature of political decision-making. Additional differences stated by De Looff are:

- Public sector organizations have to meet demand that most private corporations do not face; such as guaranteeing the citizen's legal security and equality of rights.
- When we look at the core business of public organizations, the primary processes are almost always unique and are not found in the private sector. For this reason, ready-made software is not available and IS suppliers cannot use experiences and knowledge from other client organizations, so this situation can make outsourcing less attractive. KalDer 2001 Software Sector Survey has reached the same conclusion for the public sector of Turkey (İkiz, 2002). According to this survey, public is the smallest customer group for ready-made software products in Turkey.

- There are many stakeholders in policies of public bodies, who may have very different and conflicting and morally justifiable perspective.
- Public sector organizations are not attractive to IS specialists; the compensation rules do not offer many possibilities for paying personnel according to their market value and for differentiating rewards based on performance, which makes it difficult to recruit and retain good IS staff.

2.2.2) REASONS BEHIND PUBLIC IS OUTSOURCING

Increasing demands for services, global fiscal pressures and a public sector human-capital crisis add up to a significant pressure for governments to do more with less. In response governments are turning to outsourcing as a solution (Hunter and Healy, 2002)

Gramatikov states the following reasons behind the outsourcing decisions of public sector organizations (Gramatikov, 2002):

- 1) *Capital intensiveness of the technologies*: IS projects must compete with many other candidates for public funds. Instead of doing in house, outsourcing seems to be more attractive in terms of cost.
- 2) *Tied market for IT talent*: as it is stated in the previous section, due to the remuneration constraints set by related regulations, public sector organizations usually offer lower incentives to IT personnel compared to the private sector ones. For this reason, it is more difficult to retain the highly qualified personnel in this area.

- 3) *Identical needs in non core services*: although IT needs of public sector is different from that of private sector due to the difference in their core businesses (explained in section 2.2.1), many public organizations have identical needs, which makes the definition and specification more attainable when supporting (non-core) services are concerned.
- 4) *Access to know-how and specific technological knowledge*: public organizations may and usually have insufficient information about new technologies so outsourcing can be a good choice to gain this know-how.
- 5) *Enforcement of standardization and interoperability in the public administration*: reliance on in-house implementation always has a risk of development of non-standard or inconsistent technologies among different public organizations. Outsourcing can provide some standardization on the technologies used by different public organizations.

2.2.3) ADDITIONAL RISKS OF PUBLIC IS OUTSOURCING

In addition to the main risks of IS outsourcing mentioned in section 2.1.3, public organizations may encounter with other risks when they outsource their IS related activities.

Gramatikov mentions some of these additional risks in his article (Gramatikov, 2002). He states “cultural differences between public and private organizations” may damage the outsourcing relationship between the public organization and its vendor(s). Moreover, “budget cut offs due to annual budget circle in the government sector” and “instability of the public

administration sector” may affect contractual relations and make contractual compliance much more difficult.

Public organizations should also consider additional factors during the termination of outsourcing contract. Since the data handled by public organizations are subject to regulation by privacy, access to public information and classified information legislation, “storage and transfer of data collected and processed during the external provision of the IT service” should be carefully planned and additional provisions related with the transfer of this data after contract termination should be stated in the outsourcing contract.

Risks resulting from “cultural differences” and “transfer of data” are more general ones and can be come across in many different countries. On the other hand, other two risks probably create more serious problems in the countries, which have instable political environment like Turkey, while they may not be encountered in other countries with well-established political systems.

To understand the differences on the country level, other studies can also be examined. An important study was undertaken by Accenture involving 50 senior government executives from eight countries: Australia, Canada, New Zealand, Singapore, South Africa, Spain, The United Kingdom and the United States (Hunter and Healy, 2002). According to this study, main obstacles to outsourcing in public sector in order of importance were stated as follows:

- Workforce or union pressure against outsourcing
- Internal resistance to change
- Fear of losing control
- Concerns over confidentiality and security
- Political pressure against outsourcing
- Lack of executive support
- Procurement laws

As it can be understood from the order of importance, political issues have lower importance. This can result from the characteristic of surveyed countries. All of them are developed countries with relatively stable political environment, while Gramatikov mainly focuses on Bulgaria case. Moreover, unions usually have more power in developed countries, so the risks of union pressure and internal resistance to change are mentioned as the most serious obstacles. For this reason, this order might not be so much meaningful for the countries, which do not have such a political environment or strong unions.

2.2.4) SITUATION IN TURKEY

Privatization versus Outsourcing

Before investigating the situation in Turkey, clarifying the difference between privatization and outsourcing is important. Usually, public sector outsourcing is defined within the context of privatization. Although both of them require the transfer of an operational function to a third party, ultimate aims are different.

In “privatization”, the goal is to change process through “shift of ownership”. On the other hand, “outsourcing” keeps the ownership but changes the process through “the involvement of third parties” (Gramatikov, 2002). In other words, the public organization is responsible from the function transferred in case of outsourcing, but it transfers the responsibility as well in case of privatization.

Although “outsourcing” is the main focus of this thesis, privatization process in Turkey should also be investigated to better understand the public IS outsourcing environment in this country. With this aim, the following section gives the history of privatization in Turkey and new legal developments in this area.

History of Privatization and The New Bidding Law

Since the beginning of the 1980's, privatization has been on Turkey's agenda. With the privatization effort, Turkey has been aiming to minimize state involvement in economic activities and to retrieve the financial burden of State Economic Enterprises on the national budget. The development of capital markets and re-channeling of resources towards new investments can be mentioned as the other important aims of this effort.

Actually, privatization in 1980's was the part of a fundamental transformation in Turkish economy towards an outward looking liberal economy by export led growth. Before 1980's, Turkey applied more inward focused strategy through import substitution model.

Although Turkey was very determined to take steps towards a more liberal economy, privatization process did not go very fast at the beginning. Some of the reasons for this slow progress were stated as follows (OECD Economic Survey 1991-1992): (Aktan, 1993)

- Lack of consensus in public opinion on the necessity and methods of privatization.
- Ambiguities in legal framework as to the potential buyers
- Lack of transparency in key operational steps of the privatization process.

However, privatization implementations gained momentum in the following years. Since 1986, 170 companies have been privatized, and no government share has remained in 153 of them. (OIB, 2003)

The reason behind this momentum can be the application of a more planned approach towards privatization. Some important actions taken by the government since 1980's are:

- Law No:3291, "Law Concerning the Denationalization of Public Economic Enterprises" was enacted in 1986. This law clarified the objectives, methods and implementation of the privatization program. (Aktan, 1993)
- Privatization and Restructuring Council was established in 1992. It was given the responsibility of carrying out the privatization program. (Aktan, 1993)
- Privatization Law No: 4046 was issued in 1994 to improve productivity in the economy and to reduce public expenditure.

In order to understand the situation in Turkey, new public bidding law and its effects on Turkish IS sector should also be investigated.

When the new bidding law (Law No: 4734) is compared with the previous one (Law No: 2886), the following differences are observed (Arifoğlu, 2002):

- 1) In the new law, taking consulting services is encouraged for the preparation of Environmental Effect Evaluation Report, development of technical specifications, auditing and other areas, which require technical, financial or legal expertise.
- 2) Bidding Commission should include at least two experts in the related area. In other words, for IS projects, in the bidding commission there will be at least two IS experts. By this way, bidders can be evaluated more professionally by considering other factors apart from cost.

- 3) For extremely low bids, public organizations gain the authority of eliminating the offer of these low bidders.
- 4) Technical Standards for Specifications are established for public biddings. According to it, no model, patent or mark will be mentioned in these documents. This will enable better competition by giving equal rights to the bidders.
- 5) Establishment of Public Bidding Organization will enable better auditing and leading of organizations in the bidding process. Standardization of documentations and contracts, and training related with bidding procedure are among the duties of this organization.
- 6) Faster completion of planned investments is another difference. For the projects, with a life of more than one year, planning of tasks to be completed and the effect of their cost to the budget should be stated for each year. By this way, spreading tasks and costs over year according to the life of the project will be possible.

In spite of the positive outcomes of the new Bidding Law mentioned above, there are some criticisms against it.

According to the Law (Article 63); only domestic companies can participate in bidding for the projects with a cost less than the threshold value stated in the law. Above this value, a price advantage can be given to the domestic firms up to 15 percent of the offer (TBMM, 2002).

The aim of this application is to protect domestic firms against foreign ones. However, it is very difficult to make domestic versus foreign classification in Turkish IT sector. No domestic hardware production exists in Turkey, instead assembly of products imported from other countries is a common application.

For this reason, it will be very difficult to set which products are foreign and which ones are domestic. (CAPITAL, 2003)

Another criticism is related with the price advantage given to the domestic firms. Different views exist in this area. According to Erol Bilecik, the president of TUBISAD (CAPITAL, 2003) although supporting the Turkish firms for establishing a stronger domestic IT sector is accepted as meaningful by the firms operating in this sector, 15 percent price advantage is very high. On the other hand, some parties see this percentage very low and support a higher price advantage for the products, which were developed by domestic firms (Cumhuriyet, 2001)

Main Problems of Public IS Projects in Turkey

According to the report of e-government working group, main problems of public IS projects in Turkey are grouped under two subtitles: (TBD Kamu-Bib, 2002)

- 1) Development of common public IS projects does not exist in Turkey.
- 2) There is no public project standard.

The report categorized public IS projects into two groups; common projects (related with non-core, supporting IS services of an organization) and core projects (related with the main duty of the public organization).

“Common projects” were stated as human resources, accounting, inventory, financing, leasing and rent monitoring IS projects. They are called “common” since different public organizations have similar requirements in these areas.

If this similarity can be used properly, cost and effort devoted for the development of this kind of projects will be reduced. However, the report

stated that Turkish public organizations could not get benefit from this similarity since each organization develops its own project without sharing any information or experience with the others. This causes *inefficient use of resources*.

Organizations also develop “core projects”, which are related with their main duty. Although common development of them is not possible, projects of other public organizations should be considered during the development of core projects as well. Some data can be common and must be used or processed by more than one public organization. *Establishment of standards* is needed for properly dealing with such cases. For example, name of a citizen can be used for different purposes by different public organizations. Normally, this data should be kept in one organization, which must be the source of the data (General Directorate of Population and Citizenship Affairs (Nüfus ve Vatandaşlık İşleri Genel Müdürlüğü) in that case), and others can reach this data from the main source by knowing the source and related key. However, the report reveals that all organizations keep this data separately. This application results in *duplication of resources* and *makes the updating operation more difficult*.

Moreover, the number of characters used for keeping this same data differs from one organization to the other (50 characters in MERNIS project; 16 characters in the tax identification number project of Ministry of Finance and 12 characters in the health project of Public Retirement Fund (Emekli Sandığı)). Thus, data kept in different organizations do not match each other, leading to *consistency problems*. There is also no standard application in the formats of date, hour and monetary units used in Turkish public IS projects. (TBD Kamu-Bib, 2002)

2.3) **MULTI-VENDOR IS OUTSOURCING**

2.3.1) **TYPES OF MULTI-VENDOR IS OUTSOURCING**

According to the contractual structure, there are two types of Multi-vendor IS outsourcing: (Zahler, 1998)

- 1) “Single prime contract” with well defined multiple sub-contracts
- 2) “Set of separate contracts” and some form of operational agreement among all vendors and the customer.

Zahler compared these two types and found the following differences. The first structure enables *a single point of responsibility* for the entire relationship; in other words, prime contractor has the main responsibility. Whereas in the second one, none of the vendors is responsible from the other’s performance; so the customer should monitor and control intra-vendor issues. Prime contract also makes *the legal issues of limitations of liability, indemnity and warranty easier* since responsibility for these matters need not be divided up among multiple parties. Another advantage of this type is stated as *the efficiency of the general contracting process*, since only one set of basic terms need to be negotiated.

However, there are some disadvantages that may not exist in case of separate contracts. Firstly, the prime contractor usually imposes some mark up on the fees charged by its subcontractors; this *increases the cost of services*. Secondly, the customer may *lose the ability to deal directly with the subcontractors*. Finally, it may be *more difficult to develop exit strategy* with a prime contract since the customer does not have the ability to easily replace parts of the relationship; in other words, there is too much dependency to the prime contractor.

Apart from these two general types of contractual structure, organizations may involve in multi-vendor outsourcing agreements, which is formed according to their specific needs. British Petroleum experience is mentioned as an important example for such an innovative contract structure in the outsourcing literature. “Multiple IT suppliers that act as one” is the arrangement applied by the BP and its vendors. (Cross, 1995). Instead of selecting separate vendors for its different IT job and then making them to cooperate with each other, the firm wanted an alliance of suppliers to formulate a proposal to meet its specifications. By this way, number of vendors developed proposals in close collaboration with one another and devised solutions for BP’s needs among themselves by taking responsibility for each part. For each major business site of BP, one of its three suppliers serves as the prime contractor and coordinates the services of the others. By this way, each vendor plays both the prime contractor and subcontractor roles.

2.3.2) REASONS BEHIND MULTI-VENDOR IS OUTSOURCING

Benefits of Multi-Vendor arrangement are stated as follows (Gallivian, 1999):

- 1) Vendor specialization: IT vendors may prefer to form temporary or long-term strategic alliances with their competitors. By these alliances, they can focus on their core IT services and allow other vendors to manage their non-core competencies. This application creates *economies of scale advantage*, which will eventually be shared with the clients as *lower prices* for the services provided.
- 2) Reduced transactional risks: vendors will have less incentive to behave opportunistically in multi-vendor arrangements, since other vendors are ready and willing to replace a non-performing vendor. Because of

lower switching cost compared to the single vendor arrangements, the customer will be *more flexible* to change vendor when its performance is not satisfactory.

- 3) Technical expertise: most vendors are more successful in some areas due to their technical specialty but they may lag in other areas. Instead of relying on a single general-purpose vendor to provide a very large range of skills and abilities, the customer can give each function or collection of functions to a separate vendor excelling at that range of functionality.

Cutter Consortium conducted a survey in order to find whether the expected benefits of multi-vendor outsourcing arrangements are actually realized. (Epner, 2001) Results of the survey revealed that 62 percent of the firms surveyed got more competitive bids from multiple service providers than from a single provider. Moreover, 56 percent of them stated the realization of the technical expertise benefit from keeping a diverse, best-in-class supplier base.

2.3.3) RISKS OF MULTI-VENDOR IS OUTSOURCING

Besides the previously mentioned benefits, multi-vendor outsourcing arrangements have some important drawbacks as well. Gallivian mentioned the following constraining forces of Multi-Vendor arrangements (Gallivian, 1999):

- 1) Coordination costs: costs associated with information search, communication and monitoring are called coordination costs. When the performance of outsourcing fails to meet the customer's expectations, it is more difficult to find the responsible party in multi-vendor

arrangements compared to the single vendor ones. If areas of responsibility for each vendor are not clear, they gain the opportunity to play one of against the other, at the expense of the client (Morgan Chambers, 2001). This “finger pointing” risk can be reduced or totally eliminated by the usage of prime contract structure (Zahler, 1998). But even in that case, the prime contractor has to incur this coordination cost. For this reason, it can be stated that coordination costs favor fewer vendors due to the complexities of multi-vendor arrangements (Gallivian, 1999).

- 2) Contractual complexity: Contracts usually become more complicated, as the number of parties increases. Legal fees incurred in writing and implementing such contracts increase exponentially with the rise in this number (Gallivian, 1999). Avoidance from these costs usually results in incomplete contracts, which can cause more serious problems than incurring such costs.

Apart from legal fees incurred, extra people will be required to manage the complexity and this will create additional costs (Morgan Chambers, 2001). A major mistake of companies is to reduce the number of contract management staff to reduce this cost. However, under-management leads to under-performance of the vendors.

According to the survey of Cutter Consortium, (Epner, 2001) 46 percent of the firms surveyed encountered with “the difficulty of assigning responsibility for problems”. In most cases, vendors do not have contractual relationship with each other, view each other as competitors, and worry about losing their intellectual property.

43 percent of them lived problems due to “unprepared internal personnel for the complexity of multi-vendor management”. Lack of outsourcing project and

program management skills was often stated as a problem by outsourcing survey respondents. Usage of a system integrator can be a solution for this internal problem but this is not a very common application because of its additional cost. Only 13 percent of them contracted with the system integrator to manage or coordinate the work

“Difficulty with sharing of data and other program-related information” was stated another important multi-vendor problem by the 35 percent of the respondents. Worries about losing a competitive edge or intellectual property can cause this problem by reducing the willingness of vendors to share data with others.

Finally, 26 percent of the firms surveyed reported a “significant increase in internal costs to administer complex contracts” due to the higher management and coordination costs.

2.4) *MULTI-VENDOR ARRANGEMENTS IN PUBLIC IS OUTSOURCING*

Managing multi-vendor arrangements is difficult because of the reasons stated in the previous section (Section 2.3.3). When public IS outsourcing risks (Section 2.2.3) are added to these problems, the situation becomes much more complex.

In spite of these difficulties, successful examples exist in the literature. One of them is a North American public organization, which outsourced all of its IS activities to three different suppliers. An innovative contract was stated as the reason behind the success of this arrangement in an article written by Aubert, Patry and Rivard (Aubert, et al, 1995).

The following mechanisms were used to increase incentives for vendors in order to make them to perform in the organization's best interest:

- 1) Benchmarking: benchmarking increased the information available to the public organization about the vendors' performances. The organization established some standards on the basis of projects that had been conducted internally or derived for the competing submissions. By this way, the price paid to each supplier could be adjusted according to the resources and efforts required by the project.
- 2) Monitoring: the contract also required the vendors to cooperate on almost every project. Each supplier had to cooperate with others in order to be successful in its part of the job. This arrangement also brought a third party view of each supplier's work to the public organization.
- 3) Dynamic Interaction: the organization awarded its vendors with new projects if their performance satisfies its requirements. This long-term dynamic relationship enabled vendors to leverage their investments and reduce their risks over time.
- 4) Countervailing Incentives: another motivating mechanism used was the allocation of two dependent stages of production to the same vendor (e.g. maintenance of the system developed by the vendor). By this way, vendors could not blame others for poor performance at the final stage since it was responsible from the previous stage as well.
- 5) Goal Alignment: the public organization and its vendors behaved like partners and sold IT solution to the other administrations in other countries. This shared goal increased dependency among the

organization and its vendors to achieve better results, which in turn created new sales.

- 6) Reputation effect and signaling: since the service level of the vendors is a key determinant of their reputation, this can be used as an additional incentive for them. Since the suppliers heavily depended on the organization to introduce them to other administrators, the cost of not providing adequate service became much higher (loss of potential customers is an additional cost for vendors)

- 7) Competition between agents: the public organization also included in its contracts the right to solicit competitive bids when bids submitted by the outsourcers fell outside a determined range of reasonable prices for contracted activities. By this way, continuous competition was used as an important tool to prevent opportunism.

2.5) SUCCESS FACTORS IN IS OUTSOURCING

In the previous section, a specific success story is taken as an example for “Multi-vendor IS outsourcing arrangements”. In order to designate an outsourcing project as successful, multiple dimensions should be taken into account. Four dimensions are stated by Saunders, Gebelt, and Hu. (Saunders, et al, 1997):

- 1) Economic: the efficiency of the outsourcing arrangement and the extent to which it helps the organization to avoid a major capital expenditure.

- 2) Technological: the technological flexibility, new skills and new technologies gained as a result of outsourcing.
- 3) Strategic: strategic advantage and in-sourcing capability derived from the outsourcing arrangement.
- 4) Overall satisfaction with the contract: the overall success of the outsourcing arrangement and the desire to change vendor(s).

After clarifying measures of success, the critical success factors to achieve desired results in terms of these dimensions can be examined.

In the literature, there are different criteria set for successful outsourcing process. These criteria can be grouped under five main titles:

Determination of Objective

According to DiRomualdo and Gurbaxani, “clarifying the strategic intent underlying the outsourcing decision” should be the first step for successful outsourcing process (DiRomualdo and Gurbaxani, 1998). Deciding the outsourcing objective is important since it is a very fundamental step, on which others depend. Hunter and Healy also supports this view and states that the terms of the contract, and the type of the relationship between the organization and its vendor(s) should be determined according to this initial objective (Hunter and Healy, 2002).

Vendor Selection

Depending on the outsourcing objective, potential vendors with different characteristics are selected by the organization. According to the literature, vendor selection procedure is carried out in two stages: pre-negotiation and

negotiation stages. At pre-negotiation stage, the organization makes a pre-evaluation to eliminate some of the potential vendors who lack the characteristics demanded by the organization. After this elimination, more specific evaluation of the remaining vendors is done in the negotiation stage (Turgay, 2001).

To select the right vendors for successful outsourcing process, different suggestions exist in the literature. DiRomualdo and Gurbaxani state, “Outsourcing organization and its vendor(s) should have the right mix of competencies and know-how” (DiRomualdo and Gurbaxani, 1998). Moreover, “organizational culture and work practices should be compatible with the vendor(s)” (DiRomualdo and Gurbaxani, 1998). Since the cultural and strategic fit between the parties is one of the important determinants of service quality, these aspects should be considered during vendor selection process (Turgay, 2001). Strategic fit can be achieved by setting common goals as it was done in the North American public organization case (Aubert, et.al, 1995). Saunders, Gebelt, and Hu suggest ‘profit sharing’ in order to create win-win situation in outsourcing agreements (Saunders, et al, 1997). In Morgan Chambers report, it is claimed that “organization can access its vendors’ strategic thinking” for successful outsourcing arrangement by contributing their strategy in terms of what technologies to focus on, in which areas innovation can pay off etc (Morgan Chambers, 2001).

In case of multi-vendor outsourcing arrangements, achieving the coordination among vendors can create additional obstacle for successful outsourcing. For this reason, Epner offers “regular and joint communication among all vendors” should be arranged. In addition to this, “joint technical and management review meetings” should be done periodically to discuss the progress with all vendors (Epner, 2000)

Outsourcing Contract

Well-managed contract is another important building block of successful outsourcing arrangements. The literature is very rich in terms of the essential elements of outsourcing contracts. Especially, the clauses suggested by Lacity and Hirschheim are accepted as the primary source for other researchers, who use these clauses as a guideline to measure the completeness of outsourcing agreements in their studies (e.g. Saunders, Gebelt, and Hu, 1997; Khalfan and Gough, 2000; Turgay, 2001).

According to Lacity and Hirschheim, the organization should “discard the vendor’s standard contract” and develop a new contract by considering its specific situation (Lacity and Hirschheim, 1993). They also warn the organizations to “measure everything during the baseline period” and “not to sign incomplete contracts”, since vendor(s) charge extra fee for the services not covered in the contract.

The outsourcing contract should include “service level measures” to clarify what is expected from the vendor(s) (Lacity, Hirschheim, 1993; Epner, 2000). In Morgan Chamber’s report, it is stated that setting stringent service level agreements is critical success factor, which forces vendor(s) to achieve better results by using their full potential (Morgan Chambers, 2001).

Only setting measures is not enough for the success, performance of the vendor(s) according to these measures should be evaluated as well. For this reason, “developing service level reports” is another recommendation of Lacity and Hirschheim. Epner supports such an application in case of multi-vendor arrangements and suggests “periodic performance review for each vendor” as a success factor for multi-vendor arrangements (Epner, 2000)

Flexibility of the contract is also given importance in the literature. DiRomualdo states that contracts and relationships with vendor(s) should be

designed to anticipate future changes (DiRomualdo and Gurbaxani, 1998). Since business goals may change, “annual realignment of the contract” depending on those changes is supported in the report of Morgan Chambers. “Changes in the business volume” should also be taken into account since they may require making adjustments in the contract (Lacity and Hirschheim, 1993; Saunders, et al, 1997).

“Including a termination clause” in the outsourcing contract is highly recommended in the literature in order to protect both the organization and its vendor(s) (Lacity and Hirschheim, 1993; Morgan Chambers, 2001; Gramatikov, 2002). Gramatikov makes additional warnings related with the transfer of the data after the contract termination especially for public organizations (clarified in section 2.2.3)

Although it has the risk called ‘dangers of eternal triangle’ (section 2.1.3, item 9), “taking the view of third parties” is recommended by Lacity, Hirschheim, Saunders, Gebelt and Hu (Lacity& Hirschheim, 1993; Saunders et. al. 1997) . They encourage organizations to use a technical and a legal expert during contract negotiations.

Psychological Contract

Outsourcing relationship is an inter-organizational relationship including at least two different organizations. Outsourcing parties use “written contract” to manage this relationship, but psychological contract should not be ignored for successful outsourcing arrangements as well. Unlike formal written contract, “psychological contract consists of unwritten and largely unspoken sets of congruent expectations held by the transacting parties about each other’s prerogatives and obligations.” (Sabherwal, 1999)

‘Structural controls’ are employed to achieve the compliance of parties with the written contract, while psychological contract can be supported by ‘trust’. According to Sabherwal, there are four types of trust:

- 1) Calculus-based trust is the result of rewards and punishments associated with a particular project. Expected long-term relationships, structural controls and penalty clauses are important tactics for building this kind of trust.
- 2) Knowledge-based trust emerges when two parties know each other well. Shared experience on other projects, prior acquaintance among key employees and courtship mainly result in this knowledge and in turn the trust among the parties.
- 3) Identification-based trust is the result of the two parties identifying with each other’s goals. This kind of trust can be developed by shared goals, or early-team building efforts.
- 4) Performance-based trust depends project’s early success. Accomplishing project goals seemed to improve cooperation and trust. Celebration of key interim deliverables, and vendor’s demonstration of the completed portions of the systems can help to form this kind of trust.

The key to successful outsourcing contract is to balance between trust and structural controls. None of them can be a substitute for the other, and excessive usage of one hurts the overall performance of the project.

Organizational Issues

Managing the internal personnel properly during and after the outsourcing process should be another main concern of the organization. Even if all previous steps are planned and taken successfully, organizational problems can cause the failure of the outsourcing process.

“Managing the expectations of the internal personnel” is very important, so the organization should clearly communicate with all stakeholders about the expected benefits of outsourcing (Morgan Chambers, 2001; Hunter and Healy, 2002). However, these benefits should not be exaggerated. Even an initial commitment might be achieved at first; this approach can cause dissatisfied personnel with very high expectations at the end.

Outsourcing almost always changes the way people in the organization work. Especially the members of the organization’s IS department are dramatically affected from the outsourcing decision. Their job definitions may change; they can be temporarily transferred to the vendor organization(s) or laid off permanently. For this reason, the organization should consider the possible effects of its outsourcing decision very carefully and take action to protect the right of its employees (Lacity and Hirschheim, 1993). Related with this issue, Hunter advise organizations “to get employees and unions involve in the outsourcing process early” and “to develop appealing transition packages with some period of guaranteed employment, attractive pension plans etc” (Hunter and Healy, 2002).

Finally, “support of top level management” at all levels of the outsourcing process is important success criteria mentioned in the literature (Lacity and Hirschheim, 1993)

Other considerations

A successfully completed outsourcing project is the desired end product for all outsourcing relationships. However, the project development is not a smooth process. During the life of an IS project, the project may go through different success and failure cycles. Sabherwal grouped these cycles according to the trust, structuring and performance characteristics of the project. (Sabherwal, 1999)

The virtuous cycle involves positive trust, appropriate structuring and good performance, whereas the vicious cycle involves distrust, inappropriate structuring and poor performance. Projects can live shifts from one cycle to the other during their lifetimes; in other words, a successfully started project may turn out to be an ultimate failure, or vice versa.

Sabherwal states three reasons for why projects get into trouble (shift from the virtuous cycle to the vicious cycle). These are “change in personnel”, “poor project management”, and “performance problems”. Similarly, a project can get out of trouble by jumping from the vicious cycle to the virtuous cycle. “Adding or reducing structures”, “changing the project manager”, “focused top management pressure”, and “emphasizing identity enhancing events” are mentioned as useful tactics for achieving this shift.

In summary, successful IS outsourcing project is the result of well-planned applications in key areas (i.e. Determination of the objective, vendor selection, outsourcing contract, psychological contract and organizational issues). Apart from these critical success factors, it should not be ignored that a project may not be successful in all its phases or a bad start may not indicate an ultimate failure. For this reason, parties of the outsourcing arrangement should be aware of different cycles a project may go through during its life time, and the reasons behind the shifts from one cycle to the other.

CHAPTER 3

CASE DESCRIPTION

In this thesis, “Core Health Resource Management System” (CHRMS) project of the Turkish Ministry of Health (MoH) was selected for a case study. Reasons behind the selection of this specific case, history of the project and the main actors involved in the project will be examined in the following sections.

3.1) REASONS BEHIND THE SELECTION OF THIS CASE

In the literature, successful outsourcing projects or unsuccessful ones are mainly examined for setting fundamental theories related with the success criteria in IS/IT outsourcing. However, this project was very different from the ones examined so far in the sense that it was previously terminated (i.e. became unsuccessful) but later it started again and finished successfully. For this reason, it gave us an opportunity to examine the reasons behind the failure of the initial attempt, success of the current situation, and the changes that were undertaken for achieving this shift.

Moreover, IS outsourcing literature usually includes cases from developed countries while there is not so much research conducted in developing countries. Differences probably exist between these two groups of countries and some of them were mentioned in the Literature Survey (2.2.3 Additional

Risks of Public IS Outsourcing, 2.2.4 Situation in Turkey). Although analysis of a single case may not provide conclusions valid for all cases in Turkey, it could be an initial attempt helpful for further research in the area.

Finally, as far as the primary contractor was concerned, the project reflected the characteristic of both multi-vendor and single vendor outsourcing relationships. The project started with a consortium consisting of two vendors (Likom and Siemens-Nixdorf A.G.), but then one of the vendors (Likom) left the project and the other vendor (Siemens Business Services) took the overall responsibility. In spite of this radical change, the project could still be analyzed by considering the characteristics of multi-vendor outsourcing arrangements, since SBS had many sub-contractors working for this project. Therefore, both the single vendor (considering prime contractor) and the multi-vendor outsourcing relationships (considering the subcontractors of SBS) were useful for the analysis of this special case.

3.2) HISTORY OF THE PROJECT AND ITS MAIN COMPONENTS

Since the early 1990's, Turkish Ministry of Health (MoH) and World Bank have been working on a comprehensive health reform program supported by two Bank-assisted projects; 1st Health Project (US\$ 75 million loan approved in 1989) and 2nd Health Project (US\$ 150 million loan approved in 1995) with the aims of improving the public health, advancing the health services provided in the country, and achieving organizational development in Turkish Ministry of Health. (Ozsari, 1998)

In compliance with these Health Project Agreements, different projects were developed in "Health Information Systems- HIS" area. Main plan for HIS was prepared in 1992-1993 period. In this plan, it was stated that HIS was

composed of four fundamental information systems and they were declared as follows:

- 1) Basic Health Statistics Module (First Health project)
- 2) Core Health Resource Management System (Second Health Project)
- 3) Central Monitoring System (Second Health Project)
- 4) Hospital Information System (Second Health Project)

In 1997, The World Bank approved a US\$ 14.5 million loan to Turkey to help finance a “Primary Health Care Services Project”. The aim of this project was to complement the earlier projects (Health I and Health II) by providing financing required to pilot activities under a third important legislative initiative (World Bank, 1997). With the addition of “Pilot Primary Health Care Service Information System” as the fifth module to the previous list, these five information systems formed the informatics component of the three Health Projects (World Bank, 1998).

After this general information related with the Health Reforms in Turkey, we can focus on “Core Health Resource Management System” project, which was selected as the case study for this thesis.

In 1997, the MoH signed a contract with a consortium comprising Siemens-Nixdorf (SNI) and Likom in order to develop a nationwide resource management system covering financial, material and human resource management of MoH. (World Bank, 1998).

In the original contract, Likom was responsible from the development of the whole ‘application software’, ‘related personnel trainings’ and ‘on-site support’, while SNI was responsible from ‘software and hardware Installations’ and ‘some part of the personnel training’. When the project started, it was planned to be finished in 1999. However, the project could not

be completed in the planned schedule due to the reasons, which will be clarified in the Methodology and Case Analysis section of the thesis (Chapter 4). In 2002, Likom left the consortium and Siemens Business Services (SBS) took the whole responsibility of the project.

“Core Health Resource Management System” project has four main modules (1-4) and one overall project management module (5) besides varying number of sub-modules under each one:

- 1) Financial Resources Management System (FRMS):
 - 1.1) Budget Information System
 - 1.2) Accounting Information System
 - 1.3) Cost-Price Information System
 - 1.4) Bidding and Procurement Information System
 - 1.5) Building Information System
 - 1.6) FRMS Application Management System

- 2) Material Resources Management System (MRMS):
 - 2.1) Inventory Information System
 - 2.2) Transportation Vehicles Information System
 - 2.3) Furnishings / Fixed Assets Information System
 - 2.4) Medical Equipment Information System
 - 2.5) Maintenance and Repair Information System
 - 2.6) MRMS Application Management System

- 3) Human Resources Management System (HRMS):
 - 3.1) Training Information System
 - 3.2) Staff Positions Information System
 - 3.3) Employment Record/ Register Information System
 - 3.4) Salary and Accrual Information System
 - 3.5) Discipline Information System

- 3.6) Appointment Information System
- 3.7) Promotion Information System
- 3.8) HRMS Application Management System

- 4) Drug and Pharmacy Information System:
 - 4.1) Firm Information System
 - 4.2) Responsible Director Information System
 - 4.3) Preparatory Information System
 - 4.4) Cosmetic Information System
 - 4.5) Pharmacy Information System
 - 4.6) Pharmaceutical Warehouse Information System
 - 4.7) Controlled Material Information System
 - 4.8) Application Management System

- 5) CHRMS Management System

3.3) CUSTOMER SIDE OF THE PROJECT:

History of the customer and its other IS projects

Turkish Ministry of Health (MoH) was on the customer side of the project. This ministry was established in 1920. Now, it has eight main service units and five supporting service units. The ministry is organized as Provincial Health Directorates in 81 administrative provinces. These provinces also have main service units (branches) and supporting service units similar to the organization of the ministry. In 1961, Turkish health services were ordered in a hierarchy according to the population figures. This hierarchy starts with health center (sağlık evi) as a basic unit, and continues with village clinic /

health post (sağlık ocağı), and second and third level hospitals. (Tubitak, 2003)

Main actors of the Turkish health system are the Ministry of Health, the Social Insurance Organization (SSK), Universities, the Ministry of Defense, foundations and private physicians, dentists and pharmacists. Among these different actors, Turkish Ministry of Health is the main responsible party for the hospital care and primary care and the single provider of the preventive health services in Turkey.

Some statistical figures might be useful for understanding the importance of the MoH in Turkish health system. Although its share in the total public health spending has been decreasing, the ministry still has the highest share in this area. In 1998, it made the 30 percent of the total health spending in the country. SSK and Universities followed it with their 18 percent and 14 percent shares respectively. In terms of physical infrastructure, the Ministry has 50.1 percent of the total bed capacity of Turkey with its 751 hospitals and 87709 beds according to the 2001 figures. (Tubitak, 2003)

As it was stated in Section 3.2, the Ministry of Health has other IS projects in addition to CHRMS project. Actually all of these projects will form Health Information Systems (HIS) of Turkey. Among them, “Basic Health Statistics Module” can be considered as the first step towards HIS. It started in 1995 and was successfully completed in 1997. With this module, Health Province Directorships gained the ability of electronically sending health data figures to MoH. These data are combined to form up-to-date and reliable health statistics for Turkey. In spite of this successful first step, other projects forming HIS lived some problems and their schedules were changed many times because of these problems. (Gülkesen, 2003)

Internal Organization of the Customer for this project

The International Agreement with the World Bank required the establishment of a Project Coordination Unit (PCU), which would be responsible from the usage of WB's credit. PCU was organized according to the areas where WB credit was used (i.e. construction unit, basic health services unit, information systems unit etc.)

When the project first started, IS unit of PCU had the overall responsibility related with the CHRMS project. This unit was very strong and accountable from the approval of software development phases, the communication with the vendors and the coordination within the Ministry of Health; in other words, it held both technical and administrative power of the project on the customer side.

However, due to the reasons analyzed in Chapter 4, responsibilities of this unit were reduced and Information Systems Department became responsible from the technical aspects of the project and coordination within the Ministry, while PCU was responsible from financial issues.

3.4) *VENDOR SIDE OF THE PROJECT:*

History of the vendor and its other e-government projects

Siemens A.G. was established in Germany in 1847. It operates in electric and electronic sectors in more than 190 countries with its 470,000 employees. Informatics and telecommunication, automation and control, energy, transportation systems, and medical solutions are among the services provided by the company. (Siemens, 2003)

The main vendor of the CHRMS project was Siemens Business Services (SBS), which was one of the firms working under Siemens. Siemens A.G. and Siemens Nixdorf A.G. (original vendor of the CHRMS project) established SBS in Germany in 1995. It operates in electronic and mobile business solutions and services areas. In 1999, Siemens A.G. and Siemens Nixdorf A.G. merged and then Wincor-Nixdorf and Fujitsu Siemens were separated from SBS. Today, the firm has branches in 88 countries with more than 35,000 employees. (SBS, 2003)

SBS has been operating in Turkey since 1997. SBS Turkey headquarter is located in Istanbul, and the second big branch is in Ankara. Today, 720 employees work for SBS Turkey in 13 administrative provinces (SBS, 2003). It has the leader in Turkish outsourcing market with its 33,1 percent market share (Interpro, 2001). In this market, SBS provides e-government / e-organization projects, data center services, data storage systems, business continuity and disaster recovery services, call center services, data and communication networks, network management services, security services, ATM services, and other related services. (BTHaber, 2002)

CHRMS was not the first e-government project of SBS Turkey. Understanding the situation in other projects of SBS Turkey in this area was useful for evaluating our case study in the sense that they could give some clues related with the customer-vendor relationship and the general attitude of the vendor towards e-government projects.

Tax Offices Automation Project was one of the most important e-government projects of Turkey, in which SBS Turkey involved as a vendor. The Ministry of Finance was on the customer side of the project, which started in 1998 and successfully completed in 2000. This e-government initiative of Turkey has enabled the coordination and communication among all tax offices, regional units, and central headquarter. SBS had the role of “system integrator” in this

project. The firm was mainly responsible from the personnel training during the project and still continues to provide on-site support and system maintenance services. (SBS, 2003) The project became successful both nationally and internationally. It won its first award in Cebit-Eurasia in 2002 and received 2003 Computer-world Honors 21st Century Achievement Award in June 2003 as being the best IT application in the world in Government and Non-Profit Organizations. (CyberSoft, 2003).

Another e-government project with the Ministry of Finance was “National Real Estate General Directory Automation Project”. The aim of it was to make the selling and renting of the governmental fixed property over the Internet. The project started in 1995. Main responsibility areas of SBS Turkey in this project were design, infrastructure, installation, integration and consulting services. The firm has completed four automation levels so far and now it is working on the fifth level. (BTHaber, 2002)

“Local Employment Offices Automation” and “Income Controller” projects are other e-government projects of SBS Turkey, which still continue.

Internal organization of the vendor for this project

According to the interview with the project manager, there were three teams in accordance with the components of the project. These teams were:

Application Software Team: there was one project manager in this team. The number of team members changed according to the phases of the project. This number reached a maximum of 18 since the beginning of the project and it was 10 at the end.

Hardware Installation Team: besides one project manager, 5 to 6 employees worked in this team from the Ankara Branch of SBS. Moreover, varying

number of employees from the other branches of SBS in Turkey worked for the hardware installation in administrative provinces.

Training On-Site Support Team: this team was one of the most important components of the project and had the highest number of employees. The team members were responsible from the training of both the personnel in the center of MoH and the ones in administrative provinces. Besides one project manager, 50 employees were working in this team. This number changed as the application software was installed in new provinces.

Apart from these teams, one project manager was responsible from the overall coordination of the project, the communication with the customer organization (i.e. MoH), and the preparation of the project reports. Over all these teams, there was one e-government director, who dealt with all e-government projects of SBS in addition to CHRMS.

Although they were not stated as the direct vendors of the CHRMS project, SBS used many subcontractors, which provided products and services for different parts of the project. The project manager stated these vendors and their specific contribution to the project as follows:

Table 2: Vendors of SBS and their products and/or services used in CHRMS project.

Vendor	Product / Service
Sentim	Workstations
Fujitsu Siemens	Web Solution servers
Elkotek	Modem
Netsite	Data Infrastructure and Cabling
Enterasys	Routers and Switches
Pera	Laser Printers
Servus	Dot Matrix Printers

Besides the products stated in the previous table, different Microsoft and Oracle products were used in the project as well.

3.5) OTHER ACTORS OF THE PROJECT

Likom

Likom was one of the two vendors forming the consortium (its main responsibilities were stated in section 3.2). However, the firm left all of its responsibility to SBS in 2002 because of the problems stated in Chapter 4.

Likom is the first and one of the biggest software firms of Turkey. It was established by hundred percent domestic-capital in 1984. Its project department was formed in 1995 and since then the firm has involved in many important public IS projects (e.g. MERNIS SEC Project of the General Management of Population Affairs, Targeted Coordination Determination System of the Ministry of National Defense, and Illegal Trade Database of the Ministry of Internal Affairs). All of these projects have been successfully completed. (Likom, 2004)

World Bank

World Bank was *the financier* of this project besides the many other projects of the Ministry of Health.

World Bank is one of the United Nations' specialized agencies, which provides loans, policy advice, technical assistance and knowledge sharing services to low and middle income countries. The "World Bank" is the name that has come to be used for the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA).

Together these organizations provide low-interest loans, interest-free credit, and grants to developing countries. (World Bank, 2004)

UNDP and UNOPS

United Nations Development Programme (UNDP) and The United Nations Office for Project Services (UNOPS) were the other actors of this project, which were responsible from the *contract management*.

UNOPS is an entity of the United Nations System, reconstituted as of 1 January 1995 for the specific purpose of providing services to projects and programmes supported by UN member states and organizations.

UNOPS specializes in the management of programmes and projects. If technical support is required, UNOPS subcontracts for it, either as part of its management responsibility or as an integral part of the programme or project design.

On behalf of UNDP, UNOPS has implemented several components of programmes funded by the World Bank and the Inter-American Development Bank. The instrument is the Management Services Agreement (MSA), signed by UNDP and the borrower, which stipulates the parties' obligations and services to be provided by UNOPS. (UNDP, 2004)

Undersecretariat of Treasury

Undersecretariat of Treasury was the last important actor, which was responsible from *financial monitoring* of the project. It signed the credit agreement with the World Bank at the beginning of the project. Then it supervised the project and involved in case of financial problems. The project evaluation reports and reports of mission meetings prepared by the World

Bank and the Ministry of Health were submitted to the Undersecretariat of Treasury.

CHAPTER 4

METHODOLOGY AND CASE ANALYSIS

4.1) SITUATION OF THE CASE IN THE CASE STUDY LITERATURE:

Before examining the place of our case in the case study literature, general information can be given related to case research in the Information Systems field.

A case study examines a phenomenon in its natural setting, employing multiple methods of data collection to gather information from one or a few entities. (Benbasat et al., 1987) Case study is used in many different research fields.

As it was stated by Khalfan and Gough, many researchers in the IS field have used the case study approach as their research strategy (Khalfan and Gough, 2000)

Three reasons are stated in the literature in order to explain why a case study research is a viable information systems research strategy. (Benbasat et al., 1987) First, the case study enables the researcher to study information systems in a natural setting, learn about the state of the art and generate theories from practice. Second, “how” and “why” questions can be effectively answered by a

case study. This is an especially useful characteristic for IS cases where there is a complex interaction between the organization and its IS projects. Finally, a case study approach is an appropriate research strategy in areas where few previous studies have been carried out. The IS field has a rapid pace of change with many new topics emerging each year, so case research enables to gain insight in this highly dynamic field.

There are three basic types of case study according to its purpose. (Berg, 1998)

- 1) Intrinsic Case Study: Case is selected due to its uniqueness or its ordinariness in this type of study. The aim is to better understand a particular case rather than to understand or to test a theory or to develop a new theoretical explanation.
- 2) Instrumental Case Study: In this type of case study, the case has secondary importance. The intention is to assist the researcher to better understand some external theoretical question or problem.
- 3) Collective case study: study of several instrumental case studies is the main characteristic of this type. The selection of cases is intended to allow better understanding or an improved ability to theorize about some larger collection of cases.

Our case study was a good example of “intrinsic case studies”, because the aim was to better understand the intrinsic aspects of a unique case (the main characteristics of the case according to the literature, actions taken for leading the case to success from the initial failure, etc.)

One of the most important decisions in case research is to decide on the *number of cases* used in the research. Benbasat et. al. compare single-case

with multiple-case design depending on the aim of research (Benbasat et al. ,1987). According to them, “single-case study” is appropriate when:

- 1) It is a revelatory case, situation previously inaccessible to scientific investigation.
- 2) It is a critical case for testing a well-formulated theory.
- 3) It is an extreme or unique case.

On the other hand, “multiple- case design” is used when the aim of the research is description, theory building, or theory testing.

In terms of number of cases studied, our case study was an example of a single case study. The selection of this design was appropriate since the selected case was an extreme one with its unique characteristics and the researchers in the literature had not previously worked on such a case. These factors made the single-case design particularly suitable for our study.

4.2) QUALITATIVE VERSUS QUANTITATIVE RESEARCH METHODS IN IS FIELD:

Quantitative methods are characterized by formulating hypotheses that are tested through controlled experiment or statistical analysis. The assumption of this approach is that research design should be based on the positivist model of controlling or measuring variables, and testing pre-specified hypotheses (Kaplan and Dennis, 1988). On the other hand, qualitative research involves the detailed observation and involvement of the researcher in the natural setting of the studied area and it emphasizes an interpretive approach.

Kaplan and Dennis stated the following findings related with the research traditions in IS field. Despite the strong ties of information systems with organizational and behavioral research, the use of qualitative research, though practiced and advocated in information systems, was not seen as visibly as in this field as in others (Kaplan and Dennis, 1988). The dominant approach in this field was to examine the effects of one variable on another. Most of the initial studies tried to measure quantitative outcomes by treating organizational features, user characteristics, technological features, and information needs as static, independent, and objective. This approach ignored the dynamism and interaction of these features besides the effects of social and political issues on the researched area.

Later, the IS field saw a shift from technological to managerial and organizational questions, and this led to more interest in how context and innovations interact. (Benbasat, et al., 1988) For this reason, interpreting information technology in terms of social action and meanings became more popular as evidence grew that information systems development and use are social as well as technical processes that include problems related to social, organizational, and conceptual aspects of the system. (Kaplan and Dennis, 1988)

This shift does not mean that one method is unconditionally better than the other and it should be used for all research cases. Both qualitative and quantitative methods are useful methods and successfully answer different kinds of questions. In other words, aim of the researcher is the critical factor in the selection of research method. Quantitative researchers try to understand whether and to what extent variance in x causes *variance* in y, whereas qualitative researchers ask how x plays a role in causing y, what *the process* is that connects x and y. (Maxwell, 1996)

In this thesis, our aim was to examine a specific case, which was selected due to its unique characteristics. The aim was not to measure the effects of different variables on each other or to make general conclusions from the findings of this specific case. In this study, organizational and managerial factors were analyzed in a detailed manner by seeing them as dynamic factors affecting IS outsourcing project success or failure. Qualitative research method was suitable for our research purposes, since we mainly dealt with the causal processes by which some events influence the others (i.e. changes in managerial practices and project success).

4.3) APPLICATION OF QUALITATIVE RESEARCH

4.3.1) CONCEPTUAL CONTEXT

By considering the basic theories and findings mentioned in the literature (Chapter 2: Literature Survey), our case study could be classified as follows. In terms of the customer identity (Turkish Ministry of Health), “Core Health Resources Management System” project was an example of “public IS outsourcing projects” (Section 2.2 Public IS Outsourcing). In terms of outsourcing relationship, the project was multi-vendor arrangement, since it included one client and many vendors (Section 2.1.1 Outsourcing Relationship Classification). Type of multi-vendor IS outsourcing could be further classified as “a single prime contract with well defined multiple sub-contracts” (Section 2.3.1.Types of Multi-vendor IS Outsourcing). Initially, Likom and SNI were on the prime contractor side of the project as being the members of a consortium. Now, Siemens Business Services is the prime contractor of the

project, while it has many subcontractors (i.e. Sentim, Fujitsu Siemens, Elkotek, Netsite, Entrasys, Pera, and Servus).

4.3.2) RESEARCH QUESTIONS

This thesis mainly focused on three areas: analysis of the current situation, the analysis of the initial failure, and the analysis of the changes and their effects on the project. The research questions were as follows:

- 1) Analysis of the current situation: First research question of this thesis was “Is the current outsourcing arrangement a success or a failure in terms of different success criteria mentioned in the literature?” Findings in the literature (Chapter 3. Literature Review) were used as guidance in order to make this evaluation.
- 2) Analysis of the past: the next research question was “what are the reasons behind the initial failure of the project?” In this part of the study, failure signals in the initial attempt were evaluated according to the literature.
- 3) Analysis of the change: the final research question of the study was “If the project is accepted as a successful one now, what changes in which areas have contributed to this result?” In this part, the research focus was on the change, considering both the past and the current situation.

4.3.3) DATA COLLECTION METHODS

Multiple data collection methods were employed in this study. According to the literature, usage of triangulation, i.e. collection of the information from diverse range of individuals and settings using a variety of methods (Maxwell, 1996), enables to combine the strengths of different methods. Moreover, this application provides greater support for research conclusions by cross-validation. (Benbasat et al., 1987; Kaplan and Dennis, 1988; Maxwell, 1996)

In the literature, the following *sources of data* are suggested as working well in case research, so they were employed in this study as well. (Benbasat et al., 1987; Yin, 1994)

- 1) Documentation: written materials including technical notes related with the project, formal letters between World Bank and The Ministry, internal documents such as sector policy letter written to Undersecretariat of Treasury, case records and news in the mass media were used to evaluate the previous and current situation of the project.
- 2) Archival records: organization chart of the customer was utilized to evaluate the power of departments within the organization. This evaluation was important since the place of different departments within the organizational hierarchy gave clues about why some problems emerged and how they were solved.
- 3) Direct Observations: interviews created an opportunity for direct observations. Since each interview was conducted by making a field visit to the case study site, observations provided additional information about the topic being studied. For example, during my interview in the Ministry of Health, I encountered with a conversation between two employees of the IS department. They mainly complained

about the critical behavior of other departments related with the project. They evaluated a formal letter sent by another department, which was not satisfied with the training provided by the IS department but did not explain the reasons behind this dissatisfaction or provide any suggestions to improve the current situation. This observation was critical in the sense that it revealed a communication problem among the departments of the organization and this problem affected the evaluation of the project negatively.

- 4) Interviews: semi-structured interview was the main data collection method in this study. All relevant parties of the projects were involved in this study. Six main parties of the project and interviewees who participated in the study were as follows:

Table 3: Interviewees and their roles in the project

Organization	Role of the organization in the project	Role of the interviewee
Ministry of Health	Customer	CHRMS Project Manager
Siemens Business Services	Vendor (prime contractor)	CHRMS Project Manager
World Bank	Financer	Operations Officer Human Development Sector Unit
United Nations	Contract Manager	Operations Manager United Nations Development Programme
Undersecretariat of Treasury	Financial Control	Department Manager Social Sectors Relationships with World Bank, Foreign Economic Relations General Directorate
PCU (Ministry of Health Project Coordination Unit)	Project Coordination	Former Head of IS department of the PCU in the Ministry of Health

Sampling used in this thesis was purposeful; i.e. the deliberate selection of particular setting, persons or events to provide important information that no

other choice can provide (Maxwell, 1996), The important point was that the reasons for the sampling were clearly related to the research questions (Ezzy, 2002).

Since CHRMS was a public project and the project continued for a long period of time, finding a suitable interviewee, especially on the customer side of the project, was very difficult. Many investigations related with the project increased the fears of employees in the Ministry and led them not to talk about it. Moreover, there were frequent personnel changes so it was very difficult to find a person who had been working on the project since the beginning.

On the customer side, I tried to reduce the effects of this obstacle by selecting a person who was in the coordinator position, dealing with the relationships among the vendor, World Bank and United Nations. Moreover, she had been working in this project for a long period of time (according to her explanation, she was the only person who remained in this project for such a long period, all others working with her had been changed.) For this reason, she was the most appropriate person for answering the research questions, including the evaluations of past and current situation of the project.

On the vendor side, it was possible to interview more people but in that case vendor side would be over-represented compared to the customer side. And this might create a bias in the analysis process towards the vendor's point of view. The interviewee was one of the project managers, and responsible from the overall coordination among all relevant parties of the project. Similar to the interviewee from the ministry, she knew both the overall project and its parts, because of her position.

Both of these interviews showed that World Bank and United Nations had important effects on the project, especially on the change from failure to success. Therefore, it was vital to learn the views of these parties. Interviewees

from these organizations provided these views and enabled me to see the whole picture.

Since the World Bank financed CHRMS, Undersecretariat of Treasury automatically became a relevant party in the project. For this reason, the interviewee from this public organization provided another point of view for the evaluation of the project.

Although all of these interviews were very useful to evaluate the whole project, they mainly gave information on the current situation and how the project was turned to success. To evaluate the past of the project, especially the time when the project was to be terminated, their knowledge was usually second hand. In order to get first-hand information, I conducted an interview with the former head of the IS department under the PCU. This interview made important contributions to this study by revealing the main problems lived in the past and enabled better evaluation of the project.

4.3.4) DATA ANALYSIS AND RESULTS

According to the literature, the relationship between data analysis and data collection can be disconnected or integrated. In “Disconnected Research”, the analysis does not start until the data collection is complete. On the other hand, the data collection and data analysis are interrelated processes in “Integrated Research”. (Ezzy, 2002)

This study was an example of integrated research, since data collected early in the process were used to guide the questions that were asked as the research progressed. Each interview was transcribed before conducting the subsequent ones. By analyzing the data collected from each interview, some new topics

and emphases were added to the following interviews. This enabled me to answer my research questions by using both the literature (my initial knowledge about the topic) and specific findings of this case (new emphases that emerged during the previous analyses).

4.3.4.1) ANALYSIS OF THE CURRENT SITUATION

Firstly, the analysis of the current situation should be done to answer, “Is the current outsourcing arrangement a success or a failure in terms of different success criteria mentioned in the literature?” (Research Question 1). According to the four dimensions of Saunders, Gebelt and Hu, the project can be evaluated as follows: (Saunders et al., 1997)

The outsourcing arrangement can be considered successful in terms of *economic dimension*. The vendors were selected by an international bidding according to different criteria including price. This enabled the ministry to select the vendors among the bidders by considering economical efficiency as well. Evaluation of outsourcing in comparison to developing and relying upon IS man-power native to MoH was not possible since the ministry did not have a separate IS department when the project started, it had only an IS section under the Human Resources Department and this section could not perform such a big project.

The outsourcing arrangement also made important contributions in *technological dimension*. Technology culture of the organization was improved by the utilization of new technologies and new skills were gained from trainings and seminars conducted to use the system. Another vital contribution was achieved on the *strategic dimension*, since the ministry gained in-sourcing capability by the major organizational re-structuring of the IS department during this project. The ministry personnel gained an

experience by working with IS experts (these experts had contracts with UNDP and worked in PCU for this project) and these personnel formed the initial members of the IS department. This improvement was very important since the ministry needed this work force both to continue the existing IS projects and to initiate new ones.

In terms of *overall satisfaction with the contract*, contradictions exist among the views of different parties. According to the interviewee from the ministry, both users and the IS department of the Ministry were not satisfied with the contract since it did not reflect the needs of the users properly. On the other hand, the interviewee from the PCU stated that this contract was not a standard one and specifically developed for this project in compliance with the needs of the Ministry after a detailed analysis of user needs. Moreover, the vendor mentioned that a contract amendment was performed to reflect the changes during the life of the project (e.g. change in the technology, change in the training times etc). The interview with the World Bank revealed the reason behind these contradicting views. He explained that the ministry did not take the required amendment attempts on time due to the frequent changes of top-level managers.

Another problem related with the contract resulted from the lifetime of the project. The interviewee from the World Bank mentioned, “IT projects are usually problematic because of the frequent improvements in the technology. Since there is a clause in the contract saying, “up-to-date technology will be used, the change order problems arise”. When we consider the lifetime of this project, which was much longer than planned, we can say that the changes in the technology became a more important problem for this specific case.

By taking all of these four dimensions into account, this outsourcing arrangement could be stated as a successful one. Although level of satisfaction from the contract was low, the project made important contributions to the

ministry in technological, economic and strategic dimensions. As of June 2004, the Ministry and 81 Provincial Health Directorates were using CHRMS and SBS was continuing to provide help desk services. It should be noted here that the focus of this study is on the outsourcing arrangement and not the effectiveness or success of the resulting information system. Hence, the qualification “successful” refers to that arrangement and not the implemented system, notwithstanding the achievements incurred by the latter, which are outside the scope of interest of our work.

In order to understand how this result was achieved, the applications of related parties in the key areas (i.e. Determination of Objective, Vendor Selection, Outsourcing Contract, Psychological Contract and Organizational Issues) should be evaluated.

Determination of Objective

Strategic intent behind this outsourcing attempt could be analyzed under the “Business Impact” category (DiRomualdo and Gurbaxani, 1998). The main aim of the project was to develop nationwide resource management system covering financial, material and human resource management of the MoH. The Ministry stated the real contribution of the system was expected in the strategy field. Through proper use, the system would enable strategic planning and help the ministry in its macro policies. Actually this project was considered as an important module of a complete health reform of Turkey. For this reason, the strategic intent was much more than achieving “IS Improvement” with better performance from core IS resources of the Ministry.

The Ministry could not undertake this project by using its own IS department since it lacked the necessary IT talent and management skills. The Ministry also did not have required financial resources for this project. For this reason,

the credit from the World Bank was used to finance it. This also made outsourcing the only option for the project since the World Bank could not accept such a big project to be undertaken by the personnel of the Ministry. Actually MoH had a small IS section, which was under the Human Resources Department, and whose responsibility was very limited. The IS department underwent major organizational change in 1998, when its level was raised from a section to a department responsible from IS operations of the whole ministry.

Vendor Selection

The government of Turkey and United Nations Development Programme (UNDP) made an agreement for management and other support services of the Second Health Project sponsored by the World Bank on 26 December 1995 (Resmi Gazete, 1996). The roles of the government, UNDP and United Nations Office for Project Services (UNOPS) were determined according to this Management Services Agreement (MSA). Since CHRMS was one module of the Second Health Project, understanding this MSA was important for the evaluation of the project.

The agreement had a section about the responsibilities of the main parties (The government, UNDP, and UNOPS) in “contracting of firms (services)”. According to this agreement, the Government prepared the Terms of Reference and obtained World Bank’s no objection. Then, UNDP prepared Request for Proposals (RFP), established technical evaluation team including consultants and government officials, and received proposals in the bidding process. (Refer to Appendix for the details)

There were some conditions to submit bids. Interviewee from the PCU stated “... both technical and financial power were important to submit bids. The Technical Specifications, prepared through continued collaboration with the

World Bank experts, clearly explained the grading system ...” According to this grading system, administrative power, expertise in similar projects, technical characteristics of software and hardware were individually graded and a weighted sum was calculated by considering the price. Since the details of the grading system was known by every company, who wanted to submit an offer, vendor selection procedure was clear and objective.

When the international bidding was opened, two consortiums submitted bids for the project, and Siemens-Nixdorf (SNI) and Likom Consortium won the bidding. In spite of this precision in the vendor selection procedure, the important problems were lived even in this stage. Three investigations were opened related with the selection procedure by Ministry of Health in March 1997, the Prime Ministry in November 1997, and finally the Ministry of Health in October 1999. (Ministry of Health, 2001; Ankara 4. Civil Court of First Instance, 2001). Two of them resulted with acquittal and the last one led to a court case for alleged malpractice in the preparation and conduct of the project. The court case was still continuing at the time of writing of this thesis (July 2004). These investigations caused the personnel of the Ministry to have a more negative attitude towards the project. This attitude reflected itself in all of its phases according to the interviewees from the Ministry and the vendor. This problem even affected this research, since it was very difficult to persuade people to participate in this research as an interviewee, especially the ones working in the public sector.

Additional problems were experienced in terms of the “compatibility in the organizational culture and work practices” (DiRomualdo and Gurbaxani, 1998) when the customer and the vendor were compared. The main problem resulted from organizational culture differences between the public and private sectors of Turkey. Interviewee from the vendor side explained this difference by saying “...at first we said we would do these tasks until that time and we agreed on this but when we completed the mentioned tasks, the customer did

not give acceptance and required additional services. But it is not possible since we have a plan. We are working according to a plan but planning is not very important in the public sector...organization cultures and the aims of performing a job are different. In the public sector, people consider why should I do this, what are the returns of this action to me?If I sign this acceptance, it can be risky for me. As it does not bring me any return, I will protract the procedure. This is a general mentality in the public sector, not a special situation for the MoH.” The interviewee from the ministry side also mentioned the same problems but explained the underlying reasons differently. “ ... The motivation of the Ministry regarding this project is very low...I talked with a manager a few minutes ago and he said that he would not use this program. He can erase the program and use excel instead...Additionally boredom resulting from the very long life span of the project exists among the personnel. People cannot understand why this system is needed...the people do not want to sign acceptance documents since they know what happened to the people who signed similar documents in the past.”

The interviewee from the World Bank mainly supported the views of the vendor. “Guaranteed employment in the public sector creates laziness among the personnel. For this reason, the schedule cannot be followed. Moreover, they see the project as a danger for themselves, since it brings some standards and the public sector cannot obey the standards... they see the innovative mentality as a danger.”

In spite of these differences, it is still possible to achieve strategic fit between the organization and its vendor(s). According to Aubert et al, this fit can be reached by setting common goals (Aubert , et al., 1995). In this specific case, we saw the positive effect of third parties to create this common goal. Since the World Bank financed CHRMS, the vendor attached more importance to this project and wanted to complete it successfully. The vendor had a good reputation in public sector projects and it did not want to be listed among the

unsuccessful firms by the World Bank. Similarly, there were other IS projects of the Ministry of Health and the Ministry needed the financial support of the World Bank in these projects as well (Ministry of Health, 2003). For this reason, creating a positive reputation in the eyes of World Bank was a motivation both for the customer and the vendor.

As being the prime contractor, SBS was responsible from the coordination among its subcontractors. The Ministry did not have contact with these firms and SBS dealt with all coordination and integration problems. For this reason, we can say that the Ministry lived the single point of responsibility advantage resulting from the type of outsourcing arrangement (i.e. single prime contract with well defined multiple sub-contracts). According to the interviewee from SBS, the firm had regular communication with its sub-contractors and conducted meetings with relevant ones in case of a problem.

Outsourcing Contract

As it was previously stated, the contract was specifically developed for this project. Interviewee from PCU stated, “World Bank and PCU prepared the technical specifications part of the RFP, which included terms for hardware, software development, consulting and training services. These specifications were annexed to the contract... After offers were submitted, UNDP, PCU and the selected vendor held negotiation meetings to reach the final contract.”

According to MSA (Appendix), UNDP negotiated the contract with the related company in consultation with the government and then UNOPS reviewed the final contract. Finally, UNDP issued the contract. UNDP and UNOPS were responsible from making the relevant payments to the contractor upon receipt of certification from the government in accordance with the terms and conditions of contract, monitoring and administering the contract.

Legal section of UNOPS was responsible from the review of the contract. Moreover, technical and legal experts participated in the contract negotiations; this was an important criterion stated in the literature (Lacity and Hirschheim, 1993; Saunders et al., 1997). Legal counsels were also involved in the project throughout the project life.

Related with the criteria of “measuring everything during the baseline period”(Lacity and Hirschheim, 1993), some contradictions existed among the views of the relevant parties. A consultant firm, Bilişim AS, prepared the preliminary requirements specification report in 1995. This analysis clarified the aims and the scope of the project. The resulting report was attached to the bidding specifications. According to the interviewee from the PCU, the vendors had to conduct a new analysis by taking this report as a base. Then, they held meetings and got the written approval of related departments on the results of the renewed systems analysis. However, some departments were reluctant to give approval. The interviewee from the PCU stated that in his opinion the reason behind this reluctance was the fear of loss of informal power. According to him, this system would prevent irrational usage of resources and this would especially affect Human Resource department since appointments were an important source of power for the managers of this department. With CHRMS, they could not use this power since all appointments would be performed openly and according to rational criteria, in other words, no preferential treatment would be possible.

However, the interviewee from the Ministry presented a different view and said, “The analysis performed by Bilişim AS was not sufficient and not renewed by the vendors. ...For example, the system does not include 19 regional warehouses. However, they must be in the system”. In fact, this issue constitutes one of the main points of conflict. Contrary to the statement by the interviewee from MoH, SBS and PCU interviewees stated that major systems analysis work was carried out in the first stage of the CHRMS project and

approvals from most MoH departments were obtained. There were, however, some issues such as this “19 regional warehouses”, which could not be resolved. On the other hand, my contacts with the vendor side and World Bank revealed that the ministry did not make any attempt to change the situation or some actions were very late and did not give chance to the vendor for making necessary changes. The interviewee from the World Bank reflected the seriousness of the situation by saying “...Nothing had been done for contract amendment for 1,5 years, the department heads of the ministry have changed frequently. The offer for the contract amendment came us on 18 December 2003, which was 12 days before the project termination...”

Frequent change in the needs of the customer was also an important obstacle for the success of the outsourcing arrangements (Lacity and Hirschheim, 1993). The interviewee from the vendor side complained about these frequent changes on the ministry side. These changes prevented the vendor from freezing the needs of the customer and focusing on the other phases of project development. For example, lots of changes occurred in the Human Resources Management System and SBS worked on this module for one and a half year after Likom left the consortium. The interviewee from the ministry side also mentioned the frequent changes in their needs and resulting problems of renewal and amendment in the system and gave the changes in the related legislations as the main reason behind these modifications.

The interviewee from the Ministry side stated that the organization had “service level measures” to clarify what was expected from the vendor and performance of the vendor was evaluated according to these measures. There were some reports to compare these measures with the real situation. Moreover, electronic and manual work comparison was performed. Interviewee from PCU also stated, “...very clear conditions were set by the technical specifications report attached to the contract; like the firm should prepare these deliverables until that deadline, the firm should be in interaction

with PCU by using the stated ways and get approval for the tasks...etc” He also mentioned the payments to the vendors were done according to these tangible conditions and thresholds.

“Realignment of the contract depending on the changes” was also mentioned as an important success criterion in the literature (Morgan Chambers, 2001). Many changes occurred during the lifetime of the project since it took much longer than the planned period. Main change occurred in the technology (switching over from client-server to web-based technology) and this change was reflected in the contract.

Since this was a public IS outsourcing project, “storage and transfer of data collected and processed” should have been carefully planned (Gramatikov, 2002). The ministry also attached importance to this fact and took related precautions. Encryption was used in the database. Authorization was given according to the security level of documents and identity of users. Personnel were also trained on this subject.

Related with the “termination of the contract” (Lacity and Hirschheim, 1993; Morgan Chambers, 2001; Gramatikov, 2002), interviewee from PCU noted the existence of punishment and indemnity clauses in the contract. However, both PCU and SBS mentioned that they tried to overcome problems without applying these statements and held meetings to solve them instead of using punishments.

Psychological Contract

Besides the written contract, psychological contract is also important for successful outsourcing arrangements (Sabherwal, 1999). This contract includes unwritten sets of expectations held by each party about the other’s

obligations. These expectations may cause the related parties to perform some tasks outside the written responsibilities in the contract.

Related with this issue, the interviewee from the vendor side stated that the vendor had to perform some additional tasks not mentioned in the contract and outside the responsibility defined in it. For example, the Ministry did not have standard codes for its material resources. For this reason, data entry could not be possible in Material Resources Management System. Normally, the customer should have developed these codes and the vendor side should not have been responsible from this standard code development process. However, in this specific case two employees from SBS worked with the ministry for developing material codes. This application meant additional time and cost for the vendor side (i.e. hidden cost).

Trust is important in psychological contract management (Sabherwal, 1999). Among the four types of trust mentioned in the literature, “identification-based” and “performance-based” trusts were mainly used in this specific outsourcing arrangement. Interviewee from the ministry side mentioned the effect of shared goals on the completion of the project. As it was explained before, both parties considered this project to be particularly important since World Bank sponsored it. This common goal enhanced the motivation to complete the project successfully. Moreover, interviewee from the vendor side stated the importance of “performance-based trust” and how they achieved it by the demonstration of the completed portions of the system.

Interviewee from UNDP also declared the positive effect of trust created by the vendor side. He stated that SBS took a big risk to finish the project successfully and this determination created a trust between the customer and the vendor sides. Related with the balance between “contract” and “trust”, he affirmed that “necessity” was a third dimension that must be added to these

two. According to him, their weights could be stated as 20 for “trust”, 20 for “contract” and “60” for “necessity” over 100 points.

Interviewee from PCU also mentioned the different views of relevant parties on this issue. He stated “ three actors have different views, while the ministry gave importance to the contract, PCU tried to stress on trust and vendors considered both of them important.”

Organizational Issues

“Managing the expectations of the internal personnel” is another important success factor mentioned in the literature (Morgan Chambers, 2001; Hunter and Healy, 2002). The interviewee from the Ministry side stated there were different expectations from the different levels of the organization and IS department dealt with these expectations according to their importance, emergency, and suitability. She also mentioned some problems in this area. According to her, “ the personnel are very unfamiliar with the outsourcing concept. They do not understand what the World Bank is, what contract requirements mean and it is very difficult to change this view.” This view was very interesting since this project was not the first World Bank sponsored IS project of the ministry. Interviewee from the PCU stated, “Basic Health Statistics Module involving two private vendors was successfully completed before CHRMS”. For this reason, World Bank involvement and outsourcing concepts were not new for the ministry. The problem mentioned by the interviewee from the ministry might have resulted from frequent changes in the personnel since people, familiar with the previous projects, were sent to other public sector organizations and the ministry lost this familiarity advantage.

Moreover, interviewee from the World Bank mentioned a general negative attitude of the public employees towards the private ones. He stated that the

personnel in the ministry usually did not understand why these people get higher salaries and usually showed resistance to help them.

Since outsourcing arrangement was related with information systems, the IS department of the Ministry was the main department that could be affected from this application. Interviewee from the Ministry side explained this effect by saying “our department has been enriched by this project. The number of personnel has increased, and job definitions have been changed. A new group has been formed related with CHRMS project.” Apart from these positive effects, the project affected the personnel very negatively. Many investigations were held and some people lost their jobs and some others changed their departments. All of these events affected the morale of the remaining personnel and caused them to see this project as a danger for their jobs.

Furthermore, political factors affected this project negatively, since the department heads changed very frequently. This was an important obstacle for the success of the outsourcing arrangement since “the support of top level management” was one of the success criteria mentioned in the literature (Lacity and Hirschheim, 1993). However, this kind of constant support was not possible in this project since there were frequent changes in the top level.

4.3.4.2) ANALYSIS OF THE PAST AND THE CHANGE FROM FAILURE TO SUCCESS

After the analysis of the current situation, the remaining two research questions should be answered. For this reason, analysis of the past (Research Question 2: “what are the reasons behind the initial failure of the project?”) and analysis of the change (Research Question 3: “If the project is accepted as a successful one now, what changes in which areas have contributed to this

result?") are the main focuses of this section. Five main findings would answer the specified research questions.

Finding 1

This case study clearly revealed that organizational factors played an important role in the success of an IS project and could cause the failure of a project if they were not managed properly.

These facts could be understood by comparing two IS projects of the ministry. Basic Health Statistics Module was developed without encountering any serious problem as stated by the interviewee from PCU. However, CHRMS lived many problems and although it was finished successfully, it lasted much longer than the planned period.

Main reason behind this can be clarified by analyzing organizational factors. The former system did not affect the power balances in the organization, since fast and correct collection of health statistics was beneficial for the ministry. On the other hand, rational usage of resources could reduce the informal power of some departments by setting and implementing strict guidelines of openness. This application especially affected the Human Resource Department of the Ministry.

Without the effect of organizational factors, one could normally expect the project to be completed successfully in a shorter period of time. Until 1997, IS projects of the ministry had been shown by the World Bank as a success story for other public organizations in Turkey and to other health reform projects in the world (World Bank, October 1997). Moreover, MoH also became familiar with outsourcing concept and worked with private companies by using a more complex relationship format (Unlike CHRMS, in BHSM the

ministry made separate contracts with its two vendors and PCU was responsible from the coordination). Moreover, in compliance with the Loan Agreement, the vendors, which had many successful IS projects, were selected by an international bidding.

By taking all of these facts into account, we can say that the success of IS project cannot be guaranteed only by technical factors. Organizational factors become much more important depending on how the system affect and change the established power balances inside the organization.

Finding 2

Another finding of this research was related with the techniques to overcome organizational resistance in IS projects.

The study revealed that same tactics could not be successful in all cases and new ones should be developed depending on the strength and the reasons of the resistance. Interviewee from PCU stated, “PCU tried to overcome resistance by involving the ministry’s personnel in the process, getting their approval at all steps, and organizing seminars and trainings.” Although these tactics could be successful when the lower level employees show the resistance, they could not work when the source is top-level managers. In that case, pressure of third parties becomes important. World Bank and United Nations created this pressure and caused the establishment of a common goal (i.e. successfully completed project was precondition for getting WB credit for other IS projects of the ministry and for entering other international biddings by the vendors).

This example proved that in some cases organizational resistance could not be solved inside the organization and powerful outside actors were the key to reach success.

Finding 3

Structural change was another tactic used on the ministry side to overcome organizational resistance. When the project first started in 1997, Project Coordination Unit (PCU) had overall responsibility of the project on the ministry side. This unit was very strong and accountable from the approval of software development phases, the communication with the vendors and the coordination within the ministry. In other words, it had both the technical and administrative power of the project on the customer side.

However a conflict arose between this unit and the Human Resources Department. Since the latter was the strongest department in the ministry due to sheer size of MoH and the political reasons, its satisfaction with the project was critical. For this reason, when this department claimed that its needs were not well represented by PCU, this caused a serious problem for the project.

This problem was solved by an overall change in the organization of the project on the ministry side. Some of the rights and responsibilities of PCU were transferred to the IS department. Finally, the IS department became responsible from the technical aspects of the project while PCU was responsible from the monetary aspects.

Main difference between these two units can be understood from the organizational structure of the ministry. In the organization schema, PCU was directly linked to the Undersecretary, while other departments including IS department were linked to the Deputy Undersecretaries. This placed PCU

above all other departments in the organization hierarchy. Moreover, no members from the related departments were represented inside the PCU. In the current situation, the IS department is on the same level with other departments and there are representatives from the departments constructing the main modules of the project.

Although the contradictions among the different departments of the ministry were thus resolved, another solution could perhaps have been more appropriate to achieve success in this project. According to the interviewee from UNDP, “PCU should be more professional. This body becomes more politicized when it is under the control of the Ministry”. He stated that a private PCU could be more successful without the negative effects of politics. Interviewee from PCU also mentioned possible danger of this application by saying “...financial power could be improperly controlled by the ministry”. However this danger was not lived in that case since PCU was responsible from the monetary aspects of the project and did not take any action without the approval of World Bank as it had been in the previous case.

We can say that changing the organizational structure of the Ministry enabled it to solve the conflicts among the departments and by this way the progress of the project was achieved. Moreover, by keeping the financial power in the PCU, negative effects of politics were said to be minimized.

Finding 4

Because of the excessive delays in project calendar due to reasons considered above, the project was almost terminated in 2002.

However, one of the two major vendors, SBS, accepted to take overall responsibility of the project. In other words, one of the vendors took a risk to

turn the project into a successful one. This attempt can be an important contribution to the literature, since the literature gave examples of actions that should be taken on the customer side, but in this case, it was a vendor who strived for success.

The positive effects of third parties existed behind this action as well. As it was explained before, the project was a World Bank project and SBS did not want to lose its good reputation in the eyes of WB. Similarly, the customer showed a compromising attitude not to lose further financing opportunities from WB. Financial power of SBS was also important. With its international operations, SBS was much more powerful than Likom, which was a local company. Therefore, it could take such a big risk to prevent its reputation.

Effect of United Nations on this decision should also be evaluated. According to the interviewee from UNDP, UN created a permanent capacity. Its existence was important to manage the Loan Agreement of the World Bank and created a legal framework. This capacity was very important in such a project where there were continuous changes on the customer side. Moreover, the project management became more transparent and this brought additional guarantee both to the vendor and to the customer. He also stated that their existence most probably affected the decision of SBS to take the whole risk of the project. This “responsible”, “legal” and “neutral” body provided the required guarantee to the vendor side for making such a big commitment. Moreover, UNDP played the role of mediator during the negotiations between the customer and the vendor by creating a neutral platform for discussions.

Finding 5

Apart from the temporary problems, there were some permanent problems that could not be totally overcome. As explained in the previous sections, most of

the problems arose from the cultural differences between the public and private sectors. Lack of planning and procedural delays on the public side showed itself in all phases of the outsourcing arrangement. To overcome these problems, SBS preferred to use “psychological contract” effectively by building trust and motivating users by the completed portions of the system. Effect of third parties might also be important to reduce the negative effects of this problem by creating pressure especially on the customer side.

Apart from the general culture of the public, the personnel of the ministry had a negative attitude towards this project because of repeated investigations. They were afraid to sign any document, to approve any application, etc. The interviewee from the World Bank also mentioned that they were afraid of spending money and could not make even unimportant decisions without the approval of WB. Another reason behind this fear was that the system enabled to monitor the errors made by the users and all actions of users would become auditable. When this characteristic was combined with the fear from investigations, users did not want to use the system. Moreover, there was a communication problem between the ministry and World Bank; since all correspondence should have been made in English but most of the Ministry personnel did not know this language. Although these problems did not cause the failure of the project, they slowed down its phases.

By considering our research questions, all of these findings showed that organizational factors caused the failure of the initial attempt. To protect the informal power, the organization showed a strong resistance to CHRMS and the project entered the vicious cycle. All parties played important roles in changing this situation and turning the project into a success (shift from vicious cycle to virtuous cycle). Positive effect of powerful third parties (by World Bank, UNDP and UNOPS), change in the organizational structure (by the Ministry), and usage of psychological contract to build trust (by the vendor) made the main contributions to the desired end.

4.3.5) VALIDITY

Three main threats to validity exist in qualitative research (Maxwell, 1996). Their definitions and how they were dealt with in this specific research are explained as follows:

- 1) Threat to valid description: this threat results from inaccuracy and incompleteness of data collected during the research. Effect of this threat can be reduced or overcome by recording and transcribing interviews. I recorded interviews whenever it was possible. Some of my interviewees did not want recording (WB, UNDP and the Ministry of Health). In such cases, I took notes during the interview and asked further questions to ensure that my notes would reflect the views of the interviewee.
- 2) Threat to valid interpretation: the second threat is related with the interpretation part of qualitative research. “Imposing one’s own meaning rather than understanding the people studied” is mentioned as an important threat in the literature. For this reason, I tried not to ask leading, closed or short answer questions. I combined the answers of different questions, which supported the same fact. All of the questions were open ended. This enabled interviewees to provide their views clearly without being limited by fixed-answers.
- 3) Threat to theoretical validity: the last threat results from not collecting or paying attention to discrepant data, or not considering alternative explanations or understandings of the phenomenon. To overcome this problem, I tried to analyze counter arguments besides the shared opinions of different parties. In “Data Analysis and Results Section”(Section 4.3.4), different and similar views of parties were provided not to miss alternative explanations of the same issue.

4.3.6) LIMITATIONS

Main limitation of the study was related with the sampling procedure. Since CHRMS was a problematic project, it was very difficult to persuade people to participate in this research. To overcome this problem, I selected the interviewees according to their position in this project. An interviewee on the coordinating position represented each party. This enabled me to understand both the individual views of each organization and their views about each other. Since qualitative research was employed in this research and making a generalization was not the aim, this sampling procedure would not create a serious problem by involving all relevant parties with knowledgeable representatives.

The literature mentions two types of generalizability, which are internal and external. Internal generalizability refers to the generalizability of a conclusion within the setting or group studied; whereas external generalizability refers to its generalizability beyond that setting or group. In qualitative research, internal generalizability is the key issue and I tried to achieve this by including the views of all relevant parties. (Maxwell, 1996)

In terms of external generalizability, this research includes a single case analysis. For this reason, it is not possible to make generalization for the Public IS projects in Turkey. However, it can form an initial step towards an understanding of similar cases.

CHAPTER 5

CONCLUSION

5.1) MAIN RESULTS OF THE THESIS

In this thesis, Core Health Resources Management System Project was analyzed by using qualitative research method. The project was an example of a “public IS outsourcing case” since the Ministry of Health was on the customer side. “Multi-vendor outsourcing relationship” existed as two prime contractors (SNI and Likom) were on the vendor side. The project lived both the success and failure cycles in its lifetime. Some problems caused the project to be almost terminated. However, one of the vendors, SBS, took the whole responsibility and the project was finished successfully in December 2003. Although the single vendor became responsible from the project, outsourcing relationship could still be considered as a multi-vendor one, since SBS had many subcontractors, worked for this project. For this reason, in terms of outsourcing relationship, the project was an example of “single prime contract with well defined multiple-sub contracts”.

In this study, our aim was not to assess the effectiveness or the success of the information systems of the Ministry of Health. Rather, the success specifically of the outsourcing arrangement shall be evaluated.

Interview was the main data collection method used in this thesis. Documentation, archival records and direct observations were also utilized as supportive sources of data. By taking the relevant literature (chapter 2) and all of these data sources (chapter 4) into account, the project was evaluated under the following titles in compliance with the research questions (Section 4.3.2).

The current situation

The outsourcing arrangement became successful in terms of economic, technologic and strategic dimensions with the achievement of *economical efficiency*, the establishment of *technology culture* in the organization and the development of *in-sourcing capability* by the significant raise in the organizational position and power of the IS department. However, in terms of the overall satisfaction with contract, the success or failure evaluation was not very clear. While the ministry stated dissatisfaction, vendor and World Bank blamed the ministry for not taking required action to reduce this dissatisfaction on time. In summary, the project could be stated successful according to three dimensions but there were some problems in the last dimension. By considering success factors mentioned in the literature, critical stages of the project were examined and the following results were found.

Strategic intent behind this outsourcing arrangement was to achieve “business impact” by developing a nationwide resource management system, which would help the ministry in its strategic planning. *Vendor selection process* was performed professionally by the involvement of UNDP, UNOPS and World Bank. The strategic intent was also considered during the vendor selection by evaluating the vendor with different criteria, including the expertise in similar projects and administrative power besides the offered price. The ministry lived some problems in the *compatibility of organizational culture and work practices* (planning was not very important, guaranteed employment created laziness in the public sector etc). However, negative effects of these

differences were reduced by *the existence of a common goal*, which was to finish a project of the World Bank successfully. SBS was responsible from the *coordination among its subcontractors* and played the prime contractor role successfully without reflecting any problem to the ministry. For this reason, the organization did not live any problems resulting from multi-vendor outsourcing relationship.

The contract was *not a standard contract of the vendors*; in fact it was specifically developed for this project. *Views of third parties* (including legal and technical experts) were taken during the contract preparation. The *service level measures* were set to clarify what was expected from the vendor and the performance was evaluated by *developing service level reports* according to these measures. The *frequent changes in the needs of the customer* created problems for the vendor side since freezing the needs became very difficult. However, *realignment of the contract depending on the important changes* was performed (e.g. change in technology: from client-server to web based, change in the law: new bidding law affected Financial Resources Management System module). The contract also included a *termination clause* showing the situations required termination and related obligations. Moreover, *storage and transfer of data collected and processed* were also given importance and carefully planned (encryption and authorization were employed).

The *psychological contract* was also important in this project. Trust was mainly created by shared goals (identification-based) and vendor's demonstration of the completed portions of the systems to motivate users (performance-based).

The main problems were lived in organizational issues. *Managing the expectations of the internal personnel* was difficult because of the frequent changes in the personnel (people familiar with the project were assigned to other public organizations or lost their jobs and new ones did not understand

outsourcing concept or could have infeasible expectations). Moreover, continuous *support of top level management* was not possible because of the changes in the top-level of the organization.

The past and the change from failure to success

Main problems lived in the past resulted from organizational issues. *Organizational resistance* was very strong since the project affected the power balances inside the organization. *Usage of traditional tactics to overcome this resistance* was another failure point of the project lived in the past. Getting employees involved in the outsourcing process and organizing seminars and trainings to persuade them were not enough since the resistance came from the top level.

In this specific case, *the pressure of powerful third parties* became the critical success factor, which created the change towards success. Their existence was also useful to persuade the vendor side to make a big commitment and to take the whole responsibility of the project. This point may be considered as an important outcome of this study.

Moreover, a *structural change* was performed inside the ministry by transferring some rights of the PCU to the IS department, while protecting the monetary power of the PCU. This enabled better representation of the related departments without the improper usage of financial resources.

Finally, *psychological contract* was effectively used by the vendor side. It tried to build trust by showing a strong commitment for the success, motivating users with the completed portions of the system and helping the organization in the areas outside its responsibility (e.g. preparation of standard codes for material resources).

However, some organizational problems; such as *frequent changes in the top level management, fear of the ministry personnel resulting from continuous investigations, and communication problem between the Ministry and the World Bank*, were more enduring problems and could not be totally overcome. Although they did not result in ultimate failure, they slowed down all phases of the project and increased the time to reach success.

5.2) FURTHER RESEARCH OPPORTUNITIES

Criteria for assessing whether the outsourcing attempt is successful or not have been complied with the scope of this study, as discussed in section 2.5. A definite area for further study is the evaluation of the validity and scope of those factors

Further studies can also be done for the analysis of the CHRMS and other IS projects of the Ministry of Health. Types and characteristics of each outsourcing arrangement, comparison of the success levels of these arrangements and how the integration is achieved among these projects can be analyzed. As it is stated in section 2.2.4 “Situation in Turkey”, development of common public IS projects does not exist in Turkey and there is no public project standard. By this kind of analysis, the main problems resulting from the differences in the development of different IS projects of the same public organization can be revealed- For example, the ministry is now working on the integration of its previous project BHSM and CHRMS and main problem is the difference in the architectures, client-server versus web-based.

Furthermore, this study can be an important first step towards the analysis of Public IS outsourcing projects of Turkey. As it was previously stated, there is a limited number of developing country case studies in the literature. However, there are important differences in terms of culture, political

environment, and legal issues between these two types of countries, and developing countries should also be analyzed to complete the public IS outsourcing literature. The different phases of the outsourcing arrangements such as determination of objectives, vendor selection, contractual agreement, organizational issues can be affected from the special characteristics of these countries. For this reason, the case of Turkey will make an important contribution to the literature on the subject of public IS outsourcing in a developing country context. Moreover, findings of this kind of study can be further analyzed and combined with the results of the previous and future studies on other developing countries. This way, common characteristics of developing countries on public IS outsourcing can be identified.

REFERENCES

Aktan, C. (1993) Turkey: From Inward Oriented Etatism to Outward-Looking Liberal Strategy. Turkish Public Administration Annual, Vol.17-19, 55-85.

Ankara 4. Civil Court of First Instance (2001). 2001-630 Case Record, Ankara.

Arifođlu, S.F.& Arifođlu, A. (2002). 4734 Sayılı Kamu İhale Kanunu: 2886 Sayılı Kanun ile Karşılaştırma ve Bilişim Etkileri. Bilişim Kültürü Dergisi, sayı 83

Aubert, B., Patry, M. & Rivard, S. (1995). The Structure of Incentives in a Major Information Systems Outsourcing Contract: the Case of a North American Public Organization. Scientific Series of CIRANO, March 1995, 1-12

Barthelemy, J. (2001). The Hidden Costs of IT Outsourcing. MIT Sloan Management Review/ Spring 2001, 60-69.

Benbasat, I., Goldstein, D. K. & Mead, M. (1987). The Case Research Strategy in Studies of Information Systems. MIS Quarterly, 369-386.

Berg, B. L. (1998). Qualitative Research Methods for the Social Sciences. 3rd Edition. Boston: Allyn&Bacon.

Beyah, G. & Gallivian, M. (2001). Knowledge Management as a Framework for Understanding Public Sector Outsourcing. Proceedings of the 34th Hawaii International Conference on System Sciences, Hawaii.

BTHaber (2002, September). Siemens Business Services- E-Devlet Dönüşümü Kaçınılmaz. BTHaber, 8-11.

CAPITAL (2003, February). Yeni İhale Yasası Bilisimi Vuracak mı?. Capital Digital, 29-31.

Cross, J. (1995). IT Outsourcing: British Petrole. Harvard Business Review. May-June, 94-102.

Cumhuriyet (2001, October 26). İhale Yasası Değişirken . Cumhuriyet., [On-Line], Available; <http://www.arkitera.com/haberler/2001/11/26/ihale.htm>

CyberSoft (2003). CyberSoft Receives 2003 Computerworld Honors 21st Century Achievement Award. [On-Line]. Available; <http://www.cs.com.tr/vedop2.htm>

De Looff, L.A. (1996). IS Outsourcing by Public Sector Organizations. Paper presented at the IFIP 1996 World Conference on Advanced IT Tools. The 14th World Computer Congress (IFIP96), held 2-6 September 1996, Canberra, Australia. Available; <http://www.acs.org.au/president/1996/ifip96/i96iso.htm>

DiRomualdo, A. & Gurbaxani, V. (1998). Strategic Intent for IT Outsourcing, Sloan Management Review/Summer 1998, 67-80

Earl, M.,J. (1996). The Risk of Outsourcing IT. Sloan Management Review/Spring1996, 26-32.

Epner, M. (2000). Multi-vendor Sourcing: Setting up relationships for success. Cutter Consortium, Sourcing Advisory service, 17.October.2000, [On-Line] Available; <http://www.cutter.com/research/2000/crb001017.html>

Epner, M. (2001). Executive Update: Are Multi-vendor arrangements paying off?. Cutter Consortium, Sourcing Advisory service, Vol.2, 12

Ezzy, D. (2002). Qualitative Analysis: Practice and Innovation. London: Routledge.

Gallivan, M.J. (1999). Analyzing IT Outsourcing Relationships as Alliances among Multiple Clients and Vendor. Proceedings of the 32nd Hawaii International Conference on System Sciences, Hawaii.

Gramatikov (2002) M., Outsourcing of Public Information Systems. Public Administration Department, University of Sofia. PhD Thesis.

Gülkesen, K. H. (2003), E-Health and Turkey. Presentation of Information Society Initiative for South-Eastern Europe. Available; www.isisnet.org/presentations/E-HealthAndTurkey.ppt

Hunter, D. R. & Healy, T.J. (2002, February). The Government Executive Series: Outsourcing in Government - The Path to Transformation. Accenture [On-Line]. Available; www.accenture.com

İkiz, S. (2002, March). KalDer 2001 Software Sector Survey- Resulting Conference. Presented at KalDer Conference, Istanbul.

Interpro (2001). İlk 500 Bilişim Şirketi-Türkiye 2001. Interpro Publication, 44.

Kaplan, B. & Dennis, D. (1988). Combining Qualitative and Quantitative Methods in Information Systems Research: A Case Study. MIS Quarterly, 571-583.

Khalfan, A. & Gough, T., G. (2000, May). IS/IT Outsourcing Practices in the Public Sector: A case study of a developing country. University of Leeds School of Computer Research Report Series.

Lacity, M.C. & Hirschheim, R. (1993). Information Systems Outsourcing: Myths, Methapors and Realities England: John Wiley& Sons Ltd.

Lacity, M.C, Willcocks, L.P. & Feeny, D. (1996). The Value of Selective IT Sourcing. Sloan Management Review/Spring 1996, 13-25

Likom (2004). Türkiye’de Likom. Available; www.likom.com.tr (2.06.2004)

Maxwell, J. A. (1996). Qualitative Research Design- An Interactive Approach. United States of America: SAGE Publications.

Ministry of Health (2001) Investigation Council Report. Report date: 31.07.2001, Turkey

Ministry of Health (2003) Sectoral Policy Letter. Written by the Minister of Health to the Undersecretariat of Treasury, General Directorate of Foreign Affairs.

Morgan Chambers (2001), Episode Three: Business and Sourcing Models. Available: www.morgan-chambers.com

OIB (2003). Özelleştirme İdaresi Başkanlığı. Gerçekleştirilen Uygulamalar Available; www.oib.gov.tr

Ozsari, H. (1998). Sağlık Projeleri ve Sağlık Enformasyon Sistemleri Çalışmaları Hakkında Genel Bilgi Notu. Modern Hastane Yönetimi, August-September 1998, 15

Resmi Gazete (1996). Memorandum of Agreement between the Government of Turkey and UNDP for Management and other Support Services to be provided by UNOPS in Respect of a World Bank Financed Project. 29 January 1996.

Sabherwal, R. (1999). The Role of Trust in Outsourced IS Development Projects. Communications of the ACM, Vol. 42, No.2, 80-86.

Saunders, C., Gebelt, M. & Hu, Q. (1997). Achieving Success in Information Systems Outsourcing. California Management Review, Winter 1997, 63-79

SBS (2003). SBS Türkiye-Genel Bilgi. Available; www.sbs.com.tr

Siemens (2003). Siemens Türkiye: Siemens'e Genel Bakış. Available; www.siemens.com

TBD Kamu-Bib (2002). Kamu Projelerinin ve BT Proje Standartlarının İrdelenmesi ve İlişkilendirilmesi. 11 march 2002. TBD E-Devlet Çalışma Grubu.

TBMM (2002). Kamu İhale Yasası (No: 4734) Grand National Assembly of Turkey, 4 January 2002.

Tubitak (2003). 2023 Teknoloji Öngörü Projesi: Sağlık ve İlaç Paneli Ön Rapor. Ankara 2003. Available; vizyon2023.tubitak.gov.tr

Turgay, Z. Z. (2001). Proposal for Vendor Evaluation Framework for IS/IT Outsourcing. MS Thesis. January 2001.

UNDP (2004) About UNOPS. Available; www.undp.org

World Bank, (1997). World Bank Improves Primary Health Care in Turkey. News release No:97/1396 ECA. Available; www.worldbank.org

World Bank, (October, 1997). Formal letter written by Chris Lovelace- Acting Director Human Development Sector Unit, Europe and Central Asian Region, World Bank- to the Minister of Health, Dr. Halil Ibrahim Ozsoy, October 8, 1997.

World Bank, (1998). Turkey: Health Project, Informatics Component Technical Note. July 24, 1998

World Bank, (2004). About Us. Available; www.worldbank.org

Yin, Y.K. (1994). Case Study Research: Design and Methods. Second edition. United States of America: SAGE Publications.

Zahler, R.E. (1998). Teaming: Making Multi-Vendor Relationships Work. Outsourcing Journal.

APPENDIX

Memorandum of Agreement between the Government of Turkey and UNDP
for Management and other Support Services to be provided by UNOPS in
Respect of a World Bank Financed Project - 3. Contracting of Firms (Services)
Page 37- 38

GOVT	UNDP	UNOPS	ACTIVITY
XXX			Prepares Terms of Reference, supplementary documents, short list of companies and forwards these to UNDP
XXX	XXX		Review Terms of Reference (TOR), supplementary documents
XXX			Obtains World Bank's "no objection" for Terms of Reference, supplementary documents, short list of companies
	XXX		Prepares Request for Proposal (RFP) (of which the General Conditions of Contract should be attached)
	XXX		Submits the short list, "no objection", TOR, RFP draft to UNOPS for Review, and relevant authorizations
XXX			Concurrence of the Government to RFP and Attachments
		XXX	Authorizes UNDP to issue the RFP, to deal with queries, to take part in the evaluation process in consultation with the Government. In case the amount is under the delegated authority, authorizes LCC submission following completion of evaluation.
	XXX		Issues RFP

GOVT	UNDP	UNOPS	ACTIVITY
XXX	XXX	XXX	UNDP establishes technical evaluation team, consisting of the following team members: -NPPPs (to be selected by UNDP in consultation with the Government) -Consultants as may be required by the Government or UNOPS in agreement with the Government. - Government Officials from the relevant Government agency(ies) selected by the Government as required.
	XXX		Sends the relevant “Confidentiality Agreement (s)” to the Gov’t for signature.
	XXX		Gives information about the evaluation process to the evaluation team.
	XXX		Sends the names of the evaluation team with the Confidentiality Agreements to UNOPS
XXX	XXX	XXX	Deal with queries from companies in coordination with the Government and UNOPS as required (any response to a query from one of the short listed companies should be copied to UNOPS and the World Bank with an explanation of the query itself.)
XXX			Obtains “no objection” from the World Bank for amendments (if required)
	XXX		Issues amendments in consultation with the Government (if required).
	XXX		Receives Proposals
	XXX		Opens Technical Proposals with the evaluation team and gives copy to the evaluation team for evaluation.
XXX	XXX		Technical Evaluation Team conducts the technical evaluation
	XXX		Following the completion of the technical evaluation and the relevant evaluation report, reviews the technical evaluation and opens financial proposals and finalizes the evaluation of the financial proposals with the evaluation team.
	XXX		Finalizes the draft evaluation report. The evaluation report will state the “most responsive” proposal and the recommendation of award

GOVT	UNDP	UNOPS	ACTIVITY
	XXX		Forwards the report and recommendation (the most responsive proposal) of award to Government for concurrence and relevant action.
XXX			Obtains the World Bank's "no objection" for the recommendation of award.
	XXX		Forwards the report and recommendation of award to UNOPS at the same time it is submitted to the Government for UNOPS' clarification and concurrence.
		XXX	Submits relevant request to PRAC if applicable, for PRAC approval.
		XXX	Following the approval of the case by PRAC, authorizes UNDP to negotiate with the related company.
	XXX		Negotiates contract with the related company in consultation with the Govt and forward the final contract to UNOPS for review.
		XXX	Reviews final contract
XXX			Concurs the contract in writing unless otherwise stated.
		XXX	Authorizes UNDP to sign the Contract.
	XXX		Issues the Contract and gives 1 Conformed copy to the Government.
	XXX	XXX	Make the relevant payments to the Contractor upon receipt of certification from the Government in accordance with the terms and conditions of the Contract, monitor and administer the contract.
XXX			Technical Supervision and Evaluation.

