



JÖNKÖPING INTERNATIONAL BUSINESS SCHOOL
JÖNKÖPING UNIVERSITY

Objective eyes in large IT- Projects

Making sense of the expertise

Master Thesis in Business Administration

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Jönköping May 2006



INTERNATIONELLA HANDELSHÖGSKOLAN

HÖGSKOLAN I JÖNKÖPING

Objektivitet i stora IT-Projekt

Magisteruppsats inom Företagsekonomi

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Subject terms: Consultants, Transaction cost theory, Agency theory

Abstract

Introduction: Over half of the Swedish IT-projects get delayed and more expensive than budgeted. Large corporations and governmental institutions stand before the process of investigating in new IT-systems in intervals of three to five years. In order to decrease the cost, an external consultant with large experience in IT-purchases could be used by the customers. These consultants does today work solely for the customers, helping them to find the best solution. We want to see if an external consultant instead could act as an independent moderator between the supplier and customer in the IT-systems lifecycle.

Purpose: The purpose of this study is to describe and analyze problems and possible solutions related to the involvement of third party consultants in larger IT-projects. In particular, we will investigate when and where in the project cycle it could be beneficial to use an independent moderator.

Method: We have conducted semi-structured interviews with six organizations to get an understanding about consultants in IT-projects. Four of the interviewed were IT-managers at organizations where large IT-systems are bought and implemented. Then, two of the interviewed represented the supplier companies that sell large IT-systems.

Frame of reference: Transaction cost theory and agency theory has been used. Transaction cost theory is a theory on whether you should conduct the service internally or purchase it from external firms. Agency theory describes problems in the relationship between a principal and an agent. The agent has a diversified interest towards the principal. In our case, the agent is a consultant.

Conclusion: The implementation phase benefits from using an external moderator who monitors what the customer needs, and then in a continuous interval measures if the project is aligning towards the stated goal. This can lower the failure of information and identify problem areas early and thereby prevent costly adjustments later in the project. An independent moderator with a high degree of routine and specific knowledge could enhance communication, create a better fit of the implemented system and foresee opportunistic advices from suppliers. In the pre-study phase there are benefits for the customer with evaluating the need, stating specific demands and define a clear goal.

Magisteruppsats inom Företagsekonomi

Titel: Objektivitet i stora IT-projekt

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Datum: 2005-05-24

Ämnesord: Konsulter, Transaktionskostnadsteori, Agentteori

Sammanfattning

Introduktion: Över hälften av svenska IT-projekt blir försenade eller dyrare än budgeterat. Stora företag och statliga institutioner står inför processen att investera i nya IT-system i ett intervall om tre till fem år. För att minska kostnaderna, kan kunden hyra en extern konsult med stor erfarenhet av IT upphandlingar. Den här typen av konsulter arbetar idag uteslutande mot kunderna och hjälper dem att hitta den bästa lösningen. Vi vill se om en extern konsult istället kan agera som en oberoende moderator mellan leverantören och kunden under IT-projektets livscykel.

Syfte: Syftet med den här studien är att beskriva och analysera problem och möjliga lösningar relaterade till involveringen av tredjepartskonsulter i stora IT-projekt. Vi vill särskilt undersöka när och var i projektcykeln det kan vara av värde att använda en oberoende moderator.

Metod: Vi har genomfört semistrukturerade intervjuer med sex organisationer för att få en förståelse om konsulter i IT-projekt. Fyra av de intervjuade var IT chefer i organisationer där IT-system har upphandlats och implementerats. Utöver det har vi intervjuat representanter för leverantörs företag som säljer stora IT-system.

Teoriram: Transaktionskostnadsteori och agentteori har använts. Transaktionskostnadsteorin är en teori som förklarar valet att utföra en tjänst internt eller köpa den från en extern firma. Agentteori förklarar problemet i relationen mellan huvudman och en agent. Agenten har ett diversifierat intresse gentemot huvudmannen. I vår fallstudie motsvaras agenten av en konsult.

Slutsats: Under implementeringsfasen finns det en nytta i att använda en extern moderator som övervakar vad kunden behöver och sedan gör återkommande kontroller för att se om projektet når de uppsatta målen. Detta kan minska misstag i informationsprocessen och identifiera problemområden tidigt och därigenom förebygga kostsamma justeringar sent i projektet. En oberoende moderator med rutin och specifik kunskap kan förstärka kommunikationen, förbättra passformen på det implementerade systemet och förutse opportunistiska inslag från leverantörerna. I förstudie fasen finns det nytta för kunden att utvärdera deras behov, deklarerar specifika krav och definiera ett klart mål.

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1 Introduction

1.1 Background and problem discussion

A recent study presented in the magazine Ny Teknik, shows that over half of the Swedish IT-projects conducted, get delayed in the process and almost half of the projects end up more expensive than budgeted (Abrahamsson, 2006; Brundin, 2006).

Many reports and articles confirm the same problem. In a report presented by the Standish Group (2001), you can read that 23 percent of all initiated projects fail and almost half of the projects are challenged, which means that they are completed and functional but the projects were over budget or over the time estimate. Grossman (2003 p.1) states, "*it is widely accepted that over 70 % of IT projects fail, with software development representing most of the overage*". In an article in Country Monitor, New York (2003) it is stated that an extensive report in UK companies found out that 80–90 % of IT projects implementation, failed to meet its objectives and that 80 % was exceeding its budget as well as delivered late. The article also states that it is a widespread agreement that the root of the problem is management and not technology. When it comes to differences between the private sector and governmental institutions, Abrahamsson (2006) indicates that governmental institutions have a higher rate of budgets overdrawn. Close to 70 % of their projects, end up more expensive than initially planned. Abrahamsson also writes that the significant source of irritation amongst CIO's is that the suppliers lack knowledge for the project.

Large corporations and governmental institutions stand before the process of investing in new IT-solutions and systems in approximate intervals of three to five years. Application software mostly has a loss of support 3 years after it was bought while an operating system instead has a lifecycle on 5 years, before they are out of support (Brandl, 2003).

The assessment, planning and ordering process is complicated and it is hard for the buyer to get a good fit between their needs and the delivered solution. Some of the problems that the buyer face are; lack of experience in the actual purchasing process due to the fact that they only negotiate new IT-solutions every third to fifth year, this means that they lack experience of the process. There might also be a problem for the customer when it comes to knowing what the market offers. On the supplier side, a few large companies have the capability to provide a full-range solution covering all the need for the customer. One problem here is that the supplier might or rather want to sell additional features and systems that the customer might not be in need of, it can also be the case that one supplier have a good solution for parts of the system and at the same time have questionable quality in others. There are also complaints amongst customers that the suppliers lack knowledge and know-how enough to deliver a suitable solution (Abrahamsson, 2006).

To avoid unnecessary cost of the process, the customer have the choice to hire external consultants with extensive experience within the area of planning, implementing and purchasing IT-systems. The total project cost will probably be lower if the consultants are successful in creating a closer fit between the needs of the customers and the solution of the suppliers. At the moment, it is the customers who hire the consultant in order to get help and knowledge. The consultants enter and work at the customer's organization for a limited time, they are rewarded by the customer and act on their behalf and interest towards the supplier. This is visualized in the picture below where the consultant acts as the customer.

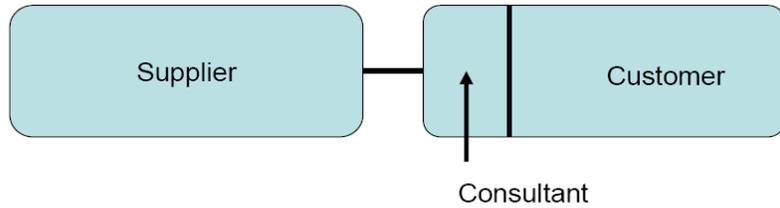


Figure 1 - Case of today

In this thesis, we want to know if an external consultant can act as an independent moderator between the supplier and the customer in the lifecycle of IT-systems. Is it beneficial to use an external party managing/assessing/auditing the process when investing in large and individualized IT-systems?

The theoretical benefit is that this moderator acts as a protector against opportunistic behaviour; furthermore there are benefits in terms of resource allocation. We will support this hypothesis in the theoretical chapter with the transaction cost theory and the agency theory. The model is presented as a figure below.

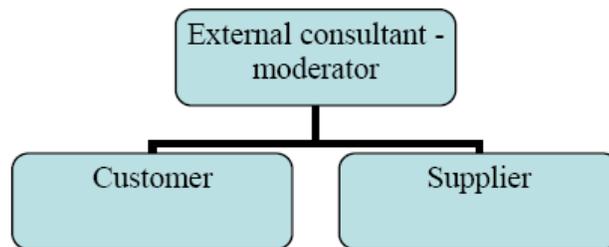


Figure 2 - Research model; Hypothetical case

We do not only want to look at the purchasing of IT-systems but to shed light upon the effect of using experts/consultants during the whole lifecycle of the IT-project. This lifecycle presented in the figure below.

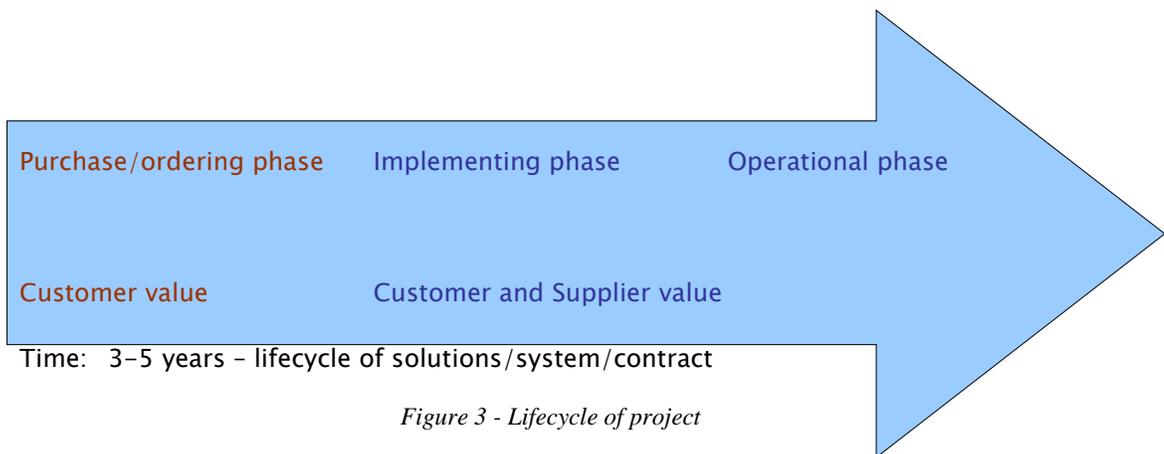


Figure 3 - Lifecycle of project

The purchase and ordering phase is initialized with an assessment of what needs the organization has; this can be initiated by a request from departments within the organization, or started from management. As an example of situations triggering an IT-project, there might be an old system starting to be out of date with lower usability or high failure frequency, other triggers might be strategic change or development.

Implementation phase is where the supplier of the system adapts the solution towards the needs specified by the customer. In time, this phase might vary depending on the adoptions and level of customization made towards the needs of the customer. In this phase, the system architects and specialists of the supplier often work in close contact with the company buying the solution.

Operational phase is where the company is running the system in everyday operations. In order to bridge the implementation phase with the operations there is usually a shorter period of testing in between. The test phase is where the customer gets the opportunity to evaluate and highlight problems with the functionality of the system.

1.2 Purpose

The purpose of this study is to describe and analyze problems and possible solutions related to the involvement of third party consultants in larger IT-projects. In particular, we will investigate when and where in the project cycle it could be beneficial to use an independent moderator.

1.3 Research question

What problems and benefits are there regarding the involvement of consultants in large IT-projects?

Is it beneficial to use an independent moderator in large IT-projects? If so, how?

1.4 Delimitations

Our case is restricted to large companies and their large IT-projects. It is also restricted to be only about Swedish organizations. We also only talk to IT-managers in the customer organizations, which mean that we only get their view of the problem.

1.5 Abbreviations

CEO- Chief Executive Officer

CIO- Chief Informant Officer

CSI- Customer Satisfaction Index

ERP – Enterprise resource planning

ERP is when all departments and functions across a company are integrated into a single software program that runs out off one database (Koch, 2001).

LOU- The Act on Public Procurement, (Lagen om Offentlig Upphandling)

LOU regulates most of the public procurements. This means that organizations such as *“local government agencies, county councils, government agencies as well as certain publicly owned companies etc, must comply with the act when they purchase, lease, rent or hire-purchase supplies, services and public works.”* Certain rules must be followed (Stockholms Universitet, 2006).

SR- Swedish Radio, (Sveriges Radio)

SVT- The Swedish public service broadcaster, (Sveriges Television)

UR- Swedish Educational broadcasting company, (Utbildnings Radion)

1.6 Structure of thesis

- **Chapter 2 – Method.** In this chapter, we present our choice of method followed by a discussion regarding alternative methods. We discuss the credibility of the study as well as the credibility of the respondents followed by a discussion of the weaknesses.
- **Chapter 3 – Theoretical framework.** In the theoretical framework, we review theories relevant for the purpose stated for this thesis. The theories that will be described are; Transaction cost theory and Agency theory.
- **Chapter 4 – Empirical findings.** The empirical findings consist of reviews of the six in depth interviews conducted with both suppliers and customers during five weeks. The chapter begins with the view of the customer and ends with the view of the supplier.
- **Chapter 5 – Analysis.** In this chapter, we intend to give the reader our interpretations of the empirical findings associated with the problem and purpose of the thesis, by using theories and models presented in the theoretical framework.
- **Chapter 6 – Conclusions.** The conclusion intends to give the reader a final review of the key findings from the analysis. We present our conclusions derived from our analysis and the main purpose of the thesis. The chapter is ended with some implications for further studies.

2 Method

In this chapter we are presenting the method which we used when conducting our study. We give an explanation to the choice of a qualitative angle, how we define our case study and the validity of both the respondents and the study. You will also find a description of the interviews conducted and thoughts about the research model.

2.1 Choice of method – Qualitative vs. Quantitative

Fog, (1979) “*Before I know what to research, I can not know how to do it*” (cited in Holme & Solvang, 1997 p.75).

This study will be conducted with a qualitative approach, since that will give us the best understanding regarding our purpose. We aim at reaching a deep understanding in our thesis about the connections between suppliers, customers and external consultants, hence the qualitative approach is the best suited. Holme & Solvang (1997) furthermore state that if you want to build theories and understand social processes, a qualitative approach should be used.

Quantitative and qualitative approaches have fundamental similarities. They both have the purpose of giving a better understanding of society, people, organizations etc. (Holme & Solvang, 1997). Bouma and Atkinson (1995) give the following description of the two approaches:

“The difference might be summarized by saying that quantitative research is structured, logical, measured, and wide. Qualitative research is more intuitive, subjective, and deep. This implies that some subjects are best investigated using quantitative whilst in others, qualitative approaches will give better results. In some cases both methods can be used.” (Bouma & Atkinson, 1995 p.208)

To further explain the difference between quantitative and qualitative methods in a simple way, it could be said that quantitative methods transform the information gathered to numbers, while qualitative methods depends on the scientists interpretation (Holme & Solvang, 1997). Also, a large difference between the methods are according to Darmer and Freytag (1995) that the quantitative method tries to interpret something based on a low number of factors at a large sample while the qualitative method uses a large variety of factors over a limited number of respondents.

When this is said, it is not surprising that some theses require a quantitative method while others require a qualitative method. What in the end decides what method the researcher should use is dependent on the research problem and how this is formulated by the researcher (Patel & Tebelius, 1987; Holme & Solvang, 1997). Holme and Solvang (1997) have made some characteristic features regarding qualitative and quantitative methods;

Quantitative methods

- Precision: the researchers want to give a good view of the quantitative variation
- Little information about many units; wide study.
- Systematical and structured observations; fixed alternatives for answering questions.
- Interest is focused on the general, average or representative.
- Distance towards the respondent or area of research.
- Interest in separate variables.
- Description and explanation.
- Observation.
- Me vs. it; relationship between the researcher and the interviewed.

Qualitative methods

- Flexibility; the researchers want a close presentation of the qualitative variation
- Rich information about the studied entities; knowledge in depth.
- Non systematic and unstructured observations; in depth interview or open ended questions.
- Interest in the unique or abnormal.
- Closeness to reality and respondents.
- Interest in connections, relations and structures.
- Description and understanding.
- Observation from within.
- Me vs. you relationship between the researcher and the respondent.

There are however some disadvantages with using a qualitative approach. Since qualitative approaches often are time-consuming with long in-depth interviews, a large sample can be difficult to have within the study. Other disadvantages with the qualitative approach are that the researcher in the interview could ask the questions in a leading way or interpret the answers incorrectly. It is also more difficult to compare information between the different interview objects using this method (Holme & Solvang, 1997). In our research, we have a case study approach, which will be further explained below.

2.2 Case study approach

The basic form of case study is often a detailed study of one single case. In regular terms the term “case” is connected to a case study of a situation or organisation. Often the case study contains a deep study of the environment or situation in question. Bryman (2002) explains his definition of a case study as a study where the case itself is the phenomena you want to study. In our approach it would be better to define the research angle as *idiographic*.

This means that we are interested in studying a few characteristics of our research objects (Bryman, 2002).

There is a discussion about the external validity in the case study approach and objections toward the possibilities of generalizing the results from a single case and apply the findings on other situations (Bryman, 2002). Here it is important to know that the case study is not representative and you will not be able to generalize the findings. In our study we are aiming at a deeper understanding of the subject. We believe that the findings can be of value for academia as well as for the business environment and hopefully the findings can contribute to better understanding.

In our research, we are in some aspects making a comparative design in the sense of using similar questions in different interviews towards different individuals working on the same level of six organisations. Here you find similarities to what Bryman (2002) calls a multiple case study approach. When conducting a study on different organisations there should be a method for selection. Our selections and reasoning will be presented in the next subchapter. The criteria's for selection might be similarities in some fields as well as differences in others. (Different ownership, Different/same size, size of IT-Investments, level of professionalism, respondent, knowledge, position, power, credibility.)

2.3 The model versus the real world

Lave & March, (1975) "*A beautiful model is simple, fertile and unpredictable.*" (cited in Holme & Solvang, 1997 p.34)

In this paper, we are presenting our own research model presented in page 3. We are trying to present the research problem and area in a pedagogical way and we think that the model will help you as a reader to gain a deeper understanding of the problem discussed further.

When working with a model there are three important demands that need to be fulfilled according to Holme and Solvang (1997). First, the model needs to be simple in its nature. The model should not be more complicated than what is absolutely necessary in order to clarify the phenomena we are working with. Secondly, the model should create a larger understanding towards the area of our research. It should also present the framework or the boundaries within the area of research. Finally, the model should be unpredictable and present some elements of surprise. We are to research, develop new problems, and find new questions in order to rewrite the existing views. Therefore, a model should foster a creative approach towards the problem and hopefully give the reader an appetite for finding new questions.

Following this, we can ask ourselves; what is a model? Two different researchers in this way answer the question:

A model is a representation of all the features available in a specific task relation and they are important for the problem investigated (Hernes, 1979).

A model is an idealized picture of an phenomenon or an object where some of the more important features in the reality is isolated while other phenomena's/features are delimited (Höivik, 1974).

2.4 Selection for interviews

The task of finding interviewees followed by making the interviews is obviously a central part to the conclusion of the research.

The purpose of this study is to describe and analyze problems and possible solutions related to the involvement of third party consultants in larger IT-projects. In particular, we will investigate when and where in the project cycle it could be beneficial to use an independent moderator. In order to find this information, a number of interviews had to be carried out.

We chose to interview two suppliers and four customers so to receive information from both parts. At the supplier side, Sogeti and WM-data accepted to be interviewed. At the customer side, we wanted to have different kinds of large organizations with experience of buying large IT-systems. In order to find four organizations that we could interview, a number of phone calls were made. Our choices were based upon relative size of the organization, ownership structure and on the supplier side we focused on the major players in the market. We ended up with interviewing Husqvarna AB, which is a private owned company, Sveriges Radio that is a state owned company. Gotland and Enköping municipality were also interviewed. A description of how these six interviews were conducted will follow below.

2.5 How interviews were conducted

Our interviews have been carried out in a semi-structured way. It is the way of interviewing that we believe fit our study in the best way. Other alternatives are to interview in a structured or unstructured way, further explained below.

Structured interviews are when the questions asked to the respondents, are exactly the same. Williamson (2002 p.242) state that *“this is simply a survey questionnaire administered by interview”*. Structured interviews should be done when it is important for the research to compare the results from the respondents with each other (Williamson, 2002).

Semi-structured interviews are explained by Williamson (2002 p.242) with the following sentence *“-these interviews have a standard list of questions, but allow the interviewer to follow up on leads provided by the participants for each of the questions involved.”*

Unstructured interviews are made when a subject should be fully explored or as a way gain insights from key people. Williamson (2002 p.242) states, *“with this approach each answer basically generates the next question”*.

In our quest to make interviews with knowledgeable people, we found out who in the respective organization had the knowledge. In the customer organizations, this person was the IT-manager, and in the supplier firms, market director and system developer were interviewed.

When contact was established with the people, we provided them with our questionnaire over email so that the respondents could be prepared. After that, we visit all respondents

personally. With this approach, the interviews became more in-depth since it gave us a greater flexibility. Our questions were allowed to be more spontaneous and we could react on the things the interviewees said with follow up questions.

During the interviews, which lasted for 1-1,5 hours, we used digital-recorders to obtain an information rich copy of the interview. The recorded material was then typed into a manuscript that was sent to the respondent after the interview. This to give the respondent a chance to correct any errors or to clarify statements that he perceived as inaccurate. Interviews were conducted in Swedish since both we and the interviewed has Swedish as their native language. This means that every interview is freely translated from Swedish to English and exact quotations will therefore not be possible to obtain from this material. However, if the reader is interested in a deeper analysis of the material or the respondent's exact choice of words, the transcript material will be provided on request of the reader. The material is available in digital form. As a natural extension of the interviews, we will move on to discuss the credibility of the respondents.

2.6 Credibility of respondents

When you are researching the attitude and expected behavior of a respondent, there are a few things you need to be aware of in order to get the right answers. When formulating and expressing your questions, the goal should be to know what the respondent would do in real life. In many situations, we can find that a certain behavior is not spontaneous but rather planned and conscious. This is as an example the case when you choose what school to attend or if you should accept a certain job offer. Questions or rather choices like this are seldom made spontaneous, and they need a deeper commitment before deciding (Aronson, Wilson & Akert, 2005). To engage a moderator or a consultant in the companies IT-implementation process is a good example of such planned behavior that demands thought and planning. This means that we as researchers need to have this in mind when designing the questions for our interviews. One of the most famous theories about how attitudes can foresee a planned behavior is named just as it should; *The Theory of Planned Behavior*. When a respondent has time to reflect upon how he or she will act, the literature states that the best way to foresee this act or behavior is to look at the respondents intentions. Intentions are given through the respondent's specific attitude towards the behavior, subjective norms and perceived control over the behavior. This is shown in the figure as follows.

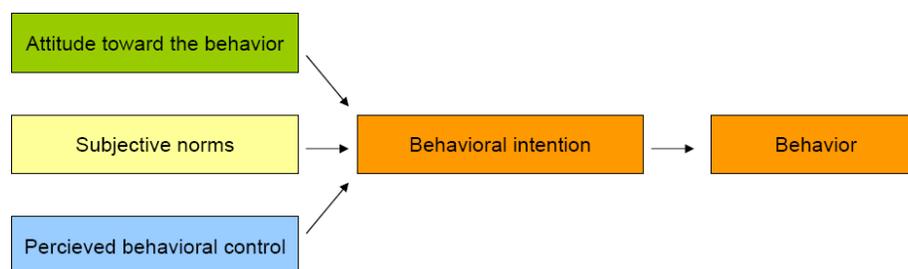


Figure 4 - Theory of planned behavior (Aronsson et.al., 2005, p. 222)

When designing and asking the questions for the study, it is important to ask questions with a narrow and specific focus as possible. This to gain knowledge about the respondents

attitude in a slimmer perspective. The reason why we should do this is to avoid inconsequence between the respondents answer or general attitude and his/hers actual behavior. Research has shown that the more specific the question, the better correlation has been measured after examining the actual behavior (Aronson et. al., 2005).

Secondly, subjective norms (marked yellow in the model) are measured to gain knowledge about what the respondent thinks that their close friends and family thinks of their planned behavior. If a woman, as an example, lives in a politically strongly left-oriented family and she herself has the desire to vote for a rightwing party, she might perceive pressure from her family and friends to vote for a leftwing party. As a result of this pressure, the woman might come to the conclusion that voting for a rightwing party as she wants is not worth the disappointment of her relatives, and instead she votes leftwing for the sole purpose of making her friends and family happy. These subjective norms are important to understand and to recognize in order to analyze the answer of the respondent accurately, in order to determine if the answer is really foreseeing the actual planned behavior. For us, the problem is rather about if the respondent answers our questions with focus on their own view or if the respondents answer our questions in a way that they think their superiors would want them to answer (Aronson et. al, 2005). This fact might be an issue in our study where we interview key personnel with conflicts of interest. As an example, we are meeting representatives from the suppliers and in this situation, it is important to know that they should be reluctant towards telling the whole truth about problems occurred and they might also present some skepticism towards the need of a third party involved in the process.

The final factor under this theory is that the respondent has perceived control over the behavior. His/her intentions are influenced by how easy it is for the respondent to actually carry out the behavior. If a person believes that a certain behavior is hard or difficult to perform, as an example to travel to the moon, the person will not build a strong intention to complete the behavior. However if the task is easy, such as using the seatbelt during the drive, it is more probable that the respondent creates a stronger intention for this behavior (Aronson et. al., 2005). In our case, we have the question about if the companies intend to use consultants in the future. Here it is important to define more precise what kind of consultant and in what situation they intend to use them. If we ask precise, we will get answers with a better fit and with a higher probability of actual behavior in the future. Following the theme of credibility we will now discuss the credibility of our study.

2.7 Credibility of study

The reliability of the research is dependent on how the facts collection is carried out and on how cautious we are in the handling of information. The validity is dependent on what we are measuring and if it is clearly stated in the problem statement (Holme & Solvang, 1997). Validity and reliability will now further be explained.

2.7.1 Validity

It is not satisfactory only to have reliable information. If the information is measuring/answering something else than what the study aims at measuring, we cannot use the information to test our research question. (Holme & Solvang, 1997)

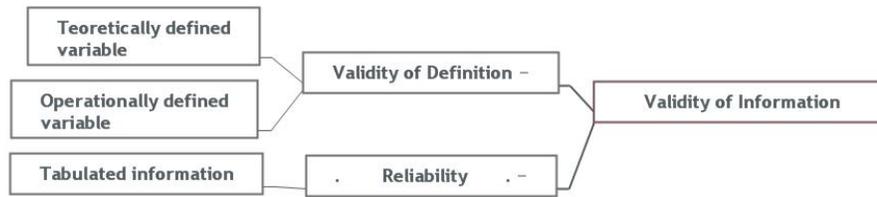


Figure 5 - Connections between information validity and reliability (free translation: Holme & Solvang, 1997, p. 167)

The demands for validity and reliability in the definition might come in conflict with each other. We might end up in a situation where we need to use a method that will give us less reliable information in order to get more direct knowledge about the theoretical phenomena. It is in many cases hard to get a good overlap between the theoretical and the operational variable (Holme & Solvang, 1997).

In our study, we have the subjective definition if the theoretical model we are presenting is a beneficial contribution to the processes available. When we are asking the respondent for their input we do this in a few different angles, but the problem is if we take the right angle in our questions. Does our study match the theoretical model presented? Are our questions a correct indicator for the theory presented? Awareness of these problems is crucial to have when conducting the study. Above this a thesis also need reliability in order to have validity of information discussed below.

2.7.2 Reliability

It is a natural goal in every study to have as reliable information as possible. High reliability is given, if different independent studies of the same phenomena give the same result (Holme & Solvang, 1997). This is in practical terms easier for a quantitative research and as you might understand not very convenient in our study. The bases for our interviews are too small in numbers of people to make us be able to draw any strong conclusions about the reliability in the material. However, some methods might give us an indication about the material and the level of reliability. In our interviews, we are presenting and addressing important issues in different angels. Some problems are discussed with two different questions in order to measure if the respondent answers consistently. The important questions are also followed with questions not structured or written down in advance, in order to gain complete understanding of what the respondent is consider with his answer.

2.7.3 Critique

When looking at the result of our study, there will be no ground for generalization or creation of general knowledge. Many of the findings might be true in a larger perspective but we as authors, do not have support in the methods used for claiming that the result in general are true for a larger population than the case presented. Inside the boundaries of our case, we are in the power to discuss and analyze findings. Outside the case; we will not draw any conclusions.

Looking at the companies included in this study it would have been good to have one more company representing the supplier side. We do also lack the opinion of a customer who

never used the help of consultants. A company as such might give us other perspectives and present a different view of the problems discussed.

The interviewed organizations did have an overall positive attitude towards IT-projects and this might be the very fact why they agreed to be interviewed. We experienced organizations that declined to be interviewed and we ask ourselves if this might be because of more negative experience in IT-projects.

During the process, we gained a lot of knowledge about the process and problems involved in the case and this colored our discussions and interviews gradually towards the later interviews.

3 Theoretical framework

In this chapter we are handling the concepts of transaction cost theory and agency theory as a foundation from where we build our hypothetical concept/model.

3.1 Management consultants in IT-projects

To make sense of the theory connected to transaction cost and agency theory, and bridge this towards our problem area we want to make a definition of what a management consultant is in a general term. Greiner and Metzger (1983 p.2) defines it as follows;

"management consulting is an advisory service contracted for and provided to organizations by specially trained and qualified persons who assist, in an objective and independent manner, the client organization to identify management problems, analyze such problems, recommend solutions to these problems, and help, when requested, in the implementation of solutions."

According to Canback (1998), there are a few key expressions in this description. *Advisory service* gives a signal that the consultant takes responsibility for the quality in the guidance, but they have no physical authority and cannot replace the manager. The words *Objective and Independent* gives the view of a consultant working with no organizational, opinionated, emotional or economic dependence towards the client.

The general reader might concur to this statement given by Canback (1998 p.5)

"It is not obvious why it is more cost effective to hire experts from the outside than to do the same work internally in companies."

The core meaning of this sentence is what we want to investigate and process with help of the theory of agents and through the theory of transaction cost, which will further explain the choice of either use the market, or to do the work internally.

3.2 Transaction cost theory

Transaction cost theory is used and described in this thesis since it explains the choice of the firm to use the market to deal with certain products, services or activities instead of handling them internally.

It is important according to Hatch (2002) to know that a company's resources, by themselves, do not contribute to the value creation process of the company. To own a resource is a necessity or a basis for value creation, but the resource needs to be used or become systematized in a way that creates value for the customers.

In an imperfect world, you will always deal with a true cost for allocation of resources caused by misunderstandings, misaligned goals and uncertainty. Transaction cost theory was in the beginning introduced by Ronald H. Coase to explain why firms choose to deal with certain products, services or activities internally while others are traded in the marketplace. Canback (1998) highlights two definitions of transaction cost; first, the cost of a company can be separated into two categories; transaction cost and production cost. Production costs are all the costs directly connected to productive activities. As an example, manufacturing, logistics, research and development activities connected to production. Transaction costs are costs that are connected with the organizing of economic activities. The costs may vary in different organizational forms (Masten, 1982). In the developed civilization, it has been anticipated that more than 45 % of the gross national product is created by transaction costs (Wallis & North, 1986). Mathiesen (1997) describes the number to over 54 % of the US gross domestic product.

Coase (1937) asks two questions to define the term transaction cost; why is there any organization? Why is not all production carried out by one big firm? The answer to these questions is that there are transaction costs that decides what is carried out in the market regulated by price and what activities that are handled internally in the firm, here the bureaucracy regulates the decision. All transactions are associated with a cost and these costs are presented as market transaction cost or internal bureaucratic transaction cost, which are presented in the figure on the next page. This results in a limitation for the size of a company explained by the break-even point of when the internal transaction cost is exceeding the cost of doing the same transactions in the marketplace. Notice this issue, as it explains the reason why firms or organizations buy services through the marketplace instead of make it in house (Canback, 1998).

The market transaction costs of highest significance are the cost of pricing a product or service, the negotiation and creation of a contract and the cost of information failure, according to Coase (1937). Internal transaction costs of greatest importance is the costs connected to determining what, when and how to produce, the costs connected to resource misallocation and the cost of demotivation (motivation is poorer in big organizations). See figure on the next page.

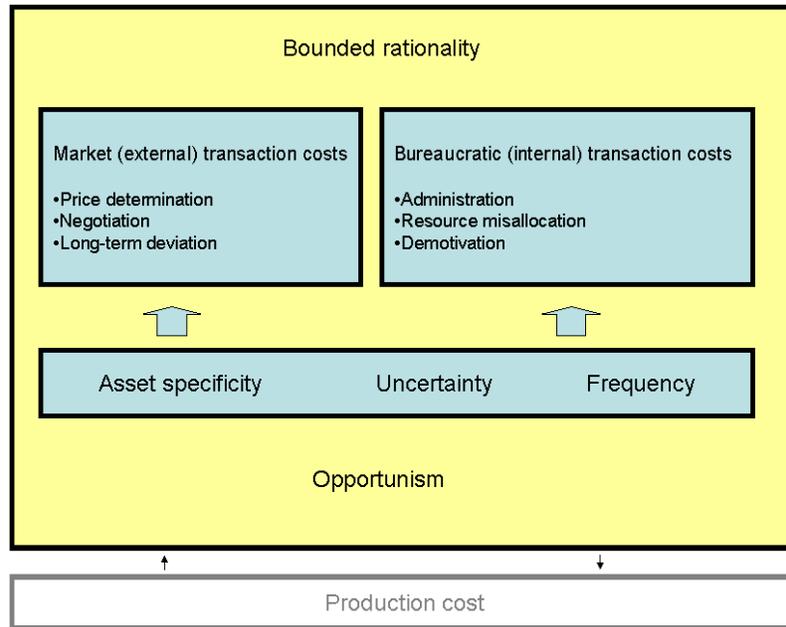


Figure 6 - Bounded rationality (Canback, 1998, p. 3)

According to Herbert Simon (1976), is human behavior strongly rational, but limited. With this, he considers that every contract will be imperfect and it makes the creation of a perfect contract impossible even if all information is presented. Connected to this, is the opportunistic behavior of persons within the organization who will put their own interest before the interest of the firm. Responsible behavior needs to be backed with an enforceable commitment, otherwise the concurrence would be broken if the self-interest of the employee would be greater with a different behavior (Canback, 1998). The creation of contract that Coase (1937) describes, refers to negotiation that Canback has used in the model above. Coase (1937) also explains that all transactions carry a cost, and as a result of this, the price determination when buying the service or product through the market is important. If the price is too high the cost of making the same internally will be lower.

According to Williamson (1975), three factors are of great importance when determining if the market or bureaucratic transaction cost are optimal. These factors are; asset specificity, uncertainty and frequency of transactions; shown in the lower half of the figure. Canback (1998) explains that asset specificity is physical assets, human assets, site assets with specific roles and usage and that the asset cannot be changed to other use with small effort. Here Canback highlights that these conditions will trigger opportunistic behavior if the asset is part of a transaction in the market. The example he gives is that if a supplier invests heavily in machinery for tooling specifically towards one customer, (in the case of a consulting firm the investment is in a relationship towards a specific client) after a certain time, the customer will be in the position of being able to pressure the supplier. This is because the supplier stands without alternative use for the investment, and the supplier will accept a price close to the variable cost of production only to cover some of the investments fixed costs.

Uncertainty in different forms will lead to more bureaucratic transactions since it will be complicated and very costly to create a contract that covers all possible scenarios or outcomes. Examples of such uncertainties can be technological uncertainty or high unpredictability in the business cycle. High uncertainty firms are more likely to let activities be carried out internally. When the transactions are frequent, the contracting cost will be higher than the internal bureaucratic cost and that will lead the organization to handle the transactions internally (Canback, 1998).

According to North (1990; North & Wallis 1994), the transaction cost itself is not the only determinant if the transaction will be carried out in the market or internally. He explains that the firm itself tries to minimize total cost and not only transaction cost. When the firm is able to save more production cost than the total increase in transaction cost, total cost will be lower and the firm satisfied.

How does this transaction cost evolve? Where is the source of this increase in transaction cost? In the modern economy, companies strive to gain cost benefits from scale and scope economies. While focusing on these strategies the growing firms need a higher degree of specialization, which by nature leads to an increased demand for internal coordination. Canback (1998) explains this relationship by the example, that if transaction cost did not exist, the largest companies would automatically be the most profitable ones in each marketplace, which we all know is not true. In fact, the larger companies need to invest in rather substantial coordination resources to realize the scale of production and the economies of scope. Here is the example of when companies increase their transaction costs in order to gain savings from the reduction of production cost. In the end, the determinant is the size of total cost (Canback, 1998).

Consequently, senior management today focus primarily on conceptual issues related to transaction cost instead of the old way where managers focused more on concrete production related issues. This is highlighted in a statement made by Simon (1976) who says that, how to organize production efficiently is not the central problem, but instead how to organize decision-making. Canback (1998) continues by highlighting that we today talk more about vision, strategic intent, learning organizations and virtual corporations.

Transaction costs: “the costs of allocating resources in an imperfect world of misunderstandings, misaligned goals, and uncertainty. External transaction costs center around the cost of contracting, internal transaction costs are dominated by the cost of coordination. Transaction costs are often described as “economic friction.” (Canback, 1998 p.5).

3.2.1 Governance, control and ideology within the organization

In the modernistic perspective of organizational governance and control, the American sociologist Arnold Tannenbaum abbreviates the view as follows (1968, p. 3):

“Organization implies control. A Social organization is an ordered arrangement of individual human interactions. Control processes help circumscribe idiosyncratic behaviours and keep them conformant to the rational plan of the organization. Organizations require a certain amount of conformity as well as the integration of diverse activities. It is the function of control to bring about conformance to organizational requirements and

achievement of the ultimate purpose of the organization. The coordination and order created out of the diverse interests and potentially diffuse behaviours of members is largely a function of control.”

Modernistic governance and control theory centers around the hypothesis that different people have different reasons for participating in an organization. This means that organizations face continuous problems with diversified interests and the organization needs to make sure that the purpose and strategies of the organization maintains intact. This makes a logical foundation for governance and control: because organizations consist of individuals with diversified interests, the management needs governance and control. One of these governance theories is the “agency theory” presented below (Hatch, 2002).

3.3 Agency theory

Agency theory is used in this thesis since it focuses on the relationship between a principal and someone who work on his/her behalf. In our case, the consultants are often working for their customer, the principal.

The agency theory puts its focus on the organization control- and governance problems from the perspective of owners, investors and external stakeholders (such as insurance companies, financial institutions and potential investors) (Hatch, 2002). The central concern of the agency theory is the relationship between one or more principals (owners) that bring in another person to work for them (Landström, 1991). These persons are named agent in order to highlight the fact that they are acting on the behalf of the owners’ interest and not their own interest when they make decisions. There is a risk with bringing in agents, namely the “agency problem”. The issue with this risk is that agents rather serve their own interest, than the principals’ interest. The agency theory wants to assure that the principles interest are protected by controlling the behavior of the agent. The theory is also valid when you are to generalize over lower levels of management in the organizational hierarchy (Hatch, 2002).

Problem of diversified interest within the agency theory are solved through contracts, which makes sure that the agents own interest falls in the line with the interests of the principals. The contracts promises rewards for the agents, so that they can fulfill their own interest when they have finished the principles interest. The rewards must be desirable for the agents and based upon the principals interest. Therefore, you can state that the contract serves as a delegation of work from the principal towards the agents, given an agreed reward (Hatch 2002). These contracts could be either written or unwritten. The main part with them is that they “*specify the rights of the agent, performance criteria on which agents are evaluated, and the payoff functions they face*” (Landström, 1991, p3).

Despite the contract of reward, it should not be assumed that the agents always perform in a way that is agreed upon. Agents can still avoid their duties and responsibilities. However, principles still contract agents to act for them. Reasons for this are that they cannot or do not want to protect their own interest continuously. The principal’s possibility to gain knowledge about the behavior of their agent’s responsibility is dependent upon what information they have access to. Sufficient information means that the principals have the knowledge about if the agents fulfill the demands stated in the contract or not. Direct observation, where possible, gives this kind of information. This method is however very time consuming and the principles could rather do it themselves. If there is incomplete information, the agents may face a temptation to avoid some duties since they may not get caught.

Because of this, principals might be taken advantage of by the agents. In order for the principals to take care of the situation with incomplete information, there exist two options according to Kathleen Eisenhardt. (Hatch, 2002).

The first option is that *“the principal can purchase information about the agent’s behaviors and reward those behaviors”* (Eisenhardt, 1985 p.3). This option also requires the principal to purchase surveillance mechanisms. The surveillance mechanisms could for example be measures of cost accounting, budgeting systems, and an additional layer of management. The second option is that *“the principal can reward the agent based on outcomes (e.g., profitability)”* (Eisenhardt, 1985 p.3). This option measures behavior and the reward are to some extent outside the agents control. For example, good outcomes can occur despite a poor effort from the agent and the other way around. This option encourages the agent to make some effort, but it does not take into account the price of shifting risks towards the agent. Eisenhardt (1985 p.3) states that *“the optimal choice between the two options rest upon the trade-off between the cost of measuring behavior, and the cost of measuring outcomes and transferring risk on the agent.”*

The choice between behavior and outcome control should be done regarding the costs associated with the information collection. Behavioral control probably demands one further level of management who is responsible for monitoring or development of information systems. When routines are of lesser presence, technology will be more expensive. In addition, when the organization faces more levels of management, agents have more opportunities to shrinking. When behavioral governance gets harder to fulfill, usefulness of output control increases. Output control is cheapest when output is easy to measure; however, output control becomes non-attractive if it is difficult to measure. If the organization faces an uncertain future, output control becomes problematic as well (Hatch, 2002).

Someone needs to face the risk between success and failure. Most often, this risk lies upon the owners since they are most likely to gain the most if he company becomes a success and they have the most to loose in the case of bankruptcy. In the case of outcome controls, it is however the agents who carry part of this risk. This is due to the fact that the company’s profit is dependent upon the behavior of the employees, variables in the environment and the insecurity connected to technology. Examples of risks are here behavior of competitors, changes in legal environment and technology breakdown. These risks are out of range for the employees to control, but they still affect the result of the organization. Agents are however only in the position to control parts of the outcome as well, and this increased risk for the agents calls for a compensation in the case of success (Hatch, 2002).

Agency theory states that both principals and agents are trying to optimize its economic. Due to this, some costs will arise in order to bring the agents behavior into the principal’s best interest. The costs that arise are according to Landström (1991 p.3) the following ones;

- *“Monitoring costs, i.e., costs incurred by the principals in monitoring and controlling behavior.*
- *Bonding costs, i.e., costs incurred by the agent in demonstrating compliance with the wishes of the principal.*
- *Residual loss, i.e., loss resulting from the divergence between the decisions made by the agent and those, which would maximize returns to the principal.”*

Agency theory: In a relationship where one or more principals bring in another person to work for them, problems can occur. The issue with this risk is that agents rather serve their own interest, than the principals' interest (Hatch, 2002).

4 Empirical findings

In this chapter, we will present the empirical findings from all interviews conducted. We have interviewed six entities, companies and municipalities, using a semi-structured interview method. Both suppliers and customers were interviewed and we will start with the perspective of the customers.

4.1 The view of customers

The customers presented below are represented by four companies. The first company is Husqvarna which represents larger public limited company; in addition to Husqvarna we will present the view of the Swedish Radio which represents a state owned company. We will also present the views of the two municipalities, Enköping and Gotland, who differs in their organization in the IT-area.

4.1.1 Husqvarna AB

We interviewed CIO (Chief Information Officer) Lennart Dorthé at Husqvarna on April 19th for one hour. Dorthé has been involved in more than 50 large IT-system purchases in the sizes of SEK25-30 million and down to a million.

Husqvarna started out as a weapon factory in 1689, which makes it one of the oldest industry companies in the world (Husqvarna, 2006). Their products today are forest-, park-, and garden equipment which are sold at 18000 retail stores around the world. They have 12000 employees situated in 50 countries and next to that; they have agents in 40 more countries. Their main markets are United States of America and in Europe, France and Poland. Their turnover was 2005 at SEK 30 billion.

Husqvarna do not have any system development within the company; instead they purchase all their IT-systems from suppliers. They have standardised applications which strictly should be used throughout the company. Husqvarna has approximately 20 professional project leaders around the world who are responsible for the different systems.

A large IT investment for Husqvarna lies around SEK 25-30 million and they are made every 3-5 years. Then they have a large amount of IT investments that lie around SEK 1 million. Larger investments are mostly not triggered by its ending lifecycle, but more often because they start to work in a new area and therefore needs a new system. Their order system for example has been around for approximately 20 years.

When a system should be chosen, they work in a relatively undemocratic way. Dorthé explains,

“we do not put 15 people in a conference room and have some kind of discussion”

Instead, most often the CIO brings a suggestion to the CEO who agrees or disagrees upon the solution. This short decision path makes decisions faster. It could despite short deci-

sion paths be time consuming to purchase an IT-system. Often the pre-study, where internal discussions take place, are time consuming. Dorthé explains that,

“the longest pre-study that I have been part of was 5 years.”

This was the time it took to get people to understand that the system really could work as a helpful tool. The purchasing process can be relatively quick and be finished in perhaps 6 months. Dorthé see time as an important aspect and he states that an optimal IT-system purchase should be quick.

“If the project takes to long time, reality might catch up before you are finished.”

The decision of a new IT-system is always taken by the responsible for the business department that needs it. He (the department responsible) however has to choose from the selection of standardized systems. Head department provide the tools and the business director then decides when they should implement it. In a project like this, there always is a control group involved and the process owner always sits as a chairman since it is his project. It is in the control group where the big decisions are made. Under the control group sits the project group and the project leader is always secretary in the control group. Last group in the hierarchy is the system group and there sits the system developers. The system group leader is also in the project group.

“In this way, there is an unbroken chain from the control group to the system group.”

However, Dorthé states that it is not so complicated today, since they always purchase standard systems.

Husqvarnas strategy for IT-system purchases is to always work with so called serious suppliers. That means that they automatically work with the larger suppliers as Oracle and IBM. Husqvarna also choose to purchase applications from different suppliers and Dorthé has never really believed in the ERP concept (explained in page 5). Dorthé states that,

“all these ERP suppliers state that they are good at everything, and that I think you should be cautious about that.”

Therefore Husqvarna has installed a communication technique called MQ series which guarantee that different systems from different companies can work in a controlled manner. This makes it possible for Husqvarna to pick the best systems from each supplier. If Husqvarna still are forced to buy a larger packet from a supplier, they try not to use the bad parts. Dorthé believes that this system can save the company some money since they can choose to purchase only the optimal systems from each of the suppliers

Husqvarna are satisfied with all their latest IT-system purchases and they have not had any sever problems. On the question of what problem they have had, Dorthé however says that,

“well, the classical is that the timeframe becomes much longer than planned.”

They seldom has problem with maintaining the budget and a reason for this is according to Dorthé that their project leaders are professional people who only work with managing projects and that they are handpicked from the business side and not from IT. Dorthé however also states that you in order to avoid problems,

“you need to have some luck”

An IT-systems operating costs for an industry company are said to be between 1-3% of the company's turnover according to Dorthé. Husqvarna does not reveal the numbers on their operating costs, but states that they have a lower percentage than the industry benchmark.

The highest cost for an IT system lies in the license costs. An ERP system can have a license cost at around SEK 30 000 per user as an initial cost and on top of that a yearly cost at 20-22% on that. If Husqvarna has 100 people who should have a license, they might only buy 75 because of these high license costs. Dorthé says that,

“unfortunately, the license cost has gone through the roof.”

Because of that, Husqvarna tries to make enterprise agreements which mean that they buy applications based on their turnover and not on the amount of users. Remaining costs are personal costs, consultants and project leaders. Dorthé explains that,

“hardware does not cost that much today.”

Another costly part with a new IT system is however the project cost, where implementation and education is a part.

Problems that might be faced when an inexperienced person purchases IT-systems are that they compensate their inexperience with methods. You meet the suppliers and rank them from what they have told. This means that you might not buy the best product but instead from the best seller. Dorthé says, that when he was new in the business,

“The hardest part was to see through their sale talk and look at the application instead.”

Husqvarna is today such a reliable customer to some of the suppliers that they do not meet the sales people but instead the people who have made the system. Because of their reliability, suppliers do not try to sell everything anymore.

Husqvarna does not use external consultants in the purchasing phase and they do not use it in order to find out what they need. However, they buy a lot of services in the implementation phase. Dorthé states that,

“the flexibility of being able to choose a specialist that are good at a specific area are of main importance.”

If Husqvarna should have all this expertise inside the company, they would probably tend to do the same solutions over and over again, he explains. Another positive aspect with using an external consultant is that they easily can be replaced.

“A consultant can get exchanged in 15 minutes. Are you not satisfied, then you change.”

Negative aspects with using external consultants may be that they need to get some time to get started and learn the company's culture. There is also a chance that Husqvarna gets a person who does not fit the company. Dorthé however states that,

“I think that the flexibility is such a big advantage that it puts a shadow on all the negative aspects.”

Dorthé also states that it is cost efficient to use the external consultants. He says that the consultant's salary is of less importance;

“If you look at the price, SEK 1400 an hour, then that is relatively uninteresting”

Instead, what is important is that the work gets done quicker and in a right way, he explains.

Dorthé does not see any significant risks with bringing in a consultant since he (the consultant) can be fired at the same time they feel that something is not working as it should be. It is important that the employees are so professional that they follow the consultant. However, even if the consultant has the role as a project leader, there is always someone at Husqvarna who controls the consultant. Dorthé explains that,

“If you do not do that, it can go very wrong and there are many who have done that.”

Before Husqvarna bring in a consultant, they make a specification on what the consultant can do, and what he is supposed to do.

The hardest part to handle in the IT-systems lifecycle is the last part before the operational phase, namely the acceptance test. The test involves end-users that make their routines, and then sign a paper that they have approved the system. It is a test who runs for a couple of months in order to guarantee that there are no surprises when they start operations.

To have a third party involved that make sure that the Husqvarna is satisfied, is nothing that Dorthé see as important when it comes to purchasing IT-systems in Husqvarna. His opinion is that their project leaders have this kind of knowledge since they work with this on a constant level. However, he also states that,

“... in technique intensive projects I believe in this solution, since it is so complex with much specialist knowledge.”

4.1.2 Sveriges Radio AB, (Swedish Radio)

The interview was conducted at Sveriges Radio in Stockholm April the 28. We interviewed Roland Janevi witch is the head of IT department and Roger Jervenheim license administrator, for one hour.

Sveriges Radio is a public-service company owned by a foundation that also owns the two other public service companies in Sweden; SVT (The Swedish public service broadcaster) and UR (Swedish Educational broadcasting company). Sveriges Radio represents a governmentally owned entity and is fully financed by tax payment through a license fee on a national level (SR, 2006). The company is strongly decentralized and 28 channels are spread over different locations in Sweden. The turnover for SR (Sveriges Radio) is about SEK 2.2 Billion per fiscal year and they employ about two thousand persons where one thousand of them are located in Stockholm (SR, 2006b).

The company was involved in about four to six larger IT-projects during the last year and Janevi defines a larger project as valued over SEK 1 million. The largest projects were about SEK 10 to 20 Million. In the pre-phase before the purchase, Janevi explains that a larger project involves about 20 persons excluding the decision makers.

In order to get funding for a new system or project, Janevi presents a report consisting of the need they have. Then they ask the management for, as an example SEK 24 million and then, the General Manager approve the plans.

“The General Manger approves everything.”

Janevi also explains that the need comes from other departments within the organization. Every local radio channel has responsibility for their local IT-system and Janevis department is responsible for the central collective IT-system. Since there are 54 different units

within the company, it becomes very difficult to get the entire picture over costs connected to IT.

Janevi states that license costs are one part that comes in a purchase, but he remarks that it is the part of the suppliers in the implementation phase that is expensive.

“That is some of their business idea when they sell a product. You can implement it yourself, but in order to get it where you want it to be, you have to buy hours in bulk from them.”

SRs strategy for IT-purchasing is strictly regulated by the law LOU, where they are restricted to a demand specification of what they want. They are not allowed to ask for a specific brand or supplier. The key is to write a good list of demands, and here they do not have the competence themselves. Janevi explains that they use consultants with a specific knowledge of this and remarks that,

“They have produced impressive material.”

He further says that the strategy with LOU is to specify the parameter for exclusion; if they states that it is lowest price that is prioritized, later it will be hard to have another demand that is higher. The different parameters for choice need to be weighted and because it is public, it must be followed. This system is new to SR, and Janevi explains that they currently are doing their first purchase under the LOU. Earlier they could visit different suppliers and put the solutions of the suppliers against each other until they got what they wanted. Regarding LOU, Janevi states;

“Now it is more like a blind date where you put yourself out and then you have to wait and see which ones call.”

The largest problem when looking at the lifecycle of the whole IT-system (pre phase, purchase, implementation and operations) is according to Janevi not the equipment but the software.

“The supplier says that, -with that software all problems you have are solved. When you then start, you see that it is not the case.”

Janevi continues;

“Then they tell you that, -In the next release we have solved that (the problem). Then they already have you on the book, but the promised functionality in software is not there.”

When asked if this is dependent on a failure in the communication, Jervenheim replies that the important thing is that they explain that this is the case. Janevi explains that this problem where you think that you have bought something and specified it clearly and then they change something, is fairly common

When asked what parts that is most costly with an IT-system, Janevi answers the cost for personnel. After that comes costs for licenses, he explains that many fabricants divide the licensing to a user license and support licensing. This is where they want to get the returns of the deal. Jervenheim states that it is for protection, upgrades and other essential deals you need to have. Janevi continues with an example, if you have Microsoft but not the protection for upgrades, you will not be able to communicate with their latest versions and as an effect of that, you will have to buy a new license. In these cases, you can calculate and estimate if you think it will be cheaper to buy a new license, or if you will save money on

the upgrades. Right now they do not upgrade this particular system and they will therefore soon have to purchase 2 000 new licenses. Janevi explains that,

“the cost of having just the Office suit is over SEK 6 Million per year.”

Regarding problems in larger IT-projects, Janevi says that there are always smaller problems, but that they are often solved. The difficulties in communication could be one reason for problems, therefore, SR have a project leader that puts particular emphasis on these questions. He also lifts the project out of the organization just to be able to handle the difficulties occurring. Janevi emphasizes that,

“You would let the basic functions handle it, if there were no difficulties.”

SR is a company that not only broadcast entertainment, but also acts as a resource for emergency announcement. Because of this, they must have trustworthy people that know how to operate all systems in the house. All operation must be done internally, and this means that there is a surplus of people when everyone is present. It is however no problem if a few employees become sick.

He further explains that SR has project leaders that are situated in a department internally and only works with projects. They are professional project leaders and the specific project organization then use personnel from our unit.

Janevi also answers that they have used project leaders from an external party if they dependent on a specific competence. Sometimes you want a general project leader and sometimes you need someone with a specific focus.

“If it is in a specific area we should purchase, then we might need some specific competence.”

Janevi continues,

“If we lack the competency ourselves, we bring it in from outside.”

Most of the consultants work on sight at SR, together with the project group. Janevi explains that as a project leader, you need to be present and lead the personnel. He also answers that they usually use consultants in the early phases of a project rather than in the later part of the lifecycle. He also says that after determining what to have and the specification of need, the consultant is dismissed. Janevi explains that in the purchase situation, he wants to call the deal because,

“it is my bag of money, not his”.

Then after the purchase, they engage the employees from the supplier during the implementation phase. Jervenheim fills in that these people follow with the system. Then they operate the system themselves. Janevi says that SR as a company has decided to have the competence to operate the systems themselves in order to be independent towards the market. They do not use consultants as a resource for operations, instead;

“If we use consultants, it is mostly as an expert help in a specific niche where we lack the knowledge at the moment.”

If they have the knowledge internal, they say that an external person does not bring much help but they might be good project leaders.

Jervenheim states that most problems in the lifecycle occur in the beginning. A few months after the system is implemented a lot of problems and bugs comes, but after a year these has descended Then the system works fine in about 6-7 years before there are larger problems again.

“When you need to do a replacement after 3-5 years, then it finally functions very well.”

However, if they choose not to replace the system at this point, they will see an increase in problems again, he explains. This is dependent on both the system and the people using the system. They have learned how the system works and accepted the shortcomings involved. If the system is kept over its lifecycle, they will see problems occur again, and now they become more serious than in the beginning. Reasons for this is that there are no support to get and,

“people have no acceptance for problems in this stage.”

A downside with using external consultants is according to Janevi that they disappear with all their knowledge and expertise once the project is completed. It is important here to see that the knowledge is transferred to the organization before the consultant leaves the project. Jervenheim continues by saying that it is a psychological effect as well,

“you feel safe when you have this competent person that you trust, and then when this person is leaving, you can have a terrible feeling of; how will this work out?...”

A risk that Janevi says can occur in an IT-system purchase is that the buyer does not know what he is supposed to buy, Janevi have seen the problem at other departments at SR. The same risk can occur if the consultant has not had the time to understand the problems as well as the ones working with it.

“You must check that they really understand what to do.”

The use of consultants is cost efficient according to Janevi and Jervenheim. There is one other upside when using consultants, namely the fact that they are just consultants and not employees.

“the consultant is supposed to report on a given day, when he sleeps, eats and have breaks is not my problem but something between him and his employer.”

This creates efficiency in another way, Janevi says.

When asked to specify his view of an optimal IT purchase, Janevi replies;

“A good specification, descent prices and that all parts are satisfied.”

It is a negotiation between two parts so it is important that both sides are satisfied; no one is supposed to fell fooled. It is also important that we have a good connection with the other part, where we can talk to each other Janevi explains. This might sound like a given reason, but they have experienced cases where they felt that they do not get contact and understanding with the other part. Janevi states that one big reason why a deal is put off, is because of that. Jervenheim adds that it does not matter how superior the goods are, it will not work without a good relation to the supplier.

On the question if they have had external consultants to evaluate the systems continuously to see that they got what they wanted, Janevi says no but think it might be a good idea to

do it now when they just started with LOU. Both Janevi and Jervenheim becomes very interested and Janevi continuously by saying that,

”There are two things when you work with a project, one is the project goal and the other is the efficiency goal. With your description, one could first look at the project goal to see if that is reached, and then over time look at the efficiency goal. We do not do that, but it would be interesting to see and follow up the efficiency goals. They are the most important and you do not get them until after 2-3 years”.

” We will steal that idea from you.”

Janevi states that if evaluating the system, it should be either an external consultant or an internal from another department that does it because of objectivity.

4.1.3 Enköping Municipality

We interviewed Enköpings municipality’s IT-manager Erdogan Bele on May 5th for an hour. He has been involved in 70-80 IT-system purchases during his career.

Enköping is a municipality situated close to the lake Mälaren and the cities Stockholm and Uppsala. It is called the most central town in Sweden and they have 38 000 inhabitants (Enköping, 2006). The municipal has a total of 3 600 employees and the IT department we visited has 3 employed.

Enköping never purchase a system that is developed just for them, instead they buy systems that are almost finished and just adapt them to fit their organisation. A large IT-system for Bele does not only mean that it is a costly system, instead,

“... a large system is depending on how much the system is used within the organization.”

Bele also state that one must also look at the lifetime of the system and the total life-cost. In the starting point of a system, there are of course some initial costs, but then, the largest cost is the license-, maintenance- and support-cost. The license costs with support is guessed to be SEK 3-4 million yearly according to Bele. What the education cost, for teaching the employees the system, is nothing that Bele can say since every public administration has that included into all the education they give their employees.

Enköping has to work under the LOU since it is a municipality. To work under the LOU is something that Bele see as positive. He has worked without LOU before, but states that,

“I think that LOU has given a dynamic in the purchases and at the same time made them very well structured.”

Because of the LOU that Enköping must follow, they have to specify the timeframe of the system in the purchasing phase. This means that they regardless of what they think about the system must end it after three to five years. If the system does not fulfil its duties, there are however some regulations that states that they can end it beforehand.

The strategy in Enköping regarding purchases of IT-systems is that the IT-department is accessorial in almost all of the city-office purchases. In this way, they have a general agreement that they can make a specification on. This way also makes it easier for them, since they do not have the resources with knowledgeable purchaser for the whole organization.

When an IT-system should be bought, Bele thinks,

“it is important that you know what you want to reach, why you get it and what the goal is.”

When these questions are answered, then the demand specification which should reveal the reality that is wanted, is very important. If a lot of work is put in the specification of demands, the largest part of the project work is done.

“If you have documented the problem well, then you get right answers from the supplier.”

This makes it easier to see which supplier that could offer the service. Enköping then have a purchasing group with experts from different areas inside the organization. It is the purchasing group who writes the specification of demands and make inquires towards the suppliers. They then call in some suppliers for interview and internally make a vote on who they want to use. This is something that is necessary in LOU since everything must be documented so that the suppliers, who did not get the purchase, could see that everything was done correctly. They might bring in consultants in this pre-purchase phase if they think that they lack the resources needed. When they bring in a consultant, they have to take in one that is agreed upon beforehand.

Enköping has decided to outsource their IT operation and instead focus on the order competence. This has made the department very small and there are only three people who work there. The outsourcing has decreased the costs for Enköping and the accessibility in systems has increased considerable.

“We now have an accessibility on 99,8 %.”

The IT-department consists of an IT-manager, one IT-architect and one IT-coordinator. Besides that every public administration has one IT-coordinator. Decisions are made in an IT strategy group which is above the IT-department in the hierarchy. They make strategies, plans and budget and the IT-manager is a part of this group. Because Enköping is a municipality, it then must be a political decision made by the municipal executive board. Some minor decisions are however made by the IT-strategy group.

Bele does not see that they have large problems when it comes to purchasing; he states that

“it is the routine we have that should be used.”

The problems instead come in the implementation phase and preparation for an implementation is therefore as important as the demand specification before a purchase. He thinks that it is important that both the supplier and the customer have common responsibilities and resources for work. Also,

“there must be the right person from both ways. That is the most sensitive and hard part.”

A purchase will usually take between 1,5-4 months to carry out, depending on what kind of purchase it is. After the purchase, they let the people who should use the system test it in order to approve it.

Bele see some positive aspects of only having one supplier to deliver several systems,

“then there are easy communications.”

However, it is not always an advantage. The most important is to have a system that works with all parts, and then it is less important to have the same supplier to all systems. When a

company makes many systems, it does not mean that all of them are good. Also, he sees that centralized suppliers are not very customer oriented since they want to sell a standard system.

At large purchases, it is important to bring in a professional person with great experience and knowledge in undertaking these kinds of purchase. However, Bele states that,

“when I feel that we have internal persons who can do a equally good job, then I prefer to use my own resources.”

The reason for this is that Bele think it is important to keep the knowledge within the organization when the purchase and implementation is over. Bele however continues by saying that,

“I am in general positive for using consultants.”

This as a way to get fast progress, especially in the beginning of the project. The negative aspect with a consultant is that they are there only for a limited time period, and someone has to have the knowledge when the consultant has left. It is also important that the consultant understand the culture of the organization and are seen as a positive reinforcement by the employees, otherwise the consultant can make more damage than benefit.

Enköping does not often have someone in the operation phase that continuously control that everything works as supposed. If they do this, they always use an internal recourse to execute it. Bele states that he will like to do this kinds of controls more often despite the facts that it requires a lot of time and resources. He states that,

“My opinion regarding IT-systems is that no system is used more than 40 % of its functionality.”

Therefore, it may be important to see how much the system is used, and see if every functionality that they bought is used. If not, it can be said to be an inaccurate investment. Bele thinks that controls should be made, not in order to abolish the system, but instead to use it better. When employees learn how to use the system, they may learn some but not all, since everything is new. Therefore it happens that people after a few years ask for more functionality in the next system, despite the fact that they already have it in the existent.

Enköping use consultants in order to receive expert knowledge and question things so to help taking decisions. In order for the consultant to make a good job, the customer must give conditions for them to do so and work together. Bele states that

“I have seen examples where the customer has made contracts where they hand over everything, I believe it is a wrong way to act.”

Last time Enköping used a consultant in an IT-system purchase, they were happy with the end result since they reached a decision quickly.

Enköpings purchases of IT-system mostly correspond to their desire. Bele has not been part of a purchase that has gone wrong, with them buying a wrong system or something like that. He believes that it is because of their culture and a well functioned network they have with other municipalities. Bele meet other IT-managers for municipalities every month to discuss, and they share experiences, tips and ideas to each other.

Most quality failings in the system cycle occur in the introduction, where some preparations can be missed.

“Before you have taken the decision, everything is green and nice, and then when the reality comes, there can be some difficulties.”

An optimal purchase should have a win-win situation, where both parts are happy with the cost and functionality. If this happens, a long relationship between the two parties might occur.

“the most important is that you have two winners, then it is optimal.”

4.1.4 Gotland Municipality

We interviewed Staffan Thurgren at Gotlands municipality in Visby on the 26th of April. Staffan is the General Manager of the consult- and service office and the interview lasted for one and a half hour. The IT-department who supports the whole organization costs about SEK 40 million to operate, and they are 45 technicians who work with it.

Gotlands municipal was founded in 1971 through a merger of several small municipalities at the island of Gotland. The municipality inhabited in 2005 about 57 600 persons (Gotland, 2006). Gotland has a turnover at about SEK 4,5 billions and the IT-department had a turnover 2005 at SEK 40 million. The turnover for the whole consult and service office is SEK 169 million. Furthermore the municipality has 7 500 employees who are full-time employed, but they pay almost 13 000 salaries every month. This makes the municipality the largest employer on Gotland.

Thurgren states that his department works just like a company. The difference is that they should not make a profit and they have only economic resources given by the board of the municipality. When a new system should be purchased for the whole organization, all the business managers within the organization are part of making the demand specification. It is a large internal effort that is put forward so that the project leader can make the demand specification. Above the project leader sits a control group, and then the final decision is made by the municipality board. However, Thurgren states that,

“the politicians can never interfere with the demand specification that we do.”

What they do is that they give money to us, for investing in a new system he explains. When an offer has been made, a few suppliers will come and show their systems. Then a workshop is made with a relatively large number of people, who test the system and make an evaluation. In this process, no consultants are used. When a system has been purchased, the same system must then be used by all departments

Thurgren states that it makes it easier to have the same supplier for several systems since the systems in that way can talk to each other.

“Suppliers always say that there are no problems if you get one system from here and one from there and then convert them to fit each other.”

It is however a lot of work that has to be put forward, in order to make them function Thurgren states. He explains that they wanted to have the same supplier for two large systems that were bought not that long ago. However, the municipality did not have the money to use the same supplier in the systems. Gotland is working under the LOU where

criteria's about large percentage should be put on functionality respectively price must be stated. In the end, Gotland must emphasize upon the price. Thurgren continuous,

"Because of the law, we can not take local consideration if we would like that."

Thurgren has himself not worked together with external consultants; Gotland however uses consultants when it comes to development questions. They do not develop any systems by themselves, so when there is a larger work that has to be made, then they use consultants. They are an operational organization that should not have the knowledge about development.

Gotland has a network with 12 other municipalities where they exchange knowledge on different functions. The different municipalities have different systems, but Thurgren states that

"The systems are in reality not especially different. There are no large different between them."

Gotland has not made evaluations of their systems in a systematic way. Thurgren believes that it might be a value in doing that. He tell us that they founded the IT-department after a consultant from Tieto Enator had come up with a solution of bringing three departments together and instead form only one. Two years later, the same consultant came and made an evaluation on how it worked. Then he could observe where they had problems, and give solutions on how to work better. Gotland always employs consultants from Tieto Enator since they are suppliers of the system they use.

Regarding systems, Gotland does not have any systematic follow-up on how their system works. Their customers come with complaints, and then they perhaps do a follow-up.

Thurgren does not see any problems with using consultants as long as everyone knows their place. Thurgren also states that you must not leave everything to the consultant but instead be part of his work.

"It would not work otherwise, because when we come to the operational phase, we are the ones who should run it."

On the question if they see any communication problems between them as a customer and the suppliers, Thurgren states that he does not. He instead says that,

"the supplier see it as important that everything works in a good way. Then off course, small things always happen over time."

In order to see what the customer thinks about the services offered at the IT-department. They work with balanced scorecards to see if they reach their goals. The scale is between 1 and 5 and the results that they have gotten are at average over 4. However, they only have an answer frequents at 40 % making it not quality proof.

"We are now looking at ways to increase the number of respondents."

4.2 The supplier view

First, we will present the view of Sogeti Sverige AB, and together with WM-Data these two companies represents the suppliers in our case.

4.2.1 Sogeti Sverige AB

The interview was conducted on April the 10 with Thobias Dencker, Market Director of the Jönköping office. Dencker has been involved in over one hundred IT-projects.

Sogeti Sverige AB (after this presented as Sogeti) is a company in the Cap Gemini corporate group and the Swedish part of Sogeti is located in 18 cities over the country. Globally they are 15 000 employees in ten countries under the brand of Sogeti and in Sweden the number of employees touches 700 persons. Together with Cap Gemini they are about 61 000 employees all over the world. In their own words, the Sogeti Group is specializing in professional IT-services on a local level. They write that they offer their clients a full range of technological IT-knowledge and expertise (Sogeti, 2006). Projects Sogeti are involved in vary in sizes from over 500 thousand hours divided on several suppliers down to smaller pre studies in the size of one weeks work.

When delivering a system, Sogeti acts as full range supplier in most of the cases. When they are limited to a subcontract, which seldom happens, this is a decision originated from the customer. The company focuses on taking as much responsibility as possible and most of the times, Sogeti acts as contractors taking responsibility for the whole project. The company wants to be experts in their areas of operation and aims at making profitable solutions.

“We know the things we deliver and we can create added value for our customers which makes us profitable to hire for the customer.”

However, in larger projects running over several locations, it is natural to have different supplier firms involved in the process.

Dencker states that a problem which a traditional customer organization has, is that they often only have 10-15 people in their IT-department. This means that they cannot be experts in all fields,

“they might only cover two or three specialist fields or only the basic knowledge that they need.”

This will end up in a gap; the company does not have the specific competence for a business system, therefore they need to buy the expertise elsewhere. This is the point where we as suppliers enter the picture; we always have employees who are experts at the demanded area. When it comes to the purchase decision and the process for the customer of buying a new system,

“we always try to be as close to the customer as possible. We target customers that we see as potential customers and then we try to be close enough so that they do not need to ask our competitors.”

Sogeti basically wants to skip the purchasing phase and engage directly in build up.

When describing differences in the work situation between experienced customers and customer without prior experience, there is one significant difference. The experienced cus-

tomers use their own methods and routines of how the work is supposed to be conducted and Sogeti then has to adapt to the customers work pattern. When it comes to an inexperienced customer, Sogeti sees benefits in using their own methods and concepts, this often result in a shorter timeframe because the company can work in the way they are the most accustomed to.

“When working with an inexperienced customer it is of great importance not to abuse this inexperience in order to sell unnecessary solutions, it is important that we act as professionals and continuously acts to find the best solution for our customers.”

As an answer on the question of how hard it is for Sogeti not to abuse inexperienced customers, Dencker answers that,

“we have a goal to have long-term customers and the first time you abuse or deceive a customer, the chance is lost.”

Dencker continuous by saying that,

“if I would tell to do that and that because they are inexperienced, and then they make a backlog with a competitor and it shows that our solution is false or inaccurate, their confidence in us will end.”

In order to see if the customers are satisfied, one of Sogetis methods is to use a customer satisfaction index (CSI), where the consultants ask the customer what their expectations are before entering a project. In that phase, the customers are not supposed to think about legal agreements or the project specification but rather the outcome of the project. The factors or parameters of importance is listed and after a project has finished, the company follows up on the factors and ask customers how well Sogeti met the criteria defined for each project. There are no differences here between experienced and inexperienced customers since they all design their own unique factors for measurement. Dencker also adds that it is important to lower the customers expectations beforehand, as an example, when they are to implement a large system it is necessary to explain to the customer that it will be a demanding project.

“It is always about exciding the customers’ expectations.”

If the project is performed with a satisfying result according to CSI, involved employees will receive a reward.

As an answer to the question about how often Sogeti works together with an external consultant from the buyers side, Dencker states that this is not very common. In business system projects, it is fairly common with a purchase consultant, but in general terms this is not common. Dencker does not know of any case where this consultant has continued into the implementing phase.

In larger projects, Sogeti often takes the role of project leader and moderates projects both supplied by themselves or as an external third party. When asked about if they as a suppliers sees value in having a professional auditor assessing and examines if the customer is getting what he/she demands Dencker answers that they are doing that themselves. They use a quality system and they are ISO certified.

“Our Quality manager make quality follow-ups on the projects in order to see that the customer is satisfied and that we do not exceed the time or budget limit.”

This system gives the customer a big value according to Sogeti and there are customers who specifically ask Sogeti to act as external project leaders in cases where they have no other involvement. Reasons for this are their model of making sure quality is delivered.

The most costly part of a service recovery process for Sogeti is the bad-will connected to the unsatisfied customers. Revenues for many years is lost if a customer leaves. It is also a large cost in returning to square one.

“A used hour never comes back”.

The time spent during a purchase in order to make the customer understand, varies a lot between projects. The effort put into communication is mainly a function of what probability Sogeti thinks they have in finally getting the contract. Dencker calls this a type of investment from their side, where contracts with a high probability of landing are prioritized before contracts with low probability. There is a big difference in time between experienced and inexperienced customers. When it comes to inexperienced customers, much of the responsibility lies on Sogeti to search for information they need. If the customer chooses to engage a consultant for the purchase process, there is little for us to do more than follow the document stated. In these cases, the process is substantially faster. However,

“when the customer is inexperienced, we get an opportunity to show that we really are competent in these areas.”

During the lifecycle of an IT-project, Dencker states that problems occurring are mostly found in the test period of the project. Here, there are a large source of miscalculations and misinterpretations. The test period is when the customers are supposed to try the system in order to determine if the system holds. In general, customers are inexperienced in this field and they have trouble knowing how to test the system in order to see problems connected with the system. If this phase is not examined properly, there is an enhanced risk that problems come in later and delays the projects.

“We want the customer to find as much as possible during the test phase, it is cheaper than finding out later in the project.”

Sogeti does not have many cases of reclamation and they would take powerful measures to adjust it immediately if it would occur. Dencker states that,

“if we have one, I can imagine that it is the integration between different systems. That is a large source of problems”.

When discussing the value of an objective third party assessing the project and measuring if the customer and supplier “gets” what they are expecting from the system/project. Dencker explains that they sometimes takes that role and examines the project that other suppliers have driven. They act as diplomats mostly in cases where the customer feels that something is starting to go wrong. The customer can say; -we have a feeling that the project is going wrong, could you come in and perform a quality check. Reasons for this is according to Dencker that,

“the customer and the supplier has been talking past each other and the project has lacked clear goals and distinct reports.”

Dencker states that he does not have any greater experience that they have been monitored at the same way. He also states that Sogeti never will say to the customer that they think a third independent part should be involved.

“It would be like shooting yourself in the foot, saying that we cannot handle this ourselves.”

He continues by saying that,

“if this would happen it needs to be on the initiative of the customer”.

It is a substantial problem in the business, that the buyer lacks the ability to communicate what they want and when the supplier is unable to make a solid action list. This can be a major problem, and the larger a project the bigger the problem gets. It usually takes long time before these problems come to the surface and at this point, the calculations are often very wrong.

4.2.2 WM-Data

The interview at WM-Data was conducted with Jonas Hultsborn on May 2 2006 for an hour. Hultsborn has a working title as System Developer and he has experience from positions as System Architect, Project Manager and Team Leader. He has been involved in more than fifteen IT- projects and four to five of them where larger with a monetary value of several million SEK.

WM-data is one of the leading IT-companies in the Nordic region with about 9 000 employees and a yearly turnover of SEK 10 Billion. WM-data strives to have deep knowledge in different IT-solution areas and aim at providing the best products available in the market. The company is located in nine countries around the world (WM data, 2006).

In a SEK 7-8 million project, Hultsborn explains that they were about four persons involved in the pre-phase and purchase part while the implementing of the project demanded a workforce of 12 to 15 persons in different phases. He also clarifies that the projects he has been involved with are about new development, enhancements – further development of IT-systems.

“When a customer wants a new IT-system or to expand or rebuild an old system, we help them with that Hultsborn continues.”

When asked about the differences between working with an experienced customer compared to working with an inexperienced one, Hultsborn explains that his experience is that it is almost always better to work with a customer who knows what they want. Hultsborn states;

“The more precise the better, everything is faster and things are easier for both the customer and us. The costs are often lower for the customer and it is easier for us to end up in the right place when the customer describes what they want in a precise manner”

However, there is one potential downside, Hultsborn describes that if the customer has too specific demands on a very detailed level in terms of database type or language of programming, this might make things a bit more troublesome. It is very good with a deep description of what the system is supposed to deliver, and what the customers expect from the system.

“After that, we often feel that we have better knowledge on how you build a system and what different products one should use.”

When it comes to inexperienced customers, Hultsborn has trouble to find any positive features with the situation.

“If the customer is aware of their shortcomings, then the situation opens for dialogue, this allows WM-data to come up with suitable propositions.”

He also mentions that there have been cases where the customer has presented a strong opinion about peculiar details, which ends up in a situation where the developer is forced to guess what the customer wants. This can lead to a negative response from the customer who later in the project explains that they wanted something else. It might depend on communication, where there are weak descriptions. The decoding of the message might differ between supplier and buyer. It has happened that projects have failed when WM-data has worked with inexperienced customers.

Hultsborn has not been in a situation where the customer has engaged an external consultant as an expert in the implementation or purchase of an IT-project.

“I suspect that if you put one extra layer between us and the customer, then you add one more layer where misunderstandings can happen.”

Mostly they want to work as close to the customer as possible. When asked if there is a value in having an independent auditor assessing the implementation and project, Hultsborn answer that it can be good to have someone who is not dependent economically by any of the both parts. However, he thinks that the benefit is bigger if there is some kind of difference in opinion between the supplier and the customer.

“Then I can think that it might be valuable.”

He however points out, that they as a company tries to be close enough to the customer to be able to confirm that they are delivering the right thing.

In the issue of making the customer understand or be at the same level in the communication, Hultsborn states that they put much emphasis in making the documents clear and explicit. In terms of time, he describes that about 20 to 25 percent of the documents written are actively focused on being distinct. In terms of meeting the customer just to explain what they are talking about, it is not common. He also explains that in the situation of governmental purchases, there is extensive paperwork and formal documentation. In these cases, it is very important to have documentation and preferably a thick file. Nevertheless, if it is an existing customer, it might be enough with a short meeting and a single paper of descriptions before a project starts. It is an important issue to understand each other; Hultsborn mentions further that

“it is almost always costly to recognize late in a project that you did not understand each other good enough.”

Hultsborn has had experience from a project being locked up in a late phase. The project was overdue in time and the customer was a new one with no earlier experience of WM-data. He explains that the customer and they had very different starting points and gradually the mood in the control group got lower and lower. Without every detail, he continues,

“there were accusations back and forth inside the group and it ended with the customer locking the door for us, telling us we did not have to come back.”

Later the attorneys from both sides however settled the case and there became added costs for both parts in this position.

In the lifecycle of a project, Hultsborn explains that it is in the end of the implementation process where most problems comes up to the surface. Both the customer and the supplier start to feel a piece of anxiety where both sides ask themselves,

“is everything there now? did we miss anything?”

He says that it can be a bit tricky to really finish a project and to move it into the next phase. When asked about reclamations of projects, Hultsborn answers that the change are mostly about correcting the system rather than making any replacements. If there is a fixed price and a specification of what the system should do, then it is up to WM-data as suppliers to use the time provided as well as possible. When they are finished, the customer evaluates the system and dependent on the design of the contract, there is a period where the customer has a special price during a limited time. This is good because it makes both the customer and WM-data eager to correct everything as quick as possible. It is dependent on writing a good contract in the beginning.

When talking about the service recovery process Hultsborn states that,

“a lost customer is the most costly effect.”

WM-data has as their business idea to keep and build long lasting relationships with their customers and when you loose a customer, you loose a substantial amount of future income.

“To pay for attorneys and fines is expensive for the moment but in the long term a lost customer is always most expensive.”

When it comes to critique from customers regarding the system implemented, Hultsborn emphasizes that it is mostly present in the phase where implementations is starting to be finished. Here the customers' sees things that they did not expect, and there are always many different aspects presented.

“This is something that you get used to after a while; you realize that it is a natural process”

However, it is rare that a customer has the opinion that this is something completely different from what they wanted. The problems WM-data faces are often solved continuously and they keep close contact with the customer to clear questions every week or second week.

Hultsborn agrees that a specific description can help to prevent many problems; he also explains that it is a problem itself to be specific in the description.

“It is very hard for the customer to imagine details in a system that does not yet exist.”

Hultsborn experience is that it is good to state a few larger goals in the beginning, and then work through the details during the project.

With having a third party assessing and evaluating the progress of project, Hultsborn is hesitant towards the value of this solution. It is important for WM-data to work closely to the

end user and a third party here, could only create noise. However, Hultsborn also says as mentioned earlier that it can be valuable in situations where the parts disagree. Also,

“the positive part is off course the independency from the third party. That you can reach someone that both trust.”

A quality certificate might be “nice”, but it is more important that this person understands the operations clearly and that the person is familiar with the customers needs. This person needs to get in-depth understanding of the operations.

“Most often that is what is hard for me and my colleagues”

To get this person to be independent, it is a prerequisite that the person is paid by both parts. However, he also suspects that this extra cost will be added to the customer in their final cost so that WM-data not will have any intrinsic cost. He also states that it might be hard to do this practically and that it is mostly in the interest of the customer.

“It would probably be initiated by the customer.”

Nevertheless, by the independence of a third party, the supplier might feel more confidence in this person and he can act as a new voice in the situation. Hultsborn however stat that it is hard to imagine

“I have never experienced this, so it is difficult to intellectualize how it would work.”

When working as a consultant Hultsborn says that the customers often feel more secure having the consultant at their compound. He estimates that he works at the customer 70 percent of the time and the rest at their WM-data office. Working close to the customer has its benefits, the communication becomes better and they can have close a interaction.

5 Analysis

In the following chapter we will shed some light on the differences and similarities between the different companies and relate this to the theoretical framework presented in the earlier chapter. The discussion will mirror all different aspects found in the empirical part. We will present both customer and supplier side of the problem when possible and highlight the differences between them.

5.1 The aspects of transaction cost theory

5.1.1 Market transaction cost

Coase (1937) states that the market transaction costs of highest significance are the cost of pricing a product or service, the negotiation, the creation of a contract and the cost of information failure.

Price determination

As it is today, the customer organizations are the ones using consultants. This means that it is only the customers who bear a cost for that service. If a consultant instead would act as a moderator, he/she would have to be paid by both the customer and the supplier. However,

Hultsborn at WM data suspects that an extra cost like this, would end up at the customer anyway. Suppliers would add that extra cost to the final price of the product/service sold to the customer. However, a moderator might decrease the amount of IT-failures and therefore lower the total cost for the customer, despite the fact that they might have to burden the whole cost. The supplier might also obtain a lower total cost since they can use their resources more efficient.

Negotiation

In the model presented by Canback (1998), the negotiation is similar to what Coase (1937) mentioned as creation of contract. There is a cost and problem with creating a contract even when all information is present. In connection to this, there is the opportunism of the persons inside the firm who put their own or others interest before the interest of the firm. (This will be further analysed in the agency theory part).

Regarding the creation of contracts, WM-Data emphasises the benefits of making a “beautiful” contract. He describes a good contract where they as suppliers give the customers a lower price for a limited period of time in the evaluation phase. This gives both sides an incentive to correct as many problems as possible during this time and therefore become more efficient. The evaluation period is always difficult; here both the supplier and the customer are nervous about missing something in the system. Therefore, Sogeti stresses the importance of mapping the expectations of the customer. They want the customer to define its expectations without consideration of legal agreements or the project specification, but rather their expected outcome of the project. This statement from Sogeti is an indicator that there are difficulties involved in contracting.

Janevi at SR stresses the fact that in negotiation, it is important that both sides are satisfied with the outcome, no one is supposed to fell circumvent. It is important to have a good connection, and one big reason why deals are blown off is that the parties do not communicate well enough to understand each other’s needs. Then the quality of the goods sold does not matter. Dorthé at Husqvarna continuous by saying that it is important to see through the sales-talk of the suppliers and instead look at the most important parts of the system application. Dencker at Sogeti however explains that it is important to tell the truth and lower the expectations of the customers. This is closely related to problems with information failure.

Cost of information failure

Coase (1937) also presents the cost of information failure as one of the market transaction costs with highest significance. Janevi at SR states that they have a specific department with project leaders that lifts the project out of the organization, because of the difficulties in communication.

The same system with an internal resource of specialised project leaders is used by Husqvarna where Dorthé explains that internally they are using project leaders who are handpicked. This is a way for Husqvarna to have competent and experienced people that know how to run projects and therefore act in a way that minimises information failure.

Other situations of information failure stated by Janevi (SR), are when the suppliers tell them that a system will solve all their problems existent but when they later implement the system, it shows that the system is insufficient. It is a fairly common problem according to Janevi, and it happens even if specifications are made clearly. The supplier has sold a system that they wanted to sell, but the functionality of the system is missing. Janevi further

explains that the important thing in the process is that the supplier informs them as customers about the shortcomings of the system and compatibility.

Hultsborn at WM-Data states that it is easier for them as suppliers to end up in the right place as well as less costly for the customer, if the customer describe what they want in a precise manner. He also explains that there have been cases where inexperienced customers have presented a strong opinion about a strange detail. This might end up in a situation where the developer is forced to guess what the customer wants. In these cases, the project may be problematic in the later part of the cycle when the customer explains that they expected/wanted something else. Decoding of messages might differ between the supplier and the customer and it has happened for WM-data that a project has come to a full stop due to information failure. Dencker at Sogeti further explains that when it comes to inexperienced customers, the supplier has to take much more responsibility to search for the information needed.

Connected to our research model, an objective and qualified moderator would work as a protector from opportunistic or miss guiding sales talk from the supplier side. The independent expert does not have any obligations towards the supplier and would therefore be able to pinpoint the solutions that are best for both parties. The moderator will also define the needs of the customer and thereby extract better information about malfunctioning systems or problem areas without blocked information channels. Downsides mentioned by Hultsborn about the mediator and problems with having a third person involved in the communication process on a system level is that, a solution like that would likely add one extra layer of communication and indirect more sources of misunderstandings. Here Hultsborn says that the communication should not be disrupted in actual buildup processes, the closeness to the customer is crucial. Hultsborn however thinks that the moderator could be beneficial in situations where the customer and supplier are in dispute, an objective moderator could help the information exchange. Our customer organizations investigated however states that they seldom have problems with the supplier.

In order to decrease the information failure, Sogeti has a systematic approach to see if the customers are satisfied. They use a Customer Satisfaction Index (CSI) where they assess the expectations of the client, investigate what the client need and what parameters they find important. During and after the project they then discuss these parameters with the clients to investigate if they are meeting the expectations of the customer. Dencker also says that the whole purpose with this system is that they should exceed the expectations of the customers.

While the suppliers have a somewhat rejecting attitude towards working with a third independent part assessing and diagnosing the projects evolvment, Dencker also states that he and Sogeti themselves act as a third part project manager on the request of the customers. He says that the customers like Sogetis methods and how it focuses on information in order to lower failure of information.

The largest problems of information failure are made in the implementation phase where both suppliers and customers can have difficulties understanding each other. Therefore, we see it as most beneficial to have an external moderator in this phase, in order to help both parts agree. If problems and disagreements were seen early in this phase, it would probably lower the cost of misaligned goals.

5.1.2 Bureaucratic (internal) transaction costs

Administration

As a logical step, administration costs in connection to the routine of LOU are higher than regular purchase routines. SR mentions that the key is to write a good list of specification on demand since they have no right to ask for a specific brand or a specific supplier. Currently they are using a consultant in the purchase process since they are new to the routines of LOU. Enköping have positive feelings towards LOU despite the fact that it makes a purchase more bureaucratic. Bele have the opinion that LOU makes the process well structured at the same time as it gives a positive dynamic to the purchase.

Husqvarna is of the general opinion that the purchase phase is rather quick; it is the pre-study phase that is time consuming. This is in comparison the opinion of the only company who is not affected by LOU.

In the supplier view, LOU is a driver of administration for them. WM-Data explains that there is extensive paperwork and formal documentation when working with governmental purchases. Sogeti describes that a stocktaking of their competences for a governmental LOU purchase is rather demanding.

Resource misallocation

Resource misallocation could be very costly for an organization. Bele at Enköping believes that a system never is used more than 40 % of its functionality, and that means that they have bought more then they need.

In SRs, case they have a strategy of holding all competencies necessary for operating all systems in-house. They describe this as a necessity in order to have control over the operations and to be sure that they can handle operations internally. However, when everyone is present there is a surplus of resources internally leading to a resource misallocation.

5.1.3 Asset Specificity

Human Assets

In this aspect the companies differ a bit in their strategy varying from Enköping with the strategy of outsourcing as much as possible of the IT-related work, to Swedish Radio who in all systems wants to have internal competence for the operational functions, in order to be independent towards the market. However SR also states that the resources might be scarce if too many problems appear at the same time. This is a rather natural way of strategizing for SR in our eyes, the business made by SR is rather technical and one other part of their mission is that SR needs to be functioning at all times. The National radio have more functions than only entertain, it is a channel of communication in cases of emergency so therefore there is higher demands for internal competency throughout the whole chain of operation. Enköping and Gotland however are working in rather traditional and predictable circumstances and the outsourcing strategy of Enköping and organisation of Gotland is suitable. Enköping who outsource must however be aware of the fact that they trigger opportunistic behaviour towards the company they have outsourced to.

The suppliers have a wide variety of experts and a large bank of specialist competence in the form of human assets. This might result in an underutilization of some experts if the

mix of competence does not fit the need of the market. A problem like this is likely to be more severe in times of low customer demand; hence human assets will have a surplus.

Site Assets

Site assets are physical assets with a specific role and usage. According to Canback (1998) these assets need to be of a specific role and usage and not easy to change into other use with relatively small effort. Physical assets in the view of IT-systems are not a significant part of the total cost of IT in companies. The usage and role is rather specific when it comes to equipment, but the value is too small compared to the total cost of an IT-project to be a source of any opportunistic behaviour in the sense that Canback (1998) talks about.

Uncertainty

When the organization is facing a great deal of uncertainty and unpredictability, the cost of contracting will increase. This is due to the problems with making a contract that covers all possible scenarios or outcomes. Uncertainties in form of unpredictability in the business cycle are one example given by Canback (1998). High uncertainty firms are more likely to carry out transactions internally. We do not see our investigated companies as uncertain since they have rather predictable business cycles. If we would have investigated companies in sectors with high risk or unpredictable business cycles, our findings might be different.

Frequency of transaction

When transactions are occurring with low frequency, the internal bureaucratic cost will be higher than the cost of contracting and this will lead a firm to handle the transaction externally (Canback, 1998).

The transaction frequency for our four customer representatives is low. They all describe a rather similar amount of IT-projects engaged in a year, and the life expectancy of systems varies from three to most often five years in all customer organizations.

An IT-system is very seldom just a repurchase but rather an upgrade or new solution, which makes every project unique and specific. This attribute explains that even the largest customer never have high frequency and a possibility to automate the process.

Summary; Cost of information failure is a significant problem. The customer side describes problems with the failure of information and misinformation i.e. opportunistic behaviour (sales talk) from the supplier. The suppliers highlight problems with inexperienced customers, imprecise demands and importance of a good contract. In the implementation phase, there are larger problems of information failure and problems found early in this phase would be beneficial for both parts. Therefore we see benefits with an independent moderator in this phase. An independent moderator would act as a protector of opportunistic or misleading sales talk from the supplier and pinpoint the solutions best for both parties.

Since the IT-projects are engaged with a low frequency, combined with the rather insignificant asset specificity, there is a good base market transaction. The uniqueness and high demand of specific competence strengthens this decision.

5.2 Analysis on Agency Theory

Relationship

Agency theory states that there are two reasons for principals in bringing in agents, either because they cannot protect their own interests or secondly; they do not want to. The customer organizations that we have interviewed all states that they bring in consultants because they do not have the specific knowledge needed inside the firm. Janevi at SR explain that, *“if we lack the competency ourselves, we bring it in from outside”*. Dorthé at Husqvarna also state that having all expertise inside the company might lead to a repetitive behaviour where they do the same solutions over and over again.

When a consultant has been engaged in a project, it will take some time for them to get started and learn the culture of the organization. Both Bele in Enköping and Dorthé at Husqvarna explains that it is important that the consultant understands the culture of the company and that their employees are professional enough to follow the consultant. At the same way, the consultant has to be seen as a positive reinforcement by the employees according to Bele in Enköping.

In order to improve the relationship, consultants are today working from the office of the customers. However, Janevi at SR states that it is logical to let the consultant work in their own facilities if the purpose is a report or other documentation. Some customers might not have the resources or facilities to have the consultant on location, while other customers would not dream about letting them work in a remote location. Jervenheim at SR even states that there is a psychological effect when the consultant leaves, *“you feel safe when you have this competent person that you trust, and then when this person is leaving, you can have a terrible feeling of how will this work out....”*

Since relationship and cultural understanding about the organization is important for the customer organizations, the same moderator should be used throughout the project if customers are satisfied with him/her.

Diversified Interest

The main concern with the agency theory is the problem that “agents rather serve their own interest than their principal” (Hatch, 1997). An organization that brings in consultants has a two folded problem since both the employees and the consultant perform work on the principal’s behalf. The first problem is that the already employed personal serve their own interest. Second problem is that consultants could serve their interest rather than the interest of the organization they should help. SR states that their own employees request coffee breaks and controlled hours. This is not a problem that SR has when using consultants since the consultants are there to deliver. If a consultant do not perform according to the agreement and instead serve their own interest, he/she can be replaced quickly by the principal and this increase the efficiency for the customer. There is no politics or responsibilities involved as in the case of an employee. The organisation invests a substantial amount of money in these projects and the ability to drop an underperforming consultant might be of important value and act as a factor of reducing risk for the customers.

An important part of bringing in a consultant is to engage the “right” person. Principals must have knowledge about the behaviour of the agents, and in order to get this, both Gotland and Enköping, has networks with other municipals. This is a way for them to not only discuss suppliers and IT-systems, but to also discuss consultants and give each other ideas and thoughts.

Gotland municipality can be said to have a ground for diversified interest since they use investigating consultants from the same organisation that acts as suppliers. This is a situation where we argue that there is a risk that the consultant has a biased interest towards his own employer and to sell a solution that they can provide rather than investigate what solution is best for Gotland Municipality. Bele at Enköping states that bringing in the “wrong” consultant could do more damage for the customer than good.

Contracts and rewards

The customers all take time to make specifications on what the consultant are supposed to do. Dorthés (Husqvarna) statement summarizes what all the customer organizations have said. He states that they always make a specification on demand so that they know what the consultant is capable of. It also specifies what the consultant is supposed to do, so that he/she knows what to deliver.

In the situation of engaging consultants the rewards are clearly stated in the contract as the payment for the specific task defined by the contract. This makes the rewards more obvious in the cases where customers choose to use consultants rather than using their own personnel. The consultant gets paid for delivering what is specified in the contract, the employee gets paid every month by a fixed salary with no specific other connections towards the project more than that they are supposed to work.

Regarding rewards at the supplier side, Sogeti has an interesting system for internal rewards within the project. The employees within the project group are awarded a bonus for a successful project, if the assessment or evaluation of the project is done with a satisfactory result according to CSI. During and after the project, a quality manager from Sogeti reviews the project and assesses the satisfaction level of the customer, which determines if the employee or rather group of employees gets a reward.

Observation

In order to see that the consultant do what he/she is supposed to do, consultants work together with a full time employed in all of the four customer organizations we have visited. The agency theory states that direct observation is rather time consuming and that the principals could rather do the task at hand themselves instead of monitoring the agent. All our customer organizations however state that, you should not just leave everything to the consultant since that can make more damage than good for the organization. Instead, they all work together with the consultant not only to observe but also to learn from them. SR states that when consultants leave with all their knowledge and expertise, it is important that the knowledge has been transferred to the organization beforehand. We can conclude that direct observations are used in some levels of the project; despite the fact that agency theory says that it is too costly. It is also our opinion that it might be the best way to solve the problem. The observation here is not a single task but rather something that comes natural with working together with the consultant.

Sogeti has its CSI system to observe that everything is working as supposed. For WM-Data the project control is made through continuous checks where the customer approves the system and the design to that specific point.

Husqvarna has a system in their IT-projects where all different levels in the hierarchy are connected with managers sitting in more than one group. This structure with an unbroken chain of people and communication throughout the different groups makes it possible for Husqvarna to have observation through the project.

Cost

Both Husqvarna and SR states that it is cost efficient to bring in external consultants. A consultant might have a high salary but what is of more importance for these organizations are that consultants get the work done quicker and more accurately.

Agency theory states that output control is cheapest when it is easy to measure. At the same time it becomes non-attractive when it is difficult to measure. How well IT system works are not that easy to measure and Enköping also states that it takes a lot of resources to perform controls in the operational phase. Despite that, they would like to do more controls. Not for the fact that they should terminate or replace the system, but rather as a way to see if the employees have learned to utilize the system. The IT-manager at Enköping municipal believes as stated before, that their systems functionality is not fully used and this means that they have bought unnecessary things.

Also SR believes that more control would be beneficial. They have not thought about it before but Janevi state that it is a way to see that the efficiency goal is reached. Janevi at SR also explain that it is the efficiency goal that is the most important factor. Dorthé at Husqvarna believes in the model but at the same time says that he does not need it in his department. Dorthé instead states that he see it as beneficial in intensive technique projects since he see them as more complex and in need of more specialist knowledge.

According to Landström (1991), three costs arise in order to bring the agent into the principals' best interest. Monitoring costs are not relevant for purchases of IT systems since, as mentioned above; the customers also use it as a way to learn. When it comes to bonding costs, a few costs may occur for the consultant when they work for the customer. They must for example work from the office of the customers; these costs may however be of little relevance in the larger picture. Regarding residual loss, our belief is that consultants instead help the customer to maximize returns to the customers since they do not have the knowledge to do it themselves.

Summary; A good relationship between customers and consultants are of main important for the customers, and the "right" consultant needs to be contracted. Customers work together with the consultants in order to transfer knowledge as well as to observe that the consultant works at the interest of the customer (to prevent opportunistic behaviour). Despite the consultants high honorary, they are worth the price since they generally work more efficient and accurate.

5.3 Independent moderator

In the empirical findings we see a common argument as a positive remark towards the use of consultants in the perspective of agency theory and with focus on efficiency, the consultant works under the company within the boundaries of a contract. The minute a consultant is misusing their time or showing proof of opportunistic behaviour he/she can be dismissed. In the consultants' eyes, every project has a specific goal and the task is to make the customer satisfied and to solve problems related to the project, given a limited time-frame. During this performance, the customer is just a customer and not in the given sense an employer who have other obligations towards the consultant. You may put it as SR, *"the consultant is supposed to report on a given day, when he sleeps, eats and have breaks is not my problem but something between him and his employer."*

The question of using a consultant or external moderator to investigate if the project delivers what the customer expected, is answered in different ways by our respondents. There is a clear difference between suppliers and customers in this matter and we would like to highlight that the differences is a natural following of their roles in a project. The customers have a relatively positive attitude towards this independent moderator while the suppliers are more reluctant when talking about benefits with this solution. Dencker at Sogeti expresses that they never will tell a customer to bring in a third party for controlling. At the same time, he explains that Sogeti acts as the role of project leaders in external projects where they have no other supplier responsibilities. He explains that the customers appreciate their methods and they are known to be good at controlling/assessing projects. This gives in our eyes a somewhat biased attitude towards the model with an external moderator. Sogeti would have no problem in acting as this third party moderator but would never use it in one of their own projects. Dencker states; *"If this would happen it needs to be on the initiative of the customer"*. It is of course natural and logic that Sogeti, as suppliers believe that their own solutions, methods and systems are the best. However, it is exactly this opportunism we think a third independent expert can safeguard the buyer from. In theory, it would also be beneficial for the supplier to get signals of where the most urgent problems are in the eyes of the customer. If there is a problem that is identified early in the project, it will be less costly to correct and adjust this in the early phases, than in the end of implementation or operational phase. This argument is valid for both the customer as well as the supplier. The supplier will save money in terms of aligned resources and they will be able to focus their efforts in the right direction. They are also likely to save resources from future declines in customer recovery activities. On the other side, the customer will get more use of their investments and they will be protected, if not fully, at least better from opportunistic behavior from the supplier where promised solutions shows to be insufficient. This is saving resources both in functionality of the firm and in the specific purchase situation.

WM-Data explains that the benefits could be found in situations where a project already has failed. Here Hultsborn explains that it can be beneficial to bring in a third independent party who acts as a mediator and new independent face in the situation. The consultant can here investigate what things that needs to be done. He is otherwise reluctant towards benefits with this assessment in the building level of the project; he believes that in these situations they as suppliers try to be as close to the customer as possible. Out of this finding, we believe it is important not to control on a much too deep level but rather investigate problems in functionality and perceived fit between expected outcome of the project and existent outcome and functionality.

Final statement

In order to get the most benefits out of the moderator, according to our analysis there are a few factors that are important to consider. In order to monitor the process in an efficient way, the moderator needs to make frequent controls during the implementation process. This to gain knowledge about the progress and have the opportunity to map and prioritize what problems that needs attention. It is important that the moderator make these test-checks in intervals and do not disturb the everyday communication between supplier and customer.

The moderator could be beneficial to use during the assessment for purchase and in the process of determining what supplier solutions that are most suitable. Another beneficial use is to have the moderator monitoring the evolvement of the project. The benefits here are to create a better list of demands from the customer and thereby avoid misaligned goals. The fit of the project is likely to gain from a control and mapping of the outcome.

Suppliers will gain knowledge in the process of building the systems, since priority of the customers problems can be more precise. This can decrease the cost of reclamation and adjustment and both the supplier and the customer can therefore benefit from a lower total project cost.

The payment towards the moderator should be shared in order to give the moderator the power of objectivity. However, it is likely that the customer has more to gain from the use of a moderator, and therefore perhaps should pay more than the supplier.

6 Conclusions

The purpose of this study is to describe and analyze problems and possible solutions related to the involvement of third party consultants in larger IT-projects. In particular, we will investigate when and where in the project cycle it could be beneficial to use an independent moderator

- Using the order of the project lifecycle, the initial phase is to determine the organizational need and to specify the expected outcomes of the project. Two customers describe benefits with using external expertise when determining what demand the system needs to meet and develop a description for the purchase. One of these customers recently changed routines for purchases and had insufficient knowledge about the demands of LOU, which further called for hiring a specialist. The other customer used consultants from the same firm supplying them with IT-systems. In this case, we see a potential risk of opportunism from the side of the consultant where the feedback and solutions presented towards the customer is likely to bias towards the solutions existent at the supplier. However, the same customer expresses benefits when communication with this consultant, understanding is better. Both suppliers stress the importance of information and before implementing, it is important to map the expectations of the customers. There are few benefits with inexperienced customers since information often is weak. However, one of the suppliers lifts up the benefits of their rigid methods for defining what the customer needs.

During the purchasing phase, the customers highlights that it is important that the process is fast, that the control is in the hands of the customer and not at the consultant and that the demand specification is well defined. The suppliers stress the importance of a good contract where the agreement for handing over the system is a mutual responsibility. Information failure is a large problem for our customers. Problems are that systems and solution do not solve problems informed about, sales talk is hard to see through and promised functionality is missing. The suppliers have problems with weak descriptions and specifications of demands from the side of the customers.

The weak descriptions generate misaligned goals through the implementation process and in-precise descriptions can end up in problems later on in the project, with increased costs as a result. Suppliers emphasize the importance of working in close contact with the customer to make the communication easier and the customers say the same. Customers see benefits of knowledge transactions from the consultant when working close. The evaluation and testing period is difficult according to both suppliers. Many customers lack the experience and knowledge in testing the systems functionality systematic enough to give a valid description of the status. It is also difficult to determine if the delivered solution fits

the need and expectation of the customer, since both parts in this situation feels anxious and doubtful.

- In the research model, we conclude that there are some beneficial variables connected to the use of an objective moderator as well as some less beneficial situations. The largest benefits in our eyes is to use an external moderator during the implementation phase who monitors what the customer needs the project to do and then in a continuous interval measures if the project is aligning towards the stated goal. This investigation has the benefits of indicating early in the process what areas that need special attention in both the supplier and customer view. This can lower the cost of misaligned goals and identify problem areas early. The level of information failure is frequent in the case present; here an independent moderator with a high degree of routine and specific knowledge could be beneficial. This especially when working with inexperienced customers, to define the specific need of the customer and analyze the information given by the supplier. This might create a better fit and foresee opportunistic advices from the side of the suppliers.

In the starting process of investigating the customers need, this third party is likely to be hired by the customer since the benefits are solely in the eyes of the customers. Here the consultant can help the customer to purchase the best solution from different suppliers in the market, instead of buying it from the supplier with the best sales pitch. During the purchase situation and contracting, the deal needs to be between the supplier and the customer when it comes to actual bargaining. However, there is a benefit of having an external part defining the needs and describing the goals of the project before the purchase. The same moderator would then assess the evolution of the project. According to one customer in the case, this solution would be more beneficial in very technically intensive projects but less needed in “simple” projects. Two other customers see a great benefit in having objective eyes monitoring the outcome of the project. The suppliers are naturally reluctant towards this solution and they would not initiate it themselves unless the project already has gone bad. If there is a problem however, the supplier believes there are benefits with using a neutral channel. The other supplier would not initiate the use of a third part himself, but would not mind to act as this moderator if asked. During the implementation phase, the payment towards the third party would be shared for the purpose of objectivity. However, both one supplier and one customer believe that the customer should pay more since they have a greater value of the solution. One supplier also states that they would later just add the cost of this moderator to the total cost of the project and the customer would end up paying anyways. We however believe that there would be savings for the supplier as well, with lowered project costs since problems might be found earlier. It is important that the moderator steps in and measures with an interval, and at the same time does not hinder the communication between customer and supplier in the everyday work.

All suppliers presented in the case have rather predictable business cycles and have good prerequisites for using an external objective moderator. Organizations with unpredictable cycles are more beneficial of using internal competency instead of the market. In our case, the frequency of purchase amongst our customers makes it beneficial for buying competence externally.

6.1 Discussion for further research

In the light of our work during this thesis, we want to suggest a few areas that we find could be interesting to investigate deeper in the future. At first, it would be interesting to look at a smaller case over a longer period and closely monitor the different aspects of larger IT- projects and the characteristics connected to this type of work. It would also be interesting to investigate how inexperienced customers perceive the process.

Looking at other parameters, a comparison between different cultures or implementation over national borders would be interesting.

A larger quantitative study investigating what IT-managers perceive as key factors for succeeding in large IT-projects might find data that are more general for companies.

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Appendix 1- Questions to customers

General background

How many IT-system purchases have you been involved in?

Size on these purchases; time, personnel, amount.

Customers

How does the company IT-organization look with regards of functions and power?

How do the patterns for communication and decisions look?

Who decides about new IT-systems?

Who negotiates?

How large is the company's cost for operating the IT-system (approximately)?

How costly was the last IT-investment?

What is your strategy for IT-purchases?

How often do you make these larger IT-purchases?

What factors have determined or will determine your decision about a purchase?

What problems have you had regarding IT-projects (purchase, implementing and operations)? What problem was the most significant?

What is the most costly part of an IT-project (except the product)?

What problems do you think you could avoid with help from expertise?

What problems do you perceive in the communication between you as a customer and you supplier?

Have you used consultants in IT-projects?

Consultant help

Were the consultants of good help?

What are the foremost reasons that you used consultants?

How did the cooperation with the consultant look? (close cooperation, specific task)

Where did the consultants enter the project? (Purchase, implementation, operations) For how long did the consultants stay? (time, phase)

What disadvantages is there with using consultants?

What benefits is there with using consultants?

Do you see any risks with using consultants?

How do you monitor that the consultants do what they should?

Did the purchase/project correspond to your desires?
Did the quality falter any time during the project cycle (where)?
In your eyes, how should an optimal purchase be performed?
How satisfied were you with the performance of the consultant?
How satisfied were you with the end result of your latest IT-project?

No consultant help

Did the purchase/project correspond to your desires?
Did the quality falter any time during the project cycle (where)?
In your eyes, how should an optimal purchase be performed?
Would you in any case say that you need help from experts?
What is your view on consultants in IT-purchases/projects?
Do you think the purchase/project would work differently if a consultant operated it?
Is there a value in letting a consultant monitor, follow up and investigate that you as a customer gets what you wanted?
Do you feel that you had the right competence and knowledge about IT-systems in the purchase phase? That you knew what you needed.
How satisfied were you with the end result of your latest IT-project?
Do you think you will use consultants in the future?
Would you use consultants/experts as a controller of quality in the later phases of an IT-project if existent?

Appendix 2- Questions for suppliers

General background

How many IT-system purchases have you been involved in?

Size on these purchases; time, personnel, amount.

Suppliers

How often do you perform larger sales of IT-systems?

What are the differences when working with an experienced customer compared to an inexperienced customer?

How often do you work towards consultants representing the customer?

Do you as a supplier have benefits in letting a professional controller measuring the quality and that the customer is satisfied with the solution?

How much time do you invest in making the customer “understand”?

What areas in the project life cycle is the most problematic? (Purchase, implementation, operations)

Describe what parts in a reclamation process you most often encounter. Describe which reclamations that are the most costly.

Do you as a supplier experience that you gets criticized for flaws in the IT-solution?

How much of this critique and the reclamation process could be avoided with better specifications of the customer expectations and demands?

Is there a benefit in letting a third party controller regularly enter and independently measure that you as a supplier and the customer receive what you expected?

Have you been involved in a process where the customer or you have been forced to hire a consultant as a “diplomat” during the project?

What parts of a service recovery process do you perceive as most costly?

Would you be willing to let a third party moderate between you and the customer? In order to hopefully increase both your and the customers understanding and project satisfaction. (Supplier and customer share the honorary fee)

Describe what parts you find beneficial with this model and what parts that is less beneficial.

