The selection process of IT outsourcing within small firms

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The selection process of IT outsourcing within small firms

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Preface

This research project is the final part of my master study Systems Engineering, Policy Analysis and Management at the faculty of Technology, Policy and Management at the Technical University of Delft.

During 12 months I have studied at the section of Information and Communication Technology. I did extensive literature research, performed open interviews with IT outsourcing suppliers and presented a questionnaire to managers of small firms. Hereby I would like to thank them all for sharing their experiences with me. They gave me the insight that I needed to complete my research.

I would like to express a special word of thanks to the late Prof. Dr. R.W. Wagenaar for giving me the opportunity to research a rather new topic in the field of Information and Communication Technology. Prof. Wagenaar had an outstanding vision and was always open to new and innovative ideas.

Furthermore I would like to thank Dr. Ir. G.M. Wijers and Dr. E. den Hartigh for helping me with the methodological part of this research. Without their guidance it would have been impossible to deliver this project in its current form and structure. Moreover, I would like to thank Dr. H. Bouwman who assisted me during the last months of my project.

Last but certainly not least, I would like to express my gratitude to my parents, who always encouraged me in developing myself and to my girlfriend, Emma, who continuously supported me during stressful times.

Paul de Grijp,

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Executive summary

This project explores a rather new topic in the field of IT outsourcing. IT outsourcing can be defined as the transfer of an IT service (e.g. desktop management) to a specialized service supplier. This research focuses on IT outsourcing within small firms (i.e. less than 50 employees and a turnover less than € 1 million). The current literature about IT outsourcing does not focus on this type of firms. As a result, it does not take into account the characteristics of small companies. These characteristics however, influence the implementation of an IT outsourcing project. For example the level of contract and negotiation skills of a firm can result in a different type of outsourcing arrangements. Moreover, the possible lack of IT knowledge within a company can influence the different phases of IT outsourcing. In the figure below all outsourcing phases are given.

During the decision phase a company decides if it wants to outsource an IT process. Throughout the selection phase, a company selects an IT outsourcing supplier and negotiates the outsourcing arrangement. During the implementation phase the IT process is implemented and finally, during the operational phase the IT service is running at the outsourcing supplier.

This research focuses on the selection phase of IT outsourcing. This implies that the make-or-buy decision has been taken. The project concentrates on identifying an IT outsourcing supplier and the corresponding IT outsourcing arrangement. Moreover, it addresses the importance of a buyer action plan, when the IT process is strongly intertwined with the organization or when the firm has limited IT outsourcing skills.

Due to the novelty of the market and the fact that most of the small firms do not have a great deal of experience with IT outsourcing, problems can arise. Some examples are exceeding budgets of IT outsourcing projects, time consuming contract negotiations or inadequate service levels. Taking well-considered outsourcing decisions during the selection phase of an IT outsourcing project can reduce risks and thus potential problems that come with the implementation and execution of IT outsourcing.
The selection process of IT outsourcing within small firms

The main goal of this research is to provide recommendations, that are relevant for small firms, while taking decisions during the selection process of an IT outsourcing project, in order to reduce the risks that come with the implementation of IT outsourcing. This can be summarized in the following main research question:

*Which recommendations can be given to small firms during the selection process of an IT outsourcing project, in order to mitigate the risks that come with the implementation of IT outsourcing?*

The recommendations are based on a decision model that is proposed in this research project. This decision model is built on common outsourcing theories and on additional literature research with a focus on small firms. The decision model looks at the characteristics of the buyer (i.e. the small firms) and the type of IT process that needs to be outsourced. These are the input components of the model. The characteristics are described under each component. Based on these components, several decisions can be taken regarding: a supplier, an outsourcing arrangement and a buyer action plan. These are the output components of the model. The decision model is presented in the following figure.

A decision model for the selection process of an IT outsourcing project within small firms

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Based on a list of IT outsourcing risks within small firms and the proposed decision model, seventeen propositions have been formulated. A proposition is in fact a possible relationship of the decision model.

Sixteen IT experts have validated these propositions via an Expert Opinion Method. They have given their opinion about to what extent they agree with a proposition. Moreover, they gave their point of view on the importance of each proposition. Finally, the level of consensus is measured to see if the experts agree with each other. When this is not the case, a proposition needs further research. The experts have reached consensus about eight of the seventeen propositions. Therefore eight recommendations are formulated to answer the main research question of this project. Each recommendation supports an IT manager within a small firm, with taking decisions during the selection process of an IT outsourcing project. The recommendations are given to mitigate the risks that can arise with the implementation of IT outsourcing within small firms. The recommendations are:

1. Firms that want to outsource uncertain IT processes should use an outsourcing arrangement that is flexible.
2. Firms that have limited IT knowledge should use an outsourcing arrangement based on a performance-based contract.
3. Firms that have limited contract and negotiation skills should use outsourcing arrangements that are flexible.
4. Firms that have limited relationship management skills should gain this expertise when they decide to outsource an IT process.
5. Firms that want to outsource secondary IT processes should outsource to suppliers which have operational excellence as a strategy.
6. Firms that want to outsource an IT process with a high degree of specificity should not use a standardized contract.
7. Small firms that outsource to a medium sized supplier should use a performance-based contract.
8. Firms that have a low risk preference and that want to outsource an IT process should write an implementation plan to minimize the risk of organizational problems.

The experts did not reach consensus on nine of the seventeen propositions. These propositions provide a starting point for further research in this area.
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Key words
Small firms, IT outsourcing, Risks, Selection process, Decision model, IT processes, Outsourcing suppliers, Outsourcing arrangements
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1 Introduction

IT outsourcing is one of the buzzwords to be found in the headlines of business magazines. Though IT outsourcing has been around for a while, now is the time it has the opportunity to finally break through (Rai, 2005). It is defined as “the transfer of an IT service, and when applicable the corresponding resources and employees, to a specialized service supplier, which provides services to an agreed quality of service and an agreed fee during a contract period” (Wijers, Beulen, Delen and van de Heisteeg, 2005). One of the reasons companies outsource IT processes is to be able to focus on their core processes, as these processes add the most value to their business (Reid, 2005). An IBM television commercial said once: “Focus on your core business, and let someone else do the rest”.

In the 1970s outsourcing gained a great impulse, when large and diverse corporations were underperforming. This trend became even more obvious in the early 1980s with the start of global recession (Kakabadse and Kakabadse, 2000). During the 1980s, the business strategy thinking changed to focusing on fewer activities (Peters and Waterman, 1982). Managers re-evaluated the theory that an organization needed to be vertically integrated and autonomous (Mullin, 1996). As a result corporations got rid of secondary and nonessential businesses in order to focus upon their core business and became disintegrated by increasingly outsourcing their requirements for components and business services (Grant, 1995). Many firms began restructuring their company strategy by researching new ways of organizing the various elements of work. Such new beginnings promoted a rethink and radical redesign of business processes in order to achieve dramatic improvements in critical areas of performance such as cost, quality, service, and speed (Gamble, 1995). Firms can have several sourcing reasons, which can differ from achieving economies of scale to hiring expertise and saving on overheads. Reasons to outsource are time and company specific (Klein, 1999).

The market of IT outsourcing consists of three types of parties. First, there are companies that are buyers, which outsource processes. Secondly there are suppliers that perform these processes as their core business. Besides buyers and suppliers there are mediators which help out firms to implement outsourcing within their business. In the last years companies have outsourced various IT processes with mega-deals worth over € 1 billion. Dun and Bradstreet estimate that outsourcing is now a € 4 trillion a year business world wide (Hazelwood, 2005). According to industry experts, 25% of the typical executive’s budget is outsourced with a projected growth to 34% by the end of next year (Corbett, 2005). The “Big Six” outsourcing firms are Accenture, ACS, CSC, EDS, Hewlett-Packard and IBM. The total value of the top 100 Western European outsourcing deals reached € 34 billion in 2005, according to a study by IDC (Thomson and Lamy, 2006). This compares with
€ 35 billion in 2004. In 2005, however, the largest deals got bigger, with nine mega deals signed for a total of € 17 billion.

About outsourcing extensively has been written in journals and magazines. In addition, some best practices have been published. An example is the Information Services Procurement Library (ISPL). This best practice (Franckson and Verhoef, 1999) focuses on the management of Information Technology related to acquisition processes. It helps both the buyer and supplier to achieve the desired quality during an IT outsourcing project using the agreed amount of time and money. It provides methods and best practices for risk management, contract management and planning for medium to large IT outsourcing projects.

The benefits of IT outsourcing are often clear for executives of companies. Cost savings and increased freed resources all sound very positive from a business perspective. There are though some difficulties though that can come with IT outsourcing. Some firms for example lack insight into their core competence or do not know to which IT outsourcing supplier they should outsource. These problems can have a significant impact on an organization that implemented an IT outsourcing project. These problems occur within small firms (i.e. less than 50 employees and a turnover less than € 1 million (Loecher, 2000)) and within medium or large sized firms. However, especially within small firms, these problems can have a large impact on the organization, as a result of the limited resources they have. For that reason this research project focuses on small firms.

1.1 Problem area

It is important to clarify the problem area of this research project. Therefore in this paragraph we focus on the three reasons that form the basis for the problem area of this research project.

The market of IT outsourcing for small firms is increasing

Slowly the market of the large outsourcing deals is stabilizing. Therefore suppliers are searching new markets to deploy their sourcing activities. One of these new markets or “blue oceans” is the small and medium enterprises (SME) market (Huigen, 2006). Due to the size of the project an SME may not be as interesting as a large multinational. However many SMEs\(^1\) consider more and more to outsource parts of their business, as they share some of the same sourcing reasons as larger firms, such as reducing costs and focusing on their core processes (Kakabadse and Kakabadse, 2005).

\(^1\) SMEs constitute around 95% of enterprises within the countries of the OECD (OECD, 1997).
Implementing IT outsourcing within their organization can create risks for small firms. A risk can be defined as the impact of a (doom-) scenario times the likelihood or probability that the scenario comes true (Aubert, Dussault, Patry and Rivard, 1998). Some examples are exceeding budgets of IT outsourcing projects, lock-in effects or inadequate service levels. It is possible to reduce or mitigate these risks by taking well-considered outsourcing decisions. Despite these risks, the IT outsourcing market for small firms is increasing rapidly (Rohde, 2004).

Few articles have been written about IT outsourcing and small firms
A lot of literature has been published in IT journals about implementations of IT outsourcing at medium or large sized companies (i.e. 50 employees or more and a turnover of more than € 1 million). These articles (Monsanto, 2004; Willcocks and Feeny, 2006) identify problems that can arise, due to IT outsourcing and they provide guidelines or solutions to minimize these problems. In the field of outsourcing and small firms only few articles have been written (Kakabadse and Kakabadse, 2005; Nabeel Al-Qirim and Hanoku, 2002; Rohde, 2004), due to the novelty of the market.

The three reasons can be summarized as follows:

1. The market of IT outsourcing for small firms is increasing.
2. The implementation of IT outsourcing can create risks within small firms.
3. Only few articles have been written about IT outsourcing related to small firms.

Figure 1 is a graphical overview of the problem area.

Together these three statements address the need for research in this area. As IT outsourcing is an extensive subject, an additional focus is needed. Therefore we look at the different phases of IT outsourcing.

There are four main outsourcing phases (Vaughan and Guy, 1997). First, a company needs to decide if it wants to outsource the IT service. This choice is called the make-or-buy decision. When this decision has been taken, it
needs to contact and select an IT outsourcing supplier for the specific IT service and negotiate the corresponding outsourcing arrangement. This phase is called the selection process. During the implementation phase the buyer and supplier implement the IT outsourcing project. Such an implementation can have a strong influence on the buyer, depending on how the organization of the buyer and the IT service are intertwined. The last phase starts when the IT service is fully operational. Figure 2 gives an overview of all phases.

Figure 2 - Overview IT outsourcing (Vaughan and Guy, 1997)

This research project focuses on the decisions that are taken during the selection phase of an IT outsourcing project, as these decisions can have a large impact on the whole IT outsourcing project. It is an important phase in which a firm has the possibility to avoid potential problems or reduce the risks that come with the implementation of IT outsourcing. To reduce a risk one should reduce the impact of the risk or the probability it comes true.

1.2 Research objectives and relevance

The main goal of this research is to provide recommendations, that are relevant for small firms while taking decisions during the selection process of an IT outsourcing project, in order to reduce the risks that come with the implementation of IT outsourcing. Therefore this project has the following main objective:

Provide recommendations to small firms that are relevant during the selection process of an IT outsourcing project, which should mitigate the risks that come with the implementation of IT outsourcing.

The recommendations support IT managers of small firms in taking decisions during the selection process of an IT outsourcing project. These decisions can be for example choosing an outsourcing supplier or negotiating an outsourcing arrangement. Taking a well-considered outsourcing decision can reduce risks and thus potential problems that come with the implementation and execution of IT outsourcing.

Due to the fact that there is limited literature available about the subject, this research project is considered as an explorative research. Therefore another research objective is formulated next to the main objective:

Provide a starting point for further research in the area of the selection process of IT outsourcing and small firms.
The social relevance for this topic is founded on several trends. In particular, the market of IT outsourcing is still growing strongly (Carlson, 2003). Especially the IT outsourcing market with a focus on small firms is increasing fast (Klucs, 2005; Kanters, 2006). This initiates questions from the market, such as how to implement IT outsourcing within small firms.

1.3 Research problem and questions

The research focuses on the decisions small firms should take during the selection process of an IT outsourcing project. These decisions are relevant to the reducing of potential risks. This can be summarized in the following main research question:

*Which recommendations can be given to small firms during the selection process of an IT outsourcing project, in order to mitigate the risks that come with the implementation of IT outsourcing?*

To be able to provide recommendations to small firms, a decision model is proposed to create insight into all related aspects of IT outsourcing. It elucidates the possible decisions a small firm can take during the selection process of an IT outsourcing project.

A decision model can be defined as follows. It is a simplified representation of a set of components of a process within a research area, generally developed for understanding, analysis or improvement of the process (Gao, 2007). It can be divided into two parts. First of all, it gives an overview of the structure of a set of components. This is in fact an overview of all possible decisions a small firm can take during the selection process of an IT outsourcing project. Secondly, it explains how the components are related to each other. These relationships are the intelligence of the model and form the basis for the recommendations, to mitigate risks that come with the implementation of IT outsourcing within small firms.

In this research project, common outsourcing theories and a literature research have been combined to build the structure of the decision model. Afterwards, based on risks that come with the implementation of IT outsourcing, propositions are constructed, using the components of the decision model. A proposition can be defined as a statement of logic, for representing implications between related components of a system (Gao, 2007). The propositions form the basis of the second part of the decision model. They establish the intelligence of the decision model. Propositions are in fact potential relationships. Because of the explorative nature of this research project, we use propositions instead of relationships.
Figure 3 gives an overview of the decision model.

The following sub questions are formulated based on the main research question and the given approach:

1. What is the current state of IT outsourcing for small firms?
2. What are the risks of the implementation of IT outsourcing within small firms?
3. Which theories form the basis for the decision model? (Based on the identified risks)
4. Which components can be derived from the identified theories for the structure of the decision model?
5. What is the structure of a decision model for the selection process of an IT outsourcing project within small firms?
6. Which propositions can be derived from the decision model based on the risks that come with IT outsourcing? (The propositions are the intelligence of the decision model)
7. How and to what extent can the propositions be validated?

Each question is answered separately in this research per chapter.

1.4 Research framework and methods
As stated before, the area of this research is rather new. IT outsourcing, a well-known topic, will be applied in a relatively new field. It lacks well founded theories. This project is therefore an explorative research.

The figure below shows an overview of the research approach.
The selection process of IT outsourcing within small firms

Figure 4 - Overview of research framework

The research project uses different research methods. There are three phases:
Phase 1
It starts with formulating the research questions in chapter 1. Furthermore, the current state of IT outsourcing for small firms is given, which is based on literature research A (see figure 4) and forms the starting point of this research project (chapter 2).

Phase 2
This phase consists of four parts. First, chapter 3 studies the risks that can come with the implementation of IT outsourcing within small firms. The risks are based on IT outsourcing problems within small firms. These problems are identified via:

1. A literature research that has a focus on IT outsourcing problems within small firms (literature research B).
2. Open interviews at small firms and IT outsourcing suppliers. The table below gives an overview of these interviews. Please see Appendix II for a more detailed overview and the transcripts of the interviews.

<table>
<thead>
<tr>
<th>Number (#)</th>
<th>Data method</th>
<th>Type of company</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Open interview</td>
<td>Small firm</td>
</tr>
<tr>
<td>3</td>
<td>Open interview</td>
<td>Outsource supplier</td>
</tr>
</tbody>
</table>

Table 1 - Overview of data methods and sources (phase 2)

Secondly, chapter 4 needs to find the main components for the structure of the decision model. It uses the following approach. First of all it uses the identified IT outsourcing risks within small firms to find common theories that are related to IT outsourcing and to identify options to reduce risks. Literature is gathered from different IT journals and strategy and management journals (literature research C). Two main theories, Transaction Costs Economics and Agency Theory, have been examined. Furthermore, it deepens literature research B to focus on small firms and IT outsourcing. The common theories and the literature with a focus on small firms are combined to provide the main components for the decision model.

Thirdly, chapter 5 uses the results of chapter 4 to build the main structure of the decision model. It looks at the attributes (i.e. the characteristics of the components) and their corresponding values.

Finally, the main potential relationships of the decision model are constructed in chapter 6. This is done via the creation of propositions. The risks of chapter 3 are used to build the propositions, which are derived from the decision model.

Phase 3
The last phase consists of two parts. First, chapter 7 validates the propositions, based on an Expert Opinion Method. This method is based on
several characteristics of the Delphi Method. A group of experts has rated the propositions categorized by two scales:

1. To what extent the experts agree with a proposition.
2. How important the experts think that a proposition is.

The exact approach of this methodology is elaborated further in chapter 7.

It is necessary to emphasize that this is an explorative research. The main goal is not to fully validate each proposition, but to create insight into the relationships of the propositions and therefore the decision model. This information can be a starting point to test this subject further.

Secondly, recommendations are provided in chapter 8, which are based on the propositions. The recommendations should support IT managers of small firms in taking decisions during the selection process of an IT outsourcing project.

1.5 Scope and definitions

IT outsourcing is a very extensive subject. Therefore it is important to scope the research project. Moreover, it is necessary to describe all definitions clearly. Appendix I gives an overview of all important definitions that are used in this research.

This thesis is scoped on several areas, which narrows the results but increases the depth of the research. Nine delineations have been chosen:

1. Small firms (i.e. less than 50 employees and a turnover less than € 1 million)

This scope has been chosen, due to the lack of available literature on this topic. Moreover, the market for outsourcing with a focus on small firms is growing strongly, which creates a significant social relevance. The figure below gives an overview of this delineation. The red circle points out the chosen focus.

![Figure 5 – Type of firms](image-url)
2. IT outsourcing

Outsourcing can be divided in several components, such as IT Outsourcing (ITO) and Business Process Outsourcing (BPO). Sourcing activities, which do not include an IT process, are not considered. Especially the IT outsourcing market is developing within the SME market. Therefore it creates an outstanding subject for further research.

3. Secondary processes (i.e. non-business processes)

For small companies it is less interesting to outsource their core competence (i.e. primary processes). The remaining added value of small firms would be very low. Furthermore the current outsourcing market for SMEs offers only few primary processes. This is another reason for this delineation.

The figure below provides an overview of the last two delineations: IT outsourcing and secondary processes.

![Figure 6 - Type of outsourcing and services](image)

4. Selection process

This study focuses on the selection process of an IT outsourcing project. This phase comes after the make-or-buy decision and before the implementation process of an IT outsourcing project. It consists of choosing an IT outsourcing supplier and an IT outsourcing arrangement.

![Figure 7 – Focus on the selection phase of an IT outsourcing project](image)
5. No make-or-buy decision

This research does not discuss the make-or-buy decision of outsourcing. It is taken as a premise that a firm has already made the decision whether to outsource or not.

6. Dyadic buyer-supplier

This research project only focuses on dyadic buyer-supplier relations. This means that buyer-multiple supplier relationships are not taken into account.

7. Only currently available IT processes

This research project focuses on the market of IT outsourcing, which offers IT services (e.g. desktop management, technical management of applications or data) to small firms. Therefore the delineation has been set to only look at services that are currently available on the market.

8. No mediators

The project does not take into account outsourcing mediators. This is based on two reasons. Firstly, small firms often do not have resources for such services. Secondly, there are currently no mediators that focus on small firms.

9. Buyer perspective

With outsourcing there are always at least two parties involved: the buyer and the supplier. Therefore it is possible to look to outsourcing from different perspectives. In the figure below an overview is given of these two perspectives.

![Figure 8 - Outsourcing perspectives](image)

This research project focuses on the buyer perspective (i.e. how should a small firm outsource).
1.6 Process
The research project is performed for a Master Thesis within the faculty of Technology, Policy and Management at the Technical University of Delft. Two supervisors of the section Information and Communication Technology (ICT) and Technology, Strategy and Entrepreneurship (TSE) have guided the author.
2 IT outsourcing for small firms

This chapter extends the introduction of IT outsourcing. It gives an answer to the following sub question:

What is the current state of IT outsourcing for small firms?

It offers an overview of several issues, which are closely related to IT outsourcing for small firms. It starts with defining IT outsourcing. Afterwards it identifies IT outsourcing reasons of small firms and the type of arrangements they use. Moreover, it looks to the main IT processes small firms outsource. At last, it examines the market of IT outsourcing for small firms. This is done via a buyer and a supplier perspective. Two practical examples of IT outsourcing are presented, which are enclosed in appendix III.

2.1 Definition of IT outsourcing

To understand the idea of IT outsourcing in general it is necessary to look to sourcing in general. Baaten (2006) suggests the following definition for sourcing:

"Sourcing is a process of decision-making, where a company’s needs or requirements are constantly reflected upon market and / or internal supply, while trying to determine the best possible fulfilment of the needs taking into consideration strategic directives and organizational implications“ (Baaten, 2006).

In short it is also called the make-or-buy decision of a company. When a company has chosen to source a process outside the company the term outsourcing is used. There are several definitions, which have a lot of similarities. This research project uses the following definition, as it covers almost all other definitions. Outsourcing can be defined as:

"The transfer of a service, and when applicable the corresponding resources and employees, to a specialized service supplier, which provides services to an agreed quality of service and an agreed fee during a contract period“ (Wijers et al., 2005).

IT outsourcing is outsourcing which focuses on an IT process, such as desktop management or server management.

2.2 IT outsourcing reasons

Companies outsource for different reasons. Specific company characteristics (e.g. company vision or size) and the situation on the market have influence
on these reasons. To increase the understanding of outsourcing it is important to know where their make-or-buy decision is based on. Barrett (1996) suggests that cost reduction is the main driving factor for outsourcing. However, other studies have pointed to reasons other than cost reduction being the primary reason for outsourcing. Sometimes the desire to offer higher quality of service overrides cost considerations. Moreover KPMG (1999) revealed that the need for ‘access to skills’ is the most important consideration for outsourcing decisions. According to Lacity and Willcocks (2000), the most achieved benefits from outsourcing are: cost reduction, refocusing of in-house IT staff on more value-added IT work and business applications, improved flexibility of IT since the outsourcer’s costs are more flexible than in-sourcing costs which are fixed. Other benefits identified are better quality service, improved use of IT resources, access to scarce IT skills, improved business flexibility, focus on core business, better management control, access to new IT, balanced processing loads, and help in cash problems. The table below gives an overview of a survey, which has been conducted within SME companies. It presents a list of reasons to outsource specific for SMEs (Nabeel Al-Qirim and Hanoku, 2002).

<table>
<thead>
<tr>
<th>No.</th>
<th>Reasons for outsourcing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Access to expertise</td>
</tr>
<tr>
<td>2.</td>
<td>To improve the quality of service</td>
</tr>
<tr>
<td>3.</td>
<td>Access to new technology</td>
</tr>
<tr>
<td>4.</td>
<td>Flexible and responsive systems</td>
</tr>
<tr>
<td>5.</td>
<td>Focus on core business competency</td>
</tr>
<tr>
<td>6.</td>
<td>Reduce costs</td>
</tr>
<tr>
<td>7.</td>
<td>Reduce risk/uncertainty in new projects</td>
</tr>
<tr>
<td>8.</td>
<td>Quick operationalisation</td>
</tr>
<tr>
<td>9.</td>
<td>Gain competitive advantage</td>
</tr>
<tr>
<td>10.</td>
<td>Lack in-house capability</td>
</tr>
<tr>
<td>11.</td>
<td>Develop new skills</td>
</tr>
<tr>
<td>12.</td>
<td>In-house IT management is cumbersome</td>
</tr>
<tr>
<td>13.</td>
<td>Continuing past contracts</td>
</tr>
<tr>
<td>14.</td>
<td>Organisational restructuring/downsizing</td>
</tr>
<tr>
<td>15.</td>
<td>Imitate competitors</td>
</tr>
</tbody>
</table>

Table 2 - Drivers of SMEs in New Zealand to outsource IT processes (Nabeel Al-Qirim and Hanoku, 2002)

As can be seen above, reducing costs is not the main reason for an SME to outsource. Increasing the quality of service of a process and the access to expertise are the main reasons to outsource. Access to new technology is important for small firms, due to the increasing complexity of technologies. It is impossible for SMEs to be an expert on all fields and therefore external technical expertise is necessary. Due to limited resources in a small firm operational tasks should be outsourced to create a better focus on core business competencies.
2.3 IT outsourcing processes

Companies differ significantly from each other in the products and services they offer. Moreover they vary in their organizational vision and structure. Therefore IT processes which they desire to outsource can differ as well. Nabeel and Hanoku (2002) have done extensive research in categorising these IT (secondary) processes. They suggest three categories:

1. Hardware
2. Software
3. Operational IT tasks

**Hardware**

Within SME companies the hardware category consists of several items, such as desktop environments, servers and the infrastructure that connects them together. Leasing the hardware is considered as part of IT hardware outsourcing. Besides the hardware itself it also includes the maintenance. A recent survey (Nabeel Al-Qirim and Hanoku, 2002) under SME companies shows that outsourcing in SMEs is mainly related to maintenance and not to ownership of IT hardware equipment (i.e. leasing the hardware). Maintenance can be seen as “access to expertise”, which is given in the table 3 of operational IT tasks.

**Software**

The second category covers the software. It includes software licenses (e.g. operating systems), the building of new application and websites, as well as the hosting of specific services on an Application Service Provider (ASP) basis. As SMEs have strong desires to do online business, it is not surprising to find that the most important activity of software that is outsourced is website development, which requires outside expertise (Nabeel Al-Qirim and Hanoku, 2002).

**Operational IT tasks**

The last category gives an overview of several operational IT tasks, which can be usually found within SMEs. It also complements some activities, which are also part of the two categories mentioned above. So access to expertise can be seen as the maintenance of a hardware component (e.g. desktop management) and the development of a customized application. For that reason the table below gives a total overview of all IT activities within an SME company.

<table>
<thead>
<tr>
<th>No.</th>
<th>Operations / Activities</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Expertise</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>Help desk services</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Disaster recovery services</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>IT planning and strategy</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>E-commerce strategy</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>Data centre service/management</td>
<td>6</td>
</tr>
</tbody>
</table>
From the table above it can be concluded that SMEs usually outsource secondary (i.e. supportive) IT services. Primary services, which are critical for a company, are usually not sourced to an external supplier (KPMG, 2004).

It is important to address that the IT market is dynamic, which leads to new and different IT processes being outsourced. Examples are the emerging trend of outsourcing on an ASP basis (Monsanto, 2004).

### 2.4 IT outsourcing arrangements

The way a company outsources to its supplier can be done in several ways. The type of arrangements between companies and suppliers is extensive (Kakabadse and Kakabadse, 2002; Murray and Kotabe, 1999). Quinn and Hilmer (1995) suggest that outsourcing arrangements have two dimensions: control and flexibility. There is always a trade-off between these two dimensions. Figure 9 below gives a synopsis of all possible arrangements when you combine the two dimensions.

![Figure 9 - Outsourcing arrangements (Adapted: Quinn and Hilmer, 1995)](image)

An arrangement can already start with only an agreement based on a preferred supplier relationship. At one end short-term contracts are chosen to encourage flexibility. At the other full ownership and/or mergers between buyers and suppliers exist. SMEs usually need flexibility and therefore they normally prefer short-term contracts or call options.

Turner, Smith, and Smith (2002) suggest that it is almost inevitable that what today is modern technology for a reasonable price will seem outdated
and overpriced in tomorrow’s market. For the buyer entering into an outsourcing agreement there is an obvious tension between the commercial pressures to commit to a long-term relationship on the one hand and the need to ensure that it keeps the flexibility to guarantee that its technology is kept under review and up to date on the other. This is another reason why small firms generally choose for short term contracts.

2.5 Market of IT outsourcing

The market of IT outsourcing consists of several parties. This research looks to the market of IT outsourcing for small companies. This has the following implications:

Buyer
- Small firm with less than 50 employees

Suppliers
- Companies which offer IT outsourcing services (e.g. desktop environment)

To distinguish the type of buyers in size, IT outsourcing firms look to the number of seats a firm has. In the table below a definition of the size of a firm is given.

<table>
<thead>
<tr>
<th>Type of buyer</th>
<th># of employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>0 – 50</td>
</tr>
<tr>
<td>Medium</td>
<td>50 – 500</td>
</tr>
<tr>
<td>Large</td>
<td>&gt; 500</td>
</tr>
</tbody>
</table>

Table 4 – Categorization of a buyer by size (Loecher, 2000)

Within the Dutch market there are three types of IT outsourcing suppliers. Thus, the market is divided in three segments, as shown in table 4.

There are some exceptions within the market, but normally small firms work with small IT outsourcing suppliers as well as medium firms work with medium IT outsourcing suppliers (Rhode, 2004).

2.6 Market trends

There is an emerging trend on the supplier side that is changing the scope of several IT outsourcing firms. Due to professionalisation and standardisation some medium outsourcing suppliers, which first focussed only on medium sized firms, have broaden their customer base to the small segment (Huigen, 2006). This means that several medium sized outsourcing suppliers focus now on firms with 5 employees to around 500 employees.
This trend enables SMEs to outsource IT processes to larger (e.g. medium sized) outsourcing firms, which can offer improved economies of scale and continuity.

### 2.7 Conclusion

This chapter has looked at the current state of IT outsourcing for small firms. All major aspects of IT outsourcing for small firms have been discussed. It has illustrated that the main reason to outsource for a small firm is to get access to IT expertise. Secondly, the type of outsourcing arrangement preferred by small firms is most of the time flexible and has a short-term of notice. At last, it has given an overview of the current market trends. It shows that the market of IT outsourcing for small firms is increasing rapidly and that IT outsourcing suppliers are focusing more and more on the market-segment of small firms. This fact proves the topicality of this subject. These aspects are used in the next chapters as a basis for this research project.
The selection process of IT outsourcing within small firms

3 IT outsourcing risks within small firms

This chapter provides insight into the risks that can occur when a small firm implements IT outsourcing. It answers the following sub question of the research project:

What are the risks of the implementation of IT outsourcing within small firms?

The IT outsourcing risks are derived from IT outsourcing problems within small firms. These problems are based on:

1. A literature research that is performed that has a focus on IT outsourcing problems within small firms.
2. A practical research that consists of open interviews at small firms and at IT outsourcing suppliers.

A synthesis is done to provide a list of risks that can occur when a small firm implements IT outsourcing in its organization.

The reason that this research looks to risks instead of IT outsourcing problems is, that it wants to prevent these problems. For potential customers (i.e. small firms) these possible problems are actually risks.

This chapter starts with providing a definition of a risk and a problem.

3.1 Definition of a risk and a problem

Formally, a risk can be defined as the impact of a (doom) scenario times the likelihood or probability that the scenario comes true. The corresponding problem is a situation where a (doom) scenario has taken place. In the figure below an overview is given of the different risk levels, which are based on the impact and the probability that a specific situation with a negative consequence occurs.

![Figure 10 – Level of a risk (Aubert et al., 1998)](image)
A risk can have different causes. Franckson and Verhoef (1999) argue that there are four causes that can form a risk. First of all, a risk can be based on situational factors. For example, the Netherlands are situated below the level of the sea. This situation imposes the risk that the Netherlands will once be flooded. Secondly, a risk can be caused by the complexity of a situation. Complexity can be regarded as the difficulty encountered in managing the available knowledge. Thirdly, uncertainty can create a risk. Uncertainty can be described as a situation where there is limited knowledge (Walker et al., 2003). For decision-making this means that decisions are based on imperfect knowledge. This incomplete knowledge can be based on the fact that the information is not available or that a person does not possess the knowledge, due to for instance limited experiences in a subject area (Meijer, Hekkert, Faber and Smits, 2006). Basically, a risk can be described as an uncertain outcome that can have a negative consequence and uncertainty as a situation where there is limited knowledge available. Here the distinction is clarified via an example. When a firm has limited IT knowledge (uncertainty) it is possible that a firm pays for the wrong IT services (risk). At last, a risk can as well be influenced by another risk. Figure 11 gives an overview of all the risks causes.

![Figure 11 - Risk causes (Adapted: Franckson and Verhoef, 1999)](image)

In this research project risks are used to find theories that are related to IT outsourcing. Moreover, they are used to determine important possible relationships of the decision model. It is therefore important to address that it is not the goal of this research project to examine all different causes of a risk.
A problem can be defined as an undesirable situation. It is the difference between actual conditions and those that are required or desired (Aubert et al., 1998). Therefore it can be rated by the difference between the actual and the desired situation. Figure 12 gives an overview.

Figure 12 - Level of a problem (Aubert et al., 1998)

The probability behind the difference between an actual and a desired situation can be formulated via a risk. Due to the fact that an undesired situation can be created by several factors, a problem can have multiple risks (Bahli and Rivard, 2003). Figure 13 gives an overview of such a situation.

Figure 13 - Risks related to a problem

An example is provided here to clarify the relation between a risk and a problem. The situation that your house is not habitable anymore can be defined as an undesired situation and thus a problem. The possible grounds behind this difference of the desired situation (an inhabitable house) and the actual situation (an unin inhabitable house) can be formulated in several risks. First, the risk that a house burns down due to a fire can lead to this undesired situation. Secondly, the risk that a house is flooded can as well lead to the same undesired situation. Therefore a problem can be related to multiple risks.

3.2 Problems of IT outsourcing within small firms

Although there has been written extensively about outsourcing, the primary focus of the extant research has been on large organizations (Feeny and Willcocks, 1998; Choudhury and Sabherwal, 2003). Though a large part of the IT outsourcing market has a focus on large enterprises there are several
trends, which show that IT outsourcing is penetrating the SME market (Klucs, 2005; Kanters, 2006).

Despite the fact that IT outsourcing is seen as a crucial element of doing business, not all implementations have had a positive impact on the business process. Choosing the right supplier and achieving a high quality relationship is reported as difficult to achieve (Kakabadse and Kakabadse, 2002). Monsanto (2004) says that it is critical to find the right type of supplier for ones sourcing business. This means that a supplier should fit the outsourcing project of a specific firm regarding several aspects, such as the focus a supplier has and type of services it offers.

An outsourcing contract defines the rights, liabilities and expectations of both the outsourcing supplier and the outsourcing customer concerned. It is often the only mechanism for regulating the relationship of the parties (Lee, 1998).

3.2.1 Literature research
Recently, some research has been done on the problems that can arise when a small firm implements IT outsourcing. The table below shows the main problems of SMEs.

<table>
<thead>
<tr>
<th>No.</th>
<th>Problems of IT outsourcing</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Identifying of right supplier</td>
<td>20</td>
</tr>
<tr>
<td>2.</td>
<td>Right choice from diverse products</td>
<td>13</td>
</tr>
<tr>
<td>4.</td>
<td>Insufficient funds</td>
<td>10</td>
</tr>
<tr>
<td>5.</td>
<td>Exceeding the planned budget</td>
<td>8</td>
</tr>
<tr>
<td>6.</td>
<td>Over dependence on supplier</td>
<td>6</td>
</tr>
<tr>
<td>7.</td>
<td>Conflict with the outsourcers</td>
<td>5</td>
</tr>
<tr>
<td>8.</td>
<td>Inadequate skills in contract negotiations</td>
<td>5</td>
</tr>
<tr>
<td>9.</td>
<td>Inability to maintain standards</td>
<td>5</td>
</tr>
<tr>
<td>10.</td>
<td>Managing different suppliers</td>
<td>5</td>
</tr>
<tr>
<td>11.</td>
<td>Overshooting of time frame</td>
<td>4</td>
</tr>
<tr>
<td>12.</td>
<td>Difficulty in managing contracts</td>
<td>3</td>
</tr>
<tr>
<td>13.</td>
<td>Double outsourcing</td>
<td>2</td>
</tr>
<tr>
<td>14.</td>
<td>Inflexibility of outsourcing contract</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 6 - IT outsourcing problems within SMEs (Nabeel Al-Qirim and Hanoku, 2002)

Table 6 shows that problems relating to suppliers and their performance are pervasive. They constitute more than half of the total problems identified (about 53%):

1. Identifying the right supplier (20%)
2. Under-performance of supplier (13%)
3. Over dependence on supplier (6%)
4. Conflict with the outsourcers (5%)
5. Inability to maintain standards (5%)
6. Managing different suppliers (5%)

The second most important problem is related to the choice from the diverse products and services (13%). It is important to address that SMEs lack such knowledge. It may be clear that the appropriate choice of products is itself linked to the choice of the right supplier who can give such advice. Though the problem of insufficient funds (10%) is significant, it is not the most important problem. Other problems identified are inadequate skills in negotiation of the contract and management of the contract (Nabeel Al-Qirim and Hanoku, 2002). This creates a difference in the power balance between the buyer and supplier. This is understandable since the businesses are small and lack the skills for contract management (negotiation, finalisation, implementation and monitoring). They may need some external support and advise for these contracts, which have the disadvantage that it increases the overhead costs of the outsourcing project.

The research of Nabeel Al-Qirim and Hanoku (2002) can be seen as a preliminary research in the field of IT outsourcing and small firms. However, it needs to be addressed that some results of the research have not been well specified. Identifying the right supplier for example is not well-defined.

Rhode (2004) suggests some other problems within small firms. Many small firms do not have designated IT departments. Therefore they are less likely to have enough level of IT skills within their organizations to outsource their IT processes. To be able to outsource an IT process a company needs to understand these processes well. Furthermore, the process of contract negotiation is costly and requires expert legal advice. These costs are often too expensive for small organizations.

When an SME outsources a function, the value of the contract is typically small, when compared to the same aspect for a larger firm. The SME’s power and skill to negotiate small contracts with a large outsourcing supplier is limited (Rhode, 2004). Poor outsourcing outcomes are often due to a failure to make contracts flexible enough to adjust to changes in the business and technology (DiRomualdo and Gurbaxani, 1998). SMEs lack the ability to incorporate this flexibility into arrangements.

The main problems of IT outsourcing found in the literature can be summarized in four main categories:

<table>
<thead>
<tr>
<th>Category</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer</td>
<td>Problems that are caused by the characteristics of a firm</td>
</tr>
<tr>
<td>Supplier</td>
<td>Problems concerning an outsource supplier</td>
</tr>
</tbody>
</table>
Table 7 - Problem categories

<table>
<thead>
<tr>
<th>IT process</th>
<th>Problems related to the outsourced IT service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outsourcing arrangements</td>
<td>Problems regarding outsourcing contracts and arrangements</td>
</tr>
</tbody>
</table>

For example, the problem of a lack of IT knowledge can be caused by the size of a firm and the related limited resources. Therefore it is part of the buyer category.

Table 8 gives an overview of all identified problems.

<table>
<thead>
<tr>
<th>Category</th>
<th>Specific problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer</td>
<td>1. Insufficient funds</td>
</tr>
<tr>
<td></td>
<td>2. Exceeding the planned budget</td>
</tr>
<tr>
<td></td>
<td>3. No insight in own core competence</td>
</tr>
<tr>
<td></td>
<td>4. Lack of IT knowledge (no IT department)</td>
</tr>
<tr>
<td>Supplier</td>
<td>1. Identifying the right supplier</td>
</tr>
<tr>
<td></td>
<td>2. Under-performance of supplier</td>
</tr>
<tr>
<td></td>
<td>3. Managing different suppliers</td>
</tr>
<tr>
<td>IT process</td>
<td>1. Right choice from diverse products and services</td>
</tr>
<tr>
<td></td>
<td>2. Under-performance of service</td>
</tr>
<tr>
<td>Outsourcing arrangements</td>
<td>1. Inadequate skills in contract negotiations</td>
</tr>
<tr>
<td></td>
<td>2. Being a small customer for a supplier (i.e. incorrect power balance)</td>
</tr>
<tr>
<td></td>
<td>3. Choosing the right outsourcing arrangement (due to lack of experience)</td>
</tr>
</tbody>
</table>

Table 8 - Overview of IT outsourcing problems (literature research)

### 3.2.2 Practical research

Besides an explorative literature research also a practical research has been carried out. During the second phase of this project several open interviews have been held with two types of companies: small firms (i.e. buyers) and IT outsourcing firms (i.e. suppliers).

**Small firms**

Four small sized firms of the Dutch market have been interviewed on the implementation of IT outsourcing within their company. The transcripts of the interviews can be found in appendix III of the project. A short description of their businesses is given below:

**Company A**

This company is a software development firm, which offers a software platform to Internet Service Providers. It consists of 10 full time employees (FTE).
Company B
This company provides an online market place for real estate in the Netherlands. The company size is 25 FTE.

Company C
This company provides online surveys to multinationals. The company size is 10 FTE in the Netherlands and it has a dependence in India of 16 FTE.

Company D
This company offers a computer solution to consumers via a unique combination of hardware and software. It consists of 8 FTE.

The companies have been interviewed to get more insight into the selection process and the implementation of IT outsourcing and to support the literature in validating the identified problems of the last paragraph. The results regarding validating the research question are given in the table below.

<table>
<thead>
<tr>
<th>Category</th>
<th>Problems Company A</th>
<th>Problems Company B</th>
<th>Problems Company C</th>
<th>Problems Company D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer</td>
<td>- No insight in own core competence</td>
<td>- None</td>
<td>- None</td>
<td>- IT outsourcing project was more expensive than agreed</td>
</tr>
<tr>
<td>Suppliers</td>
<td>- Finding the right supplier</td>
<td>- Finding the right supplier</td>
<td>- Under performance of supplier - Business loss, due to costly mistakes of supplier</td>
<td>- Conflict with supplier - Under performance of supplier</td>
</tr>
<tr>
<td></td>
<td>- High overhead costs due to the management of the relationship</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT processes</td>
<td>- Choosing the right product to outsource</td>
<td>- None</td>
<td>- No available supplier for specific process</td>
<td>- No mutual understanding of the IT process</td>
</tr>
<tr>
<td>Outsourcing arrangements</td>
<td>- No mutual understanding of the business model</td>
<td>- None</td>
<td>- Service Level Agreements (SLAs) do not offer the right Quality of Service (QoS)</td>
<td>- Inflexible outsourcing contracts - No mutual understanding of the business model</td>
</tr>
</tbody>
</table>

Table 9 – Problems of small firms (interview)

The interviewed firms had problems with finding the right type of supplier. The cause of this problem is sometimes founded in the lack of mutual understanding of how the outsourcing project should look like (Company D,
The selection process of IT outsourcing within small firms

2006). Furthermore, some outsourcing firms underperformed their IT services, due to the fact that no person within the IT outsourcing firm took the responsibility when there were problems (Company C, 2006). In addition, Company C addressed that a supplier had made costly mistakes, which resulted in business loss for the company.

The management of the relationship is also seen as difficult, because of the lack of experience of how to maintain a relationship between a buyer and a supplier (Company A, 2006). This situation can create significant overhead costs. Moreover the contractual arrangements and relationship with the supplier are important to the success of the outsourcing arrangement (Company D, 2006).

IT outsourcing firms

Next to the buyers three IT outsourcing firms have been interviewed to research as well the supplier side of IT outsourcing. This is an important aspect, because both parties are needed for an outsourcing project.

Company E

This company offers a shared service centre for its business customers. Their portfolio consists of IT processes and non-IT processes. They have a focus on medium and large enterprises.

Company F

This company is specialized in offering IT processes, such as server management and desktop management to medium enterprises.

Company G

This company offers a total solution for outsourcing operational IT processes for small and medium firms.

The interviews aimed to increasing the insight of IT outsourcing market and finding possible problems in outsourcing relationships. The results of the interviews are given in the table below.

<table>
<thead>
<tr>
<th>Category</th>
<th>Problems Company E</th>
<th>Problems Company F</th>
<th>Problems Company G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer</td>
<td>- Buyer has insufficient funds</td>
<td>- None</td>
<td>- Buyer has insufficient funds</td>
</tr>
<tr>
<td>Suppliers</td>
<td>- None</td>
<td>- The IT outsourcing market is not transparent</td>
<td>- None</td>
</tr>
<tr>
<td>IT processes</td>
<td>- None</td>
<td>- None</td>
<td>- None</td>
</tr>
<tr>
<td>Outsourcing</td>
<td>- Difficult and time consuming contract</td>
<td>- Contractual issues</td>
<td>Contractual issues</td>
</tr>
<tr>
<td>arrangements</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Almost all interviewed companies did not address problems relating the categories: suppliers and IT processes. As IT outsourcing is their core business it could be a subjective view. The only problems which were addressed were insufficient funds of small firms. This could also be interpreted as that small firms have low budgets for IT outsourcing projects and that they are not fond of exceeding the planned budget. Other problems are: difficult and time consuming contract negotiations, due to the lack of mutual understanding about the business model, the transparency of the IT outsourcing market and contractual issues. Small firms are not experienced in contract negotiations, which can lead to delays and overhead costs for outsourcing firms (Company G, 2006).

Table 11 provides an overview of all problems that have been identified during the open interviews.

<table>
<thead>
<tr>
<th>Category</th>
<th>Specific problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer</td>
<td>1. IT outsourcing project was more expensive than agreed</td>
</tr>
<tr>
<td></td>
<td>2. No insight into own core competence</td>
</tr>
<tr>
<td>Supplier</td>
<td>1. The IT outsourcing market is not transparent (i.e. identifying the right supplier)</td>
</tr>
<tr>
<td></td>
<td>2. High overhead costs, due to the management of an outsourcing relationship</td>
</tr>
<tr>
<td></td>
<td>3. Business loss, due to costly mistakes of supplier</td>
</tr>
<tr>
<td></td>
<td>4. Under performance of supplier</td>
</tr>
<tr>
<td>IT process</td>
<td>1. Choosing the right product to outsource</td>
</tr>
<tr>
<td></td>
<td>2. No available supplier for a specific IT process</td>
</tr>
<tr>
<td>Outsourcing arrangements</td>
<td>1. Difficult and time consuming contract negotiations (no mutual understanding about the business model)</td>
</tr>
<tr>
<td></td>
<td>2. Contractual issues</td>
</tr>
<tr>
<td></td>
<td>3. Service Level Agreements (SLAs) do not offer the right Quality of Service (QoS)</td>
</tr>
</tbody>
</table>

A large number of the problems overlap with the ones that have been identified during the literature research. This is logic, due to the fact that the articles found during the literature research had a focus on SMEs.
3.2.3 Synthesis

After a literature research and a practical research it can be concluded that small firms have problems with the selection process and implementation of IT outsourcing within their organizations. This validates the relevance of this research project.

A synthesis about the literature and the interviews is given in the table below. Each problem is a situation where there is a difference between the actual situation and the situation that is required or desired.

<table>
<thead>
<tr>
<th>Category</th>
<th>Specific problem</th>
</tr>
</thead>
</table>
| Buyer               | 1. IT outsourcing project was more expensive than agreed (exceeding planned budget)  
                        2. No insight in own core competence  
                        3. Lack of IT knowledge (no IT department) |
| Supplier            | 1. Difficulties with identifying the right supplier  
                        2. Over dependence on supplier  
                        3. High overhead costs, due to the management of the relationship  
                        4. Business loss, due to a mistake of a supplier |
| IT process          | 1. Right choice from diverse products and services  
                        2. No available supplier for a specific IT process  
                        3. Under-performance of a service |
| Outsourcing         | 1. Difficult and time consuming contract negotiations (due to inadequate skills in contract negotiations and no mutual understanding about the business model)  
                        2. Inflexible outsourcing contracts (due to being a small customer for a supplier / incorrect power balance)  
                        3. Choosing the right outsourcing arrangement (due to lack of experience)  
                        4. Service Level Agreements (SLAs) do not offer the right Quality of Service (QoS) |
arrangements         |                                                                                  |

Table 12 – Synthesis of identified IT outsourcing problems within small firms

Table 12 gives a complete overview of all problems. This thesis though has a focus on the selection process of IT outsourcing. Therefore two problems are out of scope and are not taken into account further in this research:

1. No insight in own core competences. This problem is related to the make-or-buy decision and is taken during the decision phase.

2. No available supplier for a specific IT process. This research project focuses on the market of IT outsourcing, which offers IT services to small firms. Therefore the delineation that we only look to services which are available in on the market has been set.
The specified IT outsourcing problems are used in the next paragraph to generate a list of IT outsourcing risks that have a focus on small firms.

3.3 Risks of IT outsourcing within small firms

IT outsourcing problems that can occur during and after the implementation of IT outsourcing within small firms have been specified. The identified problems are examined to construct a list of IT outsourcing risks within small firms.

A risk can be defined as the impact of a situation times the probability it can occur. Therefore the risks in this paragraph are discussed by looking at these two aspects: impact and probability. First, these two aspects are elaborated. Afterwards the risks are discussed.

**Impact and probability**

The impact of the risks that come with an IT outsourcing project can be divided into two main categories: business risks and money. A business risk can be for example a law suit of a customer, because of a deficient QoS. The category money is important, due to the usually limited cash position a small firm has and the difficulty it has to raise external capital (Mann, Pharr, Robinson and Weinrauch, 1991). Here a few examples are given to clarify the impact and the probability of several risks.

The risk that an IT outsourcing project exceeds its budget can come due to several factors. The impact of this risk can be measured by the amount of money a project goes over its budget related to the cash position of a company. Generally, a small firm does not have a strong cash position and therefore the financial impact can be relatively large when a project exceeds its budget. The probability that it occurs can depend on the incentives of the supplier. When a supplier has the intention to build a long term relationship, it has the right incentives. As a result these risks are lower. The same counts for opportunism of the supplier. When business goals are not aligned (e.g. when a buyer wants to reduce costs and a supplier wants to make profit) it increases the risk of opportunism. Moreover, when a firm has difficulties with measuring the performance of the supplier, opportunism can increase.

An incorrect power balance can impose a difficult situation for a small firm, in such a way that the costs during the contracting phase can increase rapidly. This is an unwanted situation, because overhead costs can increase. This makes it important to choose the right supplier. The probability that this situation occurs is however less high due to the fact that during the contracting phase there are usually more than one supplier, which decreases the power balance of a specific supplier.
Now the risks are discussed. The categories that have been specified in paragraph 3.2.1 are used to categorize the risks. Afterwards, an overview is given in table 13.

**Buyer**
Due to limited IT knowledge of a small firm, the risk exists that a firm pays for the wrong IT services (i.e. services a firm actually does not need). This can have a financial *impact* and can create the problem that an IT outsourcing project exceeds the budget of the firm. Moreover, a lack of contracting skills can as well increase the budget.
The problem that a firm has a lack of IT knowledge can create difficulties in monitoring the performance of the supplier, which can create opportunism at the supplier side. As a result, it can have a financial *impact* and can increase the outsourcing project costs.

**Supplier**
The situation of a possible incorrect power balance between a buyer and a supplier makes it important to choose the right supplier. When a firm is just a small customer for a supplier, contract negotiations can be difficult. The *impact* can be that the contract between a buyer and a supplier is not well balanced.
Lock-in effects can be created when a firm builds on a long relationship with a supplier and when it agrees to lengthy contract durations. This can lead to overdependence on a supplier.
Small firms sometimes have difficulties with managing a relationship. This inexperience can lead again to a financial *impact* of high overhead costs during the operational phase of an IT outsourcing project.
When a small firm outsources an IT process, it can create the problem of business loss, if a supplier makes a costly mistake or underperforms its service. Especially when an IT service, such as a web shop, is directly related to the sales and revenues of a company. This can lead to direct business loss for the buyer.

**IT process**
When a buyer lacks IT knowledge within its company it makes it very difficult to choose the right product or service for the IT process that it wants to outsource. This can result in buying an IT service that does not fit the needs of a small firm.
The risk that a buyer does not receive the needed Quality of Service (QoS) from a supplier can lead to the problem that an IT service underperforms. This situation can lead again to business loss due to unsatisfied customers of a buyer and therefore inefficient outsourcing.

**Outsourcing arrangement**
Inadequate skills in contract negotiations can create significant overhead costs during the negotiation phase. This can lead to the situation that outsourcing advantages do not cover outsourcing overhead costs.
When the power balance between a buyer and a supplier is unequal it can lead to a contractual lock-in for a buyer. The lack of experience of a buyer in outsourcing can create the situation that a contract does not fit the buyer. This can create the situation that a buyer pays for services it actually does not need. The risk of not receiving the right QoS can lead to the situation that a buyer receives a QoS which is not the same that has been negotiated in the Service Level Agreement (SLA).

Table 13 gives an overview of all risks with their corresponding problems.

<table>
<thead>
<tr>
<th>Risks</th>
<th>Corresponding problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer</td>
<td>IT outsourcing project was more expensive than agreed</td>
</tr>
<tr>
<td>1. IT outsourcing project may exceed budget, due to paying for the wrong services</td>
<td></td>
</tr>
<tr>
<td>2. IT outsourcing project may exceed budget, due to limited contracting skills</td>
<td></td>
</tr>
<tr>
<td>1. Possible opportunism of supplier, due to problems with measuring performance of supplier</td>
<td></td>
</tr>
<tr>
<td>1. Possible unfair contract terms, due to an incorrect power balance during contract negotiations</td>
<td></td>
</tr>
<tr>
<td>Supplier</td>
<td>Over dependence on supplier</td>
</tr>
<tr>
<td>1. Possible over dependence on supplier, due to lock-in effects</td>
<td></td>
</tr>
<tr>
<td>1. Inexperience of managing a relationship might create conflicts</td>
<td></td>
</tr>
<tr>
<td>1. Supplier might under perform</td>
<td></td>
</tr>
<tr>
<td>IT process</td>
<td>Identifying the right supplier</td>
</tr>
<tr>
<td>1. An IT service might not fit the needs of a small firm, due to a lack of IT knowledge within a small firm</td>
<td></td>
</tr>
<tr>
<td>2. IT outsourcing project might be inefficient</td>
<td></td>
</tr>
<tr>
<td>IT outsourcing arrangement</td>
<td>High overhead costs, during the management of the relationship</td>
</tr>
<tr>
<td>1. An outsourcing arrangement may generate too much overhead costs</td>
<td></td>
</tr>
<tr>
<td>2. Outsourcing advantages might not cover outsourcing overhead costs</td>
<td></td>
</tr>
<tr>
<td>Outsourcing arrangement</td>
<td>Right choice from diverse products and services</td>
</tr>
<tr>
<td>1. Lock-in effects can occur due to an outsourcing arrangement</td>
<td></td>
</tr>
<tr>
<td>Outsourcing arrangement</td>
<td>Under-performance of an IT service</td>
</tr>
<tr>
<td>1. Outsourcing contract might not fit (paying for service a buyer does not need)</td>
<td></td>
</tr>
<tr>
<td>Outsourcing arrangement</td>
<td>Difficult and time consuming contract negotiations (due to inadequate skills in contract negotiations and no mutual understanding about the business model)</td>
</tr>
<tr>
<td>1. May not receive the needed QoS, due to a deficient SLA</td>
<td></td>
</tr>
<tr>
<td>Outsourcing arrangement</td>
<td>Inflexible outsourcing contracts (because of being a small customer for a supplier (i.e. incorrect power balance))</td>
</tr>
<tr>
<td>1. May not receive the needed QoS, due to a deficient SLA</td>
<td></td>
</tr>
<tr>
<td>Outsourcing arrangement</td>
<td>Choosing the right outsourcing arrangement (due to lack of experience)</td>
</tr>
<tr>
<td>1. May not receive the needed QoS, due to a deficient SLA</td>
<td></td>
</tr>
<tr>
<td>Outsourcing arrangement</td>
<td>Service Level Agreements (SLAs) do not offer the right Quality of Service (QoS)</td>
</tr>
</tbody>
</table>

The next paragraph gives a summary of all identified risks that have a focus on small firms.
3.4 Conclusion

This chapter has focused on the implementation problems and risks that can occur when a small firms implements IT outsourcing. In table 14 the risks that have been identified are given. All risks address the impact they can have within a small firm.

<table>
<thead>
<tr>
<th>Category</th>
<th>Specific risks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buyer</strong></td>
<td>1. IT outsourcing project may exceed budget</td>
</tr>
<tr>
<td></td>
<td>2. Possible opportunism of supplier, due to problems with measuring performance of supplier</td>
</tr>
<tr>
<td><strong>Supplier</strong></td>
<td>1. Possible unfair contract terms, due to an incorrect power balance during contract negotiations</td>
</tr>
<tr>
<td></td>
<td>2. Possible over dependence on supplier, due to lock-in effects</td>
</tr>
<tr>
<td></td>
<td>3. Inexperience of managing a relationship might create conflicts</td>
</tr>
<tr>
<td></td>
<td>4. Supplier might under perform, which can result in business loss</td>
</tr>
<tr>
<td><strong>IT process</strong></td>
<td>1. An IT service might not fit the needs of a small firm, due to a lack of IT knowledge within a small firm</td>
</tr>
<tr>
<td></td>
<td>2. May not receive the needed QoS</td>
</tr>
<tr>
<td></td>
<td>3. IT outsourcing project might be inefficient</td>
</tr>
<tr>
<td><strong>Outsourcing arrangements</strong></td>
<td>1. An outsourcing arrangement may generate too much overhead costs</td>
</tr>
<tr>
<td></td>
<td>2. Outsourcing advantages might not cover outsourcing overhead costs</td>
</tr>
<tr>
<td></td>
<td>3. Lock-in effects can occur, due to an outsourcing arrangement</td>
</tr>
<tr>
<td></td>
<td>4. Outsourcing contract might not fit (paying for service a buyer does not need)</td>
</tr>
<tr>
<td></td>
<td>5. May not receive the needed QoS, due to a deficient SLA</td>
</tr>
</tbody>
</table>

Table 14 - IT outsourcing risks within small firms

It is important to address that the identified risks have a lot of similarities with the risks of medium and large enterprises, when they outsource an IT service. However, the impact of these risks can be significantly larger for small firms than their larger counterparts. Moreover, the reasons behind the risks can differ as well due to the specific characteristics of a small firm.

Chapter 4 uses the specified risks to identify theories that are related to IT outsourcing.
4 IT outsourcing theories related to small firms

This chapter examines which theories are related to IT outsourcing within small firms. Moreover, it investigates which theories can be used to build the structure of the decision model of chapter 5. The theories are identified via the specified risks of chapter 3. As a result, chapter 4 answers the following sub question:

Which theories form the basis for the decision model? (Based on the identified risks of chapter 3)

Next to this sub question, another question is formulated, as the end result of this chapter are components that are used for the structure of the decision model in the next chapter.

Which components can be derived from the identified theories for the structure of the decision model?

This chapter has the following structure. First, it uses the risks of chapter 3 to identify common outsourcing theories that are linked to IT outsourcing. Secondly, it discusses these theories how they relate to IT outsourcing. Afterwards it is argued that these common outsourcing theories do not have a focus on small firms and that therefore additional literature is needed. At last, a literature research is provided that gives insight into how IT outsourcing is related to small firms. The results (i.e. components) of the literature research are used in the next chapter to build the structure of the decision model.

4.1 Identified risks related to outsourcing theories

To decide which theories are related to IT outsourcing we look to two aspects of IT outsourcing. First of all, the definition of IT outsourcing offers a starting point. It can be defined as:

"The transfer of a service, and when applicable the corresponding resources and employees, to a specialized service supplier, which provides services to an agreed quality of service and an agreed fee during a contract period" (Wijers et al., 2005).

The definition of IT outsourcing puts forward the importance of a buyer-supplier relationship. This relationship is formalised in a contract or outsourcing arrangement. It also addresses a periodical fee for the IT service. Summarized, there are three main aspects that are related to IT outsourcing:

1. Buyer-supplier relationship
2. Outsourcing arrangements
The selection process of IT outsourcing within small firms

3. Costs for a transaction

A literature research (Aubert, Rivarda and Patry, 2003; Bahli and Rivard, 2003; Carmel and Nicholson 2004; Gottschalk and Solli-Sæther, 2005) shows that there are two theories, which are closely related to these three aspects.

1. Transaction costs economics (TCE). TCE looks to the costs which are made when a transaction (i.e. the outsourcing of an IT process) is performed between a buyer and a supplier.

2. Agency theory (AT). Agency theory can help to explain how interests between an agent (i.e. buyer) and a principal (i.e. supplier) may diverge and how the relationship between them can be regulated in contractual terms.

Secondly, the risks of chapter 3 (table 14) are used as well as a starting point to find theories that are related to IT outsourcing. Two examples are given here:

1. The risk that a supplier shows opportunistic behaviour can be explained via Agency Theory, as this theory explains the behaviour between a principal and an agent.

2. The risk that an outsourcing project creates too much overhead costs due to high contracting costs can be explained by Transaction Costs Economics. This theory addresses contractual issues. Moreover, it examines for instance how the frequency of transaction has influence on the strategic behaviour of a supplier.

Looking to the definition of IT outsourcing and the risks that have been specified in the last chapter it can be concluded that Transaction Costs Economics and Agency Theory form a basis to examine IT outsourcing.

4.2 IT outsourcing theories

Transaction Costs Economics and Agency Theory are elaborated in the next two paragraphs. Afterwards, an overview is given of the main characteristics of each theory and how they are related to IT outsourcing.

4.2.1 Transaction Costs Economics

The theoretical foundation of outsourcing most often mentioned is transaction cost economics (TCE). This theory was introduced by Coase (1937). The transaction cost economics was further developed by Williamson (1975). Williamson (1979) defined transaction costs as ex ante and ex post transaction costs. Ex ante transaction costs are costs for planning and
The selection process of IT outsourcing within small firms

negotiating an agreement. Ex post transaction costs include implementation costs, bargaining costs and running costs. Carmel and Nicholson (2004) suggest that TCE has in general three stages instead of ex ante and ex post. They are defined as: contact costs, contract costs and control costs. Contact costs are made when a buyer needs to find the right IT outsourcing supplier. Contract costs are generated when the outsourcing arrangement is negotiated. Finally, during the running of the project, control or monitoring costs are made.

Transaction costs arise because complete contracting is often impossible and incomplete contracts increase the chance of renegotiations when the balance of power between the transacting parties shifts (Williamson, 1979). Five attributes of business exchange (i.e. an IT outsourcing relationship) are associated with transaction costs (Gottschalk and Solli-Sæther, 2005):

1. The necessity of investments in durable or specific assets
2. Infrequency of transactions
3. Task complexity and uncertainty
4. Difficulty in measuring task performance
5. Interdependencies with other transactions

The necessity of early investments in durable, transaction-specific assets (e.g. human or physical capital) shifts the balance of power between a buyer and an IT outsourcing supplier, because in later renegotiations these costs are sunk costs of the party that invested them. This has most of the time influence on a supplier in a way that a supplier is not keen on large, early investments. Infrequent transactions increase the likelihood of opportunistic behaviour, due to the fact that with frequent transactions a buyer and a supplier are more morally attached to a relationship. In situations where broader market reputations are at stake, infrequent transactions may be sustainable. Long-term contracts often do not provide sufficient adaptation mechanisms. Inflexibility may actually stimulate hold-ups an therefore create higher contracting costs.

When a firm wants to outsource an IT process, which is complex, it usually generates high negotiation costs during the contracting phase. This is due to the difficult contracting issues (e.g. legislation, risks), which are generated by complex IT processes. During the control phase it is also difficult to measure the performance of complex processes. This can lead again to opportunistic behaviour at the supplier side. Difficulties in measuring can as well occur when the degree of change of ownership is high in an outsourcing relationship (Gottschalk and Solli-Sæther, 2005).

Processes which have a high degree of uncertainty can be less efficient, because of the fact that the contract needs to address all possible situations. At last, interdependencies with other transactions can create more complexity and thus higher transaction costs.
The five transaction attributes indicate situations in which opportunistic behaviour is likely. If transaction costs equalize production cost advantages of the external supplier, the firm will probably change its outsourcing strategy and insources the IT process again.

Seen from a transaction cost economics perspective, the sourcing decision is often considered as a rational decision made by firms that have considered transaction related factors such as asset specificity, environmental uncertainty and other types of transaction costs (Ang and Straub, 1998). Whenever an IT process is outsourced under conditions of high uncertainty, or whenever an IT process requires specific assets, transaction costs increase. Especially the costs of writing, monitoring and enforcing contracts are likely to be high. When transaction costs are high, outsourcing is deemed to be relatively inefficient compared with performing the operational processes internally.

To summarize the link with IT outsourcing and TCE the following table is created.

<table>
<thead>
<tr>
<th>Theory</th>
<th>Link to IT outsourcing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction cost economics</td>
<td>Outsource all IT processes where the benefits for the company are greater than the generated transaction costs of the outsourcing arrangement. The benefits include increased revenues and reduced costs, when sourcing an IT process to an IT outsourcing supplier.</td>
</tr>
</tbody>
</table>

### 4.2.2 Agency Theory

Another theory which is closely related to the theoretical foundation of IT outsourcing is agency theory. Agency theory can help to explain how interests between a buyer and a supplier may diverge and how the relationship between them can be regulated in contractual terms (Hancox and Hackney, 2000). The original drive for the development of agency theory was the separation of control from ownership within corporations. All contractual arrangements contain important elements of agency theory (Ross, 1973). According to Agency Theory there are mainly two types of contracts. First of all there are behaviour-based contracts. These contracts are also called input-based contracts. An agent gets paid by the principal (i.e. buyer) based on the time and materials it has spent. Performance-based contracts look to the output of an IT project. The agent is rewarded according to an agreed fee which is based on its performance.

Agency theory is essentially concerned with the delegation of work by one party (the principal or buyer) to another (the agent or supplier) via a contract (Eisenhardt, 1989). Eisenhardt (1989) suggests that agency theory
is concerned with resolving two difficult situations that can occur in outsourcing relationships:

1. Different (business) goals between a buyer and a supplier.
2. Diverse risk preferences between a buyer and a supplier.

The first becomes an agency problem when the goals or desires of a buyer and a supplier conflict. Especially when it is difficult or expensive for the buyer to verify what the supplier is actually doing. The supplier could perform in such a situation opportunism or strategic behaviour. In the second situation a problem arises when a buyer and a supplier have different risk preferences. These problems are well known in IT outsourcing.

An example might be that a buyer wants to reduce its costs of an IT process, while the IT outsourcing supplier wants to maximize its profits. The agency problem arises when the two parties do not share productivity gains and thus do not have a common business goal. When a system administrator manages a network environment of a firm it tries to maximize its declarable hours, when the contract is behaviour-based. The firm of course wants to reduce its IT costs for the internal network and wishes to minimize the declarable hours.

The second situation occurs when risk preferences are different. Diverse risk preferences might be the result of different ideas towards the use of new technologies in outsourcing projects. These risk differences make contract negotiations more difficult, because both parties have a different attitude towards the contract negotiations and the way an IT process should be implemented.

The technological and business complexity of IT means that there could be considerable problems for the buyer when choosing a suitable IT outsourcing supplier and when monitoring work of this supplier (Gottschalk and Solli-Sæther, 2005). Only the supplier knows how hard he is working. This can be especially important in multilateral contracting where one supplier acts for several firms. Usually this is the case in IT outsourcing because of the market dominance of one large firm.

Given the difficulties of behaviour-based contracts suggested by agency theory, it is reasonable to assume that the great majority of firms would insist on performance contracts when outsourcing IT processes. Such a strategy can only succeed if the buyer can specify the IT process requirements. Accurate predictions of the firm may not always be in the supplier’s interests. This is understandable, considering that account managers often are rewarded according to contract profitability, which is principally achieved by charging the client extra for anything which is not in the contract (Hancox and Hackney, 2000).
The choice of an outsourcing arrangement type depends on the agency costs, which include the effort and thus costs of the buyer in assessing the performance of the supplier. Furthermore the supplier has to make effort in assuring the commitment of the buyer (Cheon, Grover and Teng, 1995). Performance contracts are known to reduce the opportunism of the supplier because the rewards of both buyer and supplier depend on the same actions. This means that at that moment they have the same business goal. For behaviour-based contracts the buyer needs to have sufficient information during the selection process about the performance and quality of the delivered services of the supplier to overcome possible dangers, such as bad supplier selection (i.e. the agent does not possess the skills it claims).

In the overview below a summary is given of agency theory and its link to IT outsourcing.

<table>
<thead>
<tr>
<th>Theory</th>
<th>Link to IT outsourcing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency theory</td>
<td>Outsource only IT processes where the agent (i.e. supplier) and the principal (i.e. buyer) have the same business goals and the same idea about sharing the risk of an IT outsourcing project. If this is not the case it can generate opportunism at the supplier side.</td>
</tr>
</tbody>
</table>

Table 16 – Agency theory linked to IT outsourcing

4.2.3 Overview of Transaction Costs Economics and Agency Theory

Each theory has a different perspective on IT outsourcing and therefore addresses different aspects.

In the table below the definition attribute is used. It can be defined as a single property or characteristic of a component. A component is described by the values of its attributes. For example, a car can be described by its brand, model, colour, and so on. This are the characteristics of a car (WWW6).

In this case for instance, a long term contract is an attribute of an outsourcing arrangement as the outsourcing arrangement can be described by such characteristics. In table 17 the attributes are given per theory with their impact and result on an IT outsourcing project. The overview is elaborated below table 17.
The selection process of IT outsourcing within small firms

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Result and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early investments</td>
<td>Suppliers are not keen on large, early investments. It can change the power balance between buyer and supplier due to sunk costs after an investment.</td>
</tr>
<tr>
<td>Infrequent transactions</td>
<td>Can create opportunistic behaviour of a supplier. Suppliers are not morally attached to an outsourcing relationship. Infrequent transactions are only possible when the company’s reputation is at stake.</td>
</tr>
<tr>
<td>Long term contracts</td>
<td>Can create inflexibility. It can increase hold-ups and thus contracting costs.</td>
</tr>
<tr>
<td>Process specificity</td>
<td>Can increase the costs of writing, monitoring and enforcing contracts and therefore is less efficient and could be less interesting. Moreover, standardized contract are difficult to use, due to the specificity of a process.</td>
</tr>
<tr>
<td>High uncertainty</td>
<td>Can increase the costs of writing, monitoring and enforcing contracts and therefore is less efficient and could be less interesting.</td>
</tr>
<tr>
<td>Behaviour-based contract</td>
<td>Can create opportunism, when business goals are not aligned.</td>
</tr>
<tr>
<td>Performance-based contract</td>
<td>Less risk for a buyer, due to risk avoiding. It also can reduce opportunism at the suppliers side. Suppliers prefer normally behaviour-based contracts.</td>
</tr>
<tr>
<td>Complexity of IT process</td>
<td>Can be difficult when choosing a suitable supplier and in monitoring the agent’s work.</td>
</tr>
<tr>
<td>Diverse risk preferences</td>
<td>Can create hold-ups during contract negotiations, due to different attitude towards dividing risks.</td>
</tr>
</tbody>
</table>

Table 17 – Characteristics of TCE and AT linked to IT outsourcing

TCE addresses mainly two aspects of IT outsourcing: the IT process and the outsourcing arrangement. The characteristics that relate to the outsourcing arrangement are the contract period and the flexibility of a contract. It argues that long term contracts create inflexibility, which can increase the contracting costs. It as well addresses that supplier are not keen on early investments and that infrequent transactions can create opportunism. The characteristics that are related to an IT process are specificity and uncertainty. These two aspects make IT outsourcing more difficult and less attractive for a buyer.

Agency Theory focuses on the relationship between the buyer and the supplier. It examines four different aspects. First of all, Agency Theory addresses the importance of different risk preferences. When a buyer and a supplier have a different attitude towards risks it is difficult to understand each other in how the contract should look like or who should invest. This
can create hold-ups during contract negotiations. AT, as well, talks about the complexity of an IT process. This also relates to opportunism within a relationship, due to the fact that monitoring is more difficult when an IT process is complex. At last, it talks about two contract types: performance- and behaviour-based contracts. These contract types have a different impact on the behaviour of the buyer and supplier. Behaviour-based contracts for example can increase opportunism at the supplier side, due to the fact that business goals may not be aligned.

4.2.4 Limitations
As mentioned above, TCE and AT provide a basis to explain IT outsourcing risks. There are though some limitations, which are based on the fact that these theories do not have a focus on situational factors. Therefore the theories do not take into account characteristics of small firms. As the main goal of this chapter is to provide components for the structure of the decision model that has a focus on small firms, an additional literature research is needed, which takes these situational characteristics into account.

4.3 Literature research with a focus on small firms
The literature research of this paragraph has a focus on small firms (DiRomualdo and Gurbaxani, 1998; Franckson and Verhoef, 1999; Jansen and Bushoff, 2004; Kern and Willcocks, 2000; Nabeel Al-Qirim and Hanoku, 2002; Rohde, 2004; Willcocks and Feeny, 2006).

Rohde (2004) argues that smaller-sized firms are inherently different from their larger counterparts. These differences can lead to different outsourcing arrangements governing these arrangements. Firm size can have influence on the budget and the size of an IT outsourcing project. This can create an unequal power balance between the buyer and the supplier. Another aspect which can be related to the size, is the level of contract and negotiation skills. Limited experience can lead to difficult contract negotiations, extra costs and unexpected outcomes, such as exceeding an IT outsourcing budget. These contract and negotiation skills can also have influence on the type of outsourcing arrangement. The relationship between experience and the formation of efficient outsourcing relationships has been suggested in a study of Anand and Khanna (2000). For small firms it can be interesting to choose a standardized contract instead of a negotiated contract. Especially when the power balance is unequal or when both parties want to keep the contracting costs low. Kern and Willcocks (2000) address the importance of relationship management skills. When a firm outsources an IT process it is important to know how a buyer should manage a supplier. When it lacks this type of skills it can create extra overhead costs, which can lead to inefficient outsourcing. At last, Rohde (2004) suggests that inadequate IT knowledge can lead to difficulties in specifying IT outsourcing requirements and monitoring the performance of the supplier. This can increase again the
opportunism at the supplier side. When a small firm lacks IT knowledge, it should address this problem. Nabeel Al-Qirim and Hanoku (2002) put limited contracting skills in the top 10 of problems that small firms can encounter when they want to outsource an IT process. They argue that small firms often do not have the budget or the will to spend budget on increasing their contracting skills. This is often a reason why IT outsourcing projects can fail.

Willcocks and Feeny (2006) focus more on the IT process object. They classify an IT process by its criticality or process type. A process can be defined as a primary (i.e. strategic) process or a secondary (i.e. operational) process. When a process is very critical it increases the dependence on a supplier. This can bring lock-in effects. Franckson and Verhoef (1999) have developed a best practice which is called the Information Services Procurement Library (ISPL). This best practice categorizes an IT process by the complexity of it. They argue that the complexity of an IT process can be regarded as the difficulty encountered in managing the available knowledge of the IT process. This complexity can have influence on the selection process of an IT outsourcing project, due to difficult contract negotiations, which can create hold-ups.

An IT outsourcing supplier can be categorized by the competitive advantage of a supplier (Jansen and Bushoff, 2004). Currently there are three main strategies for suppliers. First of all, a supplier can focus on operational excellence. This strategy reduces the operational costs for a buyer. Product leadership has a focus on the quality of the product. At last, customer intimacy sees the relationship with the customer as most important. Due to the difference in strategies this attribute can have influence on the decision process.

Di Romualdo and Gurbaxani (1998) address the attribute flexibility, which is related to the outsourcing arrangement object. They argue the need for flexibility in an outsourcing contract, when a firm acts in a dynamic business and technology environment. Flexibility can for example be increased by a short term of notice or contracts with no or limited guaranties of the buyer.

Sparrow (2004) reasons that when a small firm wants to outsource an IT process, it should first assess the impact of the IT outsourcing project on its own organization. This assessment can result in a buyer action plan. It consists mainly of two parts. First, when an IT process is very intertwined with the organization of the buyer, a firm should adapt its organizational processes to the new situation. This can lead to a reorganization of the company and should be put into an implementation plan. Secondly, depending on which type of IT process a firm outsources, it should assess its own in house skills regarding IT knowledge, contract and negotiation skills and relationship management skills. When for example a firm lacks contract and negotiation skills it can train its own procurer or hire external legal advice. Due to the limited resources of a small firm it usually does not get adequate attention. A firm should already address this topic during the
The selection process of IT outsourcing within small firms

selection phase, because otherwise it can lead to problems during the implementation or operational phase of an outsourcing project.

4.4 Conclusion

In this chapter common outsourcing theories are combined with an additional literature research.

In table 18 the attributes of the outsourcing theories and the additional literature research are combined to give an overview of all aspects that are related to IT outsourcing within small firms. As mentioned before, an attribute can be defined as a characteristic of a component. These characteristics are used in chapter 5 to build the structure of the decision model.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Result and explanation</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specificity</td>
<td>High process specificity increases the costs of writing, monitoring and enforcing contracts. Therefore it could be less efficient and less interesting.</td>
<td>Gottschalk and Solli-Sæther, 2005</td>
</tr>
<tr>
<td>Uncertainty</td>
<td>High process uncertainty increases the costs of writing, monitoring and enforcing contracts. Therefore it could be less efficient and less interesting.</td>
<td>Ang and Straub, 1998</td>
</tr>
<tr>
<td>Contract flexibility</td>
<td>Inflexible contracts can create long negotiations and higher contracting costs during the duration of the contract.</td>
<td>Gottschalk and Solli-Sæther, 2005</td>
</tr>
<tr>
<td>Contract period</td>
<td>Long term contracts create inflexibility. It can increase hold-ups and thus contracting costs.</td>
<td>Williamson, 1979</td>
</tr>
<tr>
<td>Risk preference</td>
<td>A difference in risk preferences can lead to suboptimal IT outsourcing, due to different attitudes towards dividing risks. This can create hold-ups during the contract negotiations.</td>
<td>Eisenhardt, 1989</td>
</tr>
<tr>
<td>Complexity</td>
<td>Complex IT processes can make it difficult to choose a suitable supplier. Furthermore it can increase the costs for monitoring the supplier’s work.</td>
<td>Gottschalk and Solli-Sæther, 2005</td>
</tr>
<tr>
<td>Contract type</td>
<td>Behaviour-based contracts can create opportunism, when business goals are not aligned. Performance-based contracts can reduce risk for a buyer. It can reduce opportunism at the suppliers side. Suppliers usually prefer behaviour-based contracts.</td>
<td>Hancox and Hackney, 2000</td>
</tr>
<tr>
<td>Attribute</td>
<td>Description</td>
<td>Source(s)</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Firm size</td>
<td>Can create an unequal power balance when a small firm deals with a medium or large supplier.</td>
<td>Rohde, 2004</td>
</tr>
<tr>
<td>IT knowledge</td>
<td>When a buyer has little IT knowledge it can create an unequal power balance, which can lead to opportunism.</td>
<td>Rohde, 2004</td>
</tr>
<tr>
<td>Contract and negotiation skills</td>
<td>Small firms generally have little contract and negotiations skills. Therefore power and skills to negotiate small contracts at large firms are limited.</td>
<td>Nabeel Al-Qirim and Hanoku, 2002; Anand and Khanna, 2000</td>
</tr>
<tr>
<td>Process type</td>
<td>The type of process can be defined as a primary process (strategic) or as a secondary process (operational).</td>
<td>Rohde, 2004; Willcocks and Feeny, 2006</td>
</tr>
<tr>
<td>Complexity</td>
<td>Complexity can be regarded as the difficulty encountered in managing the available knowledge of the IT process.</td>
<td>Franckson and Verhoef, 1999</td>
</tr>
<tr>
<td>Competitive advantage supplier</td>
<td>There are different types of suppliers: Operational excellence, Customer intimacy, Product leadership.</td>
<td>Jansen and Bushoff, 2004</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Need due to changes in business and technology environment.</td>
<td>DiRomualdo and Gurbaxani, 1998</td>
</tr>
<tr>
<td>Contract form</td>
<td>A contract can be standardized or negotiated per customer. This has influence on the contracting costs and the flexibility for the buyer.</td>
<td>Rohde, 2004</td>
</tr>
<tr>
<td>Relationship management skills</td>
<td>When a buyer does not have relationship management skills it can create extra overhead costs.</td>
<td>Kern and Willcocks, 2000</td>
</tr>
<tr>
<td>Implementation plan</td>
<td>When an IT process is very intertwined with the firms organizational processes it should reorganise its organization</td>
<td>Sparrow, 2003</td>
</tr>
</tbody>
</table>

Table 18 – An overview of attributes that are derived from literature related to IT outsourcing within small firms
5 Decision model

The goal of this chapter is to create insight into IT outsourcing decisions within small firms. Therefore a decision model is created. This chapter focuses on the structure of the model. This forms the following sub question:

*What is the structure of a decision model for the selection process of an IT outsourcing project within small firms?*

The decision model that is established in this chapter gives an overview of which components are important for an outsourcing decision. The characteristics of the components (i.e. attributes) of chapter 4 are used as a basis.

Chapter 6 builds the intelligence of the decision model. When the structure and the intelligence of the model are combined, it provides insight into how IT managers should make decisions.

5.1 Overview diagram

To develop a basis for the structure of the decision model it is important to put this research into context. Therefore an overview diagram is used in this chapter. This diagram is derived from a System Diagram, which has been put forward by Enserink, Koppenjan and Thissen (2004). Normally this type of diagram is used to create insight into large, complex systems. In this research project it is used to put the decision model into the right context.

![Figure 14 – Overview Diagram (Adapted: Enserink, Koppenjan and Thissen, 2004)](image)

In this diagram several definitions are used. First, a short overview is given of all the definitions.

**Exogenous variables:** These variables refer to an action or object coming from outside the system (Enserink, Koppenjan and Thissen, 2004).
Thissen, 2004). Environment and instrumental variables are exogenous:

1. Environment variables refer to variables which can not be modified or changed by the system or the user.

2. Instrumental variables can change the system. It is the input of the user to the system.

Endogenous variables: In a model, an endogenous change is one that comes from inside the model and is explained by the model itself (WWW3).

Output variables: The output variables are the variables which are the result of the system.

The make-or-buy decision is an instrumental variable, because a firm has the freedom to decide if it wants to outsource a specific IT process. In this research project we have left the make-or-buy decision out of scope, but it is shown here to create a complete overview.

Agency Theory and Transaction Costs Economics address in chapter 4 the influence of the characteristics of an IT process on an IT outsourcing project. Furthermore Agency Theory discusses the influence of the characteristics of a principal (i.e. buyer) on an IT outsourcing project. These attributes are in fact organizational characteristics (e.g. firm size). Due to the fact these influences can not be changed they are called exogenous or environment variables.

This research looks to the selection phase of an IT outsourcing project. The definition of a selection phase addresses the need to choose an IT outsourcing supplier and an IT outsourcing arrangement. The next phase is the implementation process. When a company outsources an IT service, which is very intertwined with its organizational processes, the company needs a plan to adapt its organization to the new situation. Moreover, when a firm does not have the skills to manage for example an outsourcing relationship, it needs as well to address this inexperience. Therefore the decision of choosing a supplier, an outsourcing arrangement and the buyer action plan are output variables of the model.

It is important to specify all mentioned variables to create a clear view. For that reason an overview is constructed in table 19.
The selection process of IT outsourcing within small firms

<table>
<thead>
<tr>
<th>Type of variable</th>
<th>Specified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrumental</td>
<td>1. Make-or-buy decision</td>
</tr>
</tbody>
</table>
| Environment      | 1. Type of buyer  
|                  | 2. Type of IT process |
| Output           | 1. Type of outsourcing supplier  
|                  | 2. Type of outsourcing arrangement  
|                  | 3. Buyer action plan |

Table 19 - Overview of variables

When the overview diagram with the specified variables are combined you get the following figure.

![Figure 15 - Overview Diagram for the selection process of an IT outsourcing project](image)

The interesting part of the diagram is how the endogenous variables are related to each other. In figure 15 this part is specified as the decision model.

Finally, the main structure of the decision model consists of five objects. These objects are derived from the specified overview diagram in figure 15:

<table>
<thead>
<tr>
<th>Input objects</th>
<th>Output objects</th>
</tr>
</thead>
</table>
| 1. Type of buyer  
| 2. Type of IT process | 1. Type of IT outsourcing supplier  
|                  | 2. Type of IT outsourcing arrangement |
|                  | 3. Buyer action plan                |

Table 20 - Overview of input and output objects

These objects form the basis of the decision model and is specified in the next paragraphs.
5.2 Approach

In the field of outsourcing and small firms only few articles have been written (Kakabadse and Kakabadse, 2005; Nabeel Al-Qirim and Hanoku, 2002; Rohde, 2004), due to the novelty of the market. Therefore there is almost no theory available for creating a decision model specific for small firms. As a result, common IT outsourcing theories and an additional literature research, which has a focus on small firms have been combined in chapter 4.

5.2.1 Definitions

The structure of the decision model consists of objects, attributes and values. In this paragraph it is explained how they are related to each other and how they can be defined. First of all the decision model exists of different objects. They are also called components (as mentioned earlier in this research). The definition object is used in this chapter, as this is common use in the design of models. Each object has specific attributes. Moreover each attribute has its own values (Ribeiro, 1996). Figure 16 gives a clear example.

![Figure 16 - Definition of an object](image)

The object Car has several attributes, such as brand, colour and motor type. Each attribute has corresponding values. For instance, the attribute motor type has two possible values: gasoline and petrol.

5.2.2 Objects

This paragraph gives an overview of all objects with their corresponding attributes. The attributes are derived from chapter 4 (table 18). Additionally, an overview is given where each attributes is derived from (i.e. theory or additional literature research).
The selection process of IT outsourcing within small firms

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Explanation</th>
<th>Theory</th>
<th>Additional literature research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buyer</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>The number of employees of a firm</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>IT knowledge</td>
<td>The level of IT knowledge a firm has</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Contract and negotiation skills</td>
<td>The skills of a firm to negotiate a contract</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Relationship management skills</td>
<td>The level of experience a firm has with managing an IT outsourcing relationship</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Risk preference</td>
<td>The attribute a firm has towards taking risks</td>
<td>AT</td>
<td></td>
</tr>
<tr>
<td><strong>IT process</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>The type of process can be defined as a primary process (strategic) or as a secondary process (operational)</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Specificity</td>
<td>High process specificity increases the costs of writing, monitoring and enforcing contracts. Therefore it could be less efficient and less interesting.</td>
<td>TCE</td>
<td></td>
</tr>
<tr>
<td>Uncertainty</td>
<td>The level of incomplete knowledge in a situation</td>
<td></td>
<td>AT</td>
</tr>
<tr>
<td><strong>Supplier</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>The number of employees of a firm</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Competitive advantage</td>
<td>There are different types of suppliers: operational excellence, customer intimacy, product leadership.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Risk preference</td>
<td>The attribute a firm has towards taking risks</td>
<td>AT</td>
<td></td>
</tr>
<tr>
<td><strong>Outsourcing arrangement</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract type</td>
<td>There are two types of contracts: behaviour-based contracts (input based) and performance-based contracts (output based)</td>
<td></td>
<td>AT</td>
</tr>
<tr>
<td>Contract period</td>
<td>The agreed period of a contract</td>
<td>TCE</td>
<td></td>
</tr>
<tr>
<td>Flexibility</td>
<td>The freedom to choose</td>
<td>TCE</td>
<td>X</td>
</tr>
<tr>
<td>Contract form</td>
<td>A contract can be standardized or negotiated per customer</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>Buyer action plan</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT knowledge</td>
<td>The level of IT knowledge a firm has</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Contract and negotiation skills</td>
<td>The skills of a firm to negotiate a contract</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Relationship management skills</td>
<td>The level of experience a firm has with managing an IT outsourcing relationship</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Implementation plan</td>
<td>A plan to reorganise organizational processes to adapt the organization to the new situation</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Table 21 – Overview of objects of the decision model with their attributes

The table shows that only few attributes have been found both in the literature and in the defined theories. Moreover, it is surprising that for example contract and negotiation skills are only covered by the literature research and not found in the theories. This could be explained by the fact...
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that transaction cost economics enlightens contractual arrangements on a conceptual level and the literature focuses more on practice. Anand and Khanna (2000) for instance, address the relationship between contracting skills and contracting costs, by referring to TCE.

The next paragraph gives an overview of all the values of all attributes.

5.2.3 Scale measurement

Each attribute has its own values. These values need to be specified to be able to construct the propositions. Therefore a scale measurement is used to specify the values of each attributes. There are different levels of scales. Table 22 gives an overview of all possible scale levels and their explanation.

<table>
<thead>
<tr>
<th>Level</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal</td>
<td>Distinction, such as gender</td>
</tr>
<tr>
<td>Ordinal</td>
<td>Distinction with order, such as academic level</td>
</tr>
<tr>
<td>Interval</td>
<td>Distinction with order and equal differences</td>
</tr>
<tr>
<td>Ratio</td>
<td>Distinction with order, equal differences and zero point, such as age</td>
</tr>
</tbody>
</table>

Table 22 – Levels of scale measurement

The larger part of the attributes are ordinal or nominal. Some attributes consist of the values low and high. For these attributes, a subset of two values is used instead of three values (i.e. low, medium and high). This is due to the fact that several outsourcing best practices, such as the ISPL, use in practice as well a subset of two values (Franckson and Verhoef, 1999).

The attributes of a buyer are specified. The attribute size can be sorted by looking at the definition of an SME (Loecher, 2000) and market information. Therefore an ordinal level is chosen with three categories, which address: small firms (0-49 employees), medium firms (50-499 employees) and large firms (> 500 employees). The attribute size is also used for a supplier. Here the same categories are taken. The attribute IT knowledge of a specific IT process has two possible values, available or not available. Therefore it is a nominal scale. The level of contract and negotiation skills can be defined as low or high. The level of relationship management expertise can be ranked in a low of high skill level. It addresses the ability to manage a supplier in a way that it makes the outcome of the IT outsourcing project as desired. The risk preference of a buyer or a supplier are addressed by Agency Theory. It can be categorized in a low or high risk preference.

Willcocks and Feeny (2006) talk about different IT process types. An IT process can be primary or secondary. A primary process means that a process is strategic and that it can create a competitive advantage for the company. A secondary process can be defined as a more operational task. Transaction Costs Economics addresses the importance for the specificity and
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uncertainty of a process. These attributes have an ordinal level with the values: low or high. Complexity can be regarded as the difficulty encountered in managing the available knowledge of the IT process. Franckson and Verhoef (1999) suggest a low, medium and high scale for complexity. However, they combine the low and medium scale when they use ISPL in practice. Due to the pragmatic approach of the decision model, this research uses as well the same scale: simple (i.e. low or medium complexity) or complex (i.e. high complexity).

A supplier can be classified in three different attributes. The competitive advantage, or the unique selling point of a supplier, can be categorized in three values. A supplier can offer operational excellence, customer intimacy or product leadership. A strategy which is often used to reduce costs is operational excellence. For the attributes size and risk preference the same values as mentioned for a buyer apply.

An outsourcing arrangement is characterized by four attributes. Agency Theory argues two different contract types: behaviour-based contracts (i.e. input based) and performance-based contracts (i.e. output based). The period of a contract can be sorted in three options: 0-12 months, 12-24 months or more than 24 months. Large outsourcing projects have normally longer contract durations. A contract duration should normally not be longer than the period the buyer can foresee the business and technological developments (De Looff, 1996). Flexibility can be defined as the need to change, due to alterations in business and technology environments. It can be sorted in a low need or a high need for flexibility (e.g. a short term of notice or limited guarantees of the buyer). At last, a contract form can be standardized or negotiated (Rohde, 2004).

Finally, a buyer action plan can be categorized by four attributes. It consists of two parts. First it addresses the level of different skills of buyer. When a buyer does not master for instance contract and negotiation skills it can decide if it wants to increase this in house experience, or hire external resources. The levels of the different skills are equivalent as the skills of the buyer object. Next to the skills, a buyer action plan can consist of a implementation plan. A firm can choose if it wants to address this topic or not. Therefore this value has a nominal level.

Table 23 gives an overview of all attributes with their corresponding values.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Level</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>Ordinal</td>
<td>0-49, 50-499, &gt;500</td>
</tr>
<tr>
<td>IT knowledge</td>
<td>Nominal</td>
<td>Available, Not available</td>
</tr>
<tr>
<td>Contract and negotiation skills</td>
<td>Ordinal</td>
<td>Low, High</td>
</tr>
<tr>
<td>Relationship management skills</td>
<td>Ordinal</td>
<td>Low, High</td>
</tr>
<tr>
<td>Risk preference</td>
<td>Ordinal</td>
<td>Low, High</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>IT process</th>
<th>Type</th>
<th>Nominal</th>
<th>Primary, Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specificity</td>
<td>Ordinal</td>
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</tr>
<tr>
<td>Complexity</td>
<td>Ordinal</td>
<td>Low, High</td>
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</tr>
<tr>
<td>Uncertainty</td>
<td>Ordinal</td>
<td>Low, High</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>Ordinal</td>
<td>0-49, 50-499, &gt;500</td>
<td></td>
</tr>
<tr>
<td>Competitive advantage</td>
<td>Nominal</td>
<td>Operational excellence, Customer intimacy, Product leadership</td>
<td></td>
</tr>
<tr>
<td>Risk preference</td>
<td>Ordinal</td>
<td>Low, High</td>
<td></td>
</tr>
<tr>
<td>Contract type</td>
<td>Nominal</td>
<td>Behaviour, Performance-based</td>
<td></td>
</tr>
<tr>
<td>Contract period</td>
<td>Ordinal</td>
<td>0-12, 12-24, &gt;24 months</td>
<td></td>
</tr>
<tr>
<td>Flexibility</td>
<td>Ordinal</td>
<td>Low, High</td>
<td></td>
</tr>
<tr>
<td>Contract form</td>
<td>Nominal</td>
<td>Standardized, Negotiated</td>
<td></td>
</tr>
<tr>
<td>IT knowledge</td>
<td>Ordinal</td>
<td>Low, High</td>
<td></td>
</tr>
<tr>
<td>Contract and negotiation skills</td>
<td>Ordinal</td>
<td>Low, High</td>
<td></td>
</tr>
<tr>
<td>Relationship management</td>
<td>Ordinal</td>
<td>Low, High</td>
<td></td>
</tr>
<tr>
<td>Implementation plan</td>
<td>Nominal</td>
<td>Available, Not available</td>
<td></td>
</tr>
</tbody>
</table>

Table 23 - Scale measurement of IT outsourcing attributes

The specified attributes are used in the next paragraph to construct the decision model.

5.2.4 Scope of model
The decision model has some premises and delineations. They are given below:

1. As this project is an explorative research, we have created a common model that is open for critique and will need further research.

2. The decision model is made for a decision process where a buyer is not influenced by existing partnerships or preferred suppliers. The situation that a buyer has already a trustful relationship with a supplier has not been taken into account.

3. The scope of this project can be defined as small firms, which outsource secondary IT processes. The attributes buyer size and IT process type are given to provide a complete overview. The values of buyer size (>50 employees) and IT process type (primary), are out of scope.

Based on these premises and delineations the decision model can be constructed.
5.3 Conclusion

Now that all objects and their attributes with corresponding values are specified an overview of the final structure of the decision model can be given. The structure of the decision model is presented in figure 17.

The decision model is built for the selection process of an IT outsourcing project. It consists of input and output objects. The input objects (i.e. type of buyer and type of IT process) have an influence on the output objects (i.e. type of supplier, type of outsourcing arrangement and buyer action plan), which form the basis for decisions during the selection process. The arrows that are drawn in figure 17 represent these relationships. To simplify the model it is argued that the output object do not influence each other. Therefore there a no relationships drawn between these objects.

The goal of this chapter has been to provide the structure of a decision model for the selection process of IT outsourcing within small firms. Currently, the model does not have intelligence. It only addresses the possible options a small firms has when it wants to outsource. The next chapter gives insight into the potential relationships of the model via propositions.
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6 Propositions

The aim of this chapter is to provide propositions based on the specified structure of the decision model. A proposition can be defined as a potential relationship of the decision model. To ensure that the recommendations of the next chapter address the identified risks of chapter 3, the propositions are risk driven. This means that the propositions are based on the specified risks of chapter 3. To accomplish that, a matrix is created to identify which risk is related to which attribute of the decision model. The following sub question is formulated:

Which propositions can be derived from the decision model based on the risks that come with IT outsourcing?

The propositions form the intelligence of the model and are validated in chapter 7. The validation method used is the Expert Opinion Method. The validated propositions form the basis for the recommendations of this research project.

6.1 Propositions based on risks

Here an overview is given of all identified propositions. They are constructed according to the following approach:

1. Based on the specified risks of chapter 3 one or more input attributes are chosen to which the proposition should relate to.

2. Based on an input attribute, an output attribute is chosen that is possibly influenced by the input attribute.

3. Based on the input and output attribute a proposition is constructed and a context is given to clarify the proposition.

Summarized, a proposition is constructed via one input attribute and one or two output attributes. There are two propositions which have double contexts. They are specified with A or B. At the end of this chapter an overview is provided (table 25) of all risks mapped to their specific attributes. In the next paragraphs the attributes that are related to a risk are made italic.

6.1.1 Risk 1

The following risk addresses the possibility that an IT outsourcing project exceeds its budget.

An IT outsourcing project may exceed budget
This risk can be based on two types of input objects. First of all, poor contract and negotiation skills can lead to an unclear contract and therefore unpredicted results.

The IT process object as well offers a liability for exceeding the budget of a project. The level of uncertainty can create unexpected situations, which can lead to higher project costs.

There are several output attributes that can be influenced by one of the input attributes. For instance, the level of contract and negotiation skills can result in choosing specific contract form (i.e. a standardized contract instead of a negotiated contract). Moreover, for uncertain situations it is important to keep a high level of flexibility or a short contract period.

Based on the specified input and output attributes the following three propositions have been specified. The first propositions is indicated as 1 A, due to the fact that it occur two times, but with two different contexts.

**Proposition 1 A**

Proposition: Firms with limited contract and negotiation skills should use an outsourcing arrangement based on a standardized contract.

Context: When a firm would negotiate a contract, it is very likely that the not all future situations have been addressed. Therefore the outcome of the IT outsourcing project is not predictable. This can lead to exceeding the budget of the project. A standardized contract does not have this problem.

**Proposition 2**

Proposition: Firms that want to outsource uncertain IT processes should use an outsourcing arrangement with a contract duration of a maximum of 12 months.

Context: When an IT process is uncertain, it is difficult to manage all the information, due to business and technological changes. Therefore it is hard to specify current requirements and future requirements. Companies should use, as a result, contracts with a contract duration of a maximum of 12 months.

**Proposition 3**

Proposition: Firms that want to outsource uncertain IT processes should use an outsourcing arrangement which is flexible.
Context: When an IT process is uncertain, it is difficult to manage all the information due to business and technological changes. Therefore it is hard to specify current requirements and future requirements. Companies should use, as a result, flexible contracts (i.e. a short term of notice).

6.1.2 Risk 2
The second risks addresses possible strategic behaviour of a supplier:

Possible opportunism of supplier, due to problems with measuring performance of supplier

The level of IT knowledge is an input attribute that is related to the mentioned risk. It is only possible to measure the performance of a supplier when a firm has in house knowledge about what the results should be. An output attribute that is related to the level of IT knowledge is the type of contract. A performance-based contract and a behaviour-based contract ask different levels of IT knowledge of a firm.

The following proposition has been constructed.

Proposition 4

Proposition: Firms which have limited IT knowledge should use an outsourcing arrangement based on a performance-based contract.

Context: When a firm has limited IT knowledge it is difficult for the company to judge the work of the supplier. It has not sufficient knowledge to know if the behaviour (i.e. time and costs) of the supplier is within lines of the agreement. Moreover a performance-based contract can reduce opportunistic behaviour of a supplier.

6.1.3 Risk 3
The third risk addresses the power balance between a buyer and a supplier:

Possible unfair contract terms, due to an incorrect power balance during contract negotiations

A power balance depends often on the difference of size between two firms. Therefore the input attribute that is taken is the size of a buyer and hence the output attribute is the size of supplier.

The following proposition has been created.
Proposition 5A

Proposition: Small firms should outsource to IT outsourcing suppliers of the same size or suppliers which have a focus on small firms.

Context A: When a small firm outsources to a supplier which is significantly larger than the firm itself or it has another business focus, it can impose difficulties during the contract negotiations. When the power balance is incorrect it can lead to sub-optimal outsourcing for a buyer.

6.1.4 Risk 4

This risk relates to a possible lock-in effect that can occur when a buyer starts an outsourcing relationship with a supplier:

Possible over dependence on supplier, due to lock-in effects

A relationship depends most of the time on a contract and therefore the contract and negotiation skills can influence the level of the specified risk. This type of skills can have influence on the output attribute flexibility. This attribute relates as well to the degree of a lock-in effect.

Based on the two specified attributes the following proposition is constructed.

Proposition 6

Proposition: Firms that have limited contract and negotiation skills should use outsourcing arrangements that are flexible.

Context: Due to the lack of experience, a company should not over depend on a supplier. A firm needs the flexibility to change parts of the contract during the duration of the agreement or a short term of notice.

6.1.5 Risk 5

The fifth risk is linked to managing a relationship between a buyer and a supplier:

Inexperience of managing a relationship might create conflicts

Conflicts can occur when one of the two parties do not have sufficient relationship management skills. The input attribute that relates to this type of skills for a buyer is, logically, relationship management skills. When a
buyer lacks such skills it has the option to increase its experiences by hiring external resources or train its own staff.

The following proposition is derived from the two specified attributes.

**Proposition 7**

**Proposition:** Firms that have limited relationship management skills should gain this expertise when they decide to outsource an IT process.

**Context:** When a firm does not have in house experience to manage an outsourcing relationship it should gain these skills as soon as possible as it can lead to extra overhead costs or even the failure of the project.

**6.1.6 Risk 6**

Underperformance of a supplier is one of the possible negative aspects of IT outsourcing:

*Supplier might under perform, which can result in business loss*

The impact that a supplier might under perform can be influence by the *type of process* that is outsourced. This is an input attribute. Therefore the *type of IT process* relates to the *type of supplier* a firm chooses. When continuity is important a firm probably will go to a supplier with operational excellence.

The next proposition is based on the type of IT process and the type of supplier.

**Proposition 8**

**Proposition:** Firms that want to outsource secondary IT processes should outsource to suppliers which have operational excellence as a strategy.

**Context:** Secondary processes are mostly operational processes. Price is the key factor in this type of outsourcing projects. A firm should outsource to a supplier which holds operational excellence as a strategy, due to the fact that the other strategies can perform less well on pricing.

**6.1.7 Risk 7**

The following risk addresses the possible impact of the lack of IT knowledge within a firm:
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An IT service might not fit the needs of a small firm, due to a lack of IT knowledge within a small firm

The input attribute that is mainly related to this risk is the level of IT knowledge. As this can have a large impact on an IT outsourcing project, it can be wise for a firm to increase their skills. This is formulated in the output attribute IT knowledge.

The following proposition has been constructed.

**Proposition 9**

Proposition: A firm that has limited IT knowledge about a specific IT process that it wants to outsource, should acquire sufficient in house IT knowledge to be able to measure the performance of the IT process.

Context: When a firm does not have enough specific IT knowledge about an IT process which is outsourced, it can not measure the performance of a supplier and therefore does not know if a supplier shows opportunistic behaviour.

**6.1.8 Risk 8**

This risk addresses the possibility that a supplier offers an IT process with a lower level of service that is requested by the buyer:

*May not receive the needed QoS*

The level of service a buyer receives can be influenced by the size of the buyer. For instance, when a buyer is just a small customer for a supplier, it is possible that the supplier is not dedicated to deliver always the best quality to the buyer.

Based on the input attribute, size of a buyer, and the output attribute, size of a supplier, the next proposition is created. It is the same proposition that has been specified earlier, but it has a different context.

**Proposition 5 B**

Proposition: Small firms should outsource to IT outsourcing suppliers of the same size or suppliers which have a focus on small firms.

Context: When a small firm outsources to a supplier which is significantly larger than the firm itself or it has another business focus, it can impose difficulties during the relationship of the two parties. A small firm can get the feeling it is only a number within the
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organization of the supplier. It is also possible that when a problem occurs during the IT outsourcing project, the supplier does not take accurate action, due to the insignificance of the buyer.

6.1.9 Risk 9

The following risk addresses the possibility that the outsourcing advantages do not cover the overhead costs. As a result, an IT outsourcing project can be cost inefficient:

*IT outsourcing project might be inefficient*

When an IT process is *uncertain* or *complex* it is difficult to know if an IT outsourcing project will be cost efficient. For instance, *uncertainty* can create unpredictable situations. The *uncertainty* of an IT process applies as well for a supplier, which offers the service. This *uncertainty* can have influence on the type of supplier that offers such an IT process. For example, a supplier with a high *risk preference* is likely to offer *uncertain* IT processes than the other way around. The *complexity* attribute can have an impact on the *contract period*. Suppliers most of the time only offer *complex* IT processes when a buyer signs for a long *contract period*.

The following two proposition are created.

**Proposition 10**

Proposition: Firms that want to outsource an IT process, which is uncertain, should outsource to a supplier which has a high risk preference.

Context: An uncertain IT process creates relatively more risks for a supplier. Therefore a supplier should have a high risk preference. A supplier which has a low risk preference wants to put each possible situation into a contract. This situation can lead to sub-optimal outsourcing, due to high contracting costs or upfront investments.

**Proposition 11**

Proposition: Firms that want to outsource a complex IT process, should use an outsourcing arrangement with a contract duration of at least 24 months.

Context: When an IT process is complex the negotiation phase and implementation phase take more time than normal. This increases in the beginning the overhead costs (i.e. contracting costs and implementation costs). To make the outsourcing
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project efficient the contract duration should be long enough to be able to see the advantages.

6.1.10 Risk 10

An outsourcing arrangement is a key element of an IT outsourcing project. The following risk addresses the possibility that an IT outsourcing project may generate significant overhead costs:

An outsourcing arrangement may generate too much overhead costs

Contracting costs may differ, based on the type of contract that is used. An important input attribute is the level of IT knowledge of a buyer. A buyer needs to know sufficient about an IT process to be able to construct and IT outsourcing arrangement. Another possibility is that a buyer uses a standardized contract of a supplier, which can decrease the contracting costs. Therefore the input attribute IT knowledge and the output attribute type of contract are used to build the next proposition.

Proposition 12

Proposition: Firms that do not have sufficient IT knowledge should outsource using a standardized contract.

Context: When a firm, with limited IT knowledge, wants to negotiate an outsourcing contract it is likely that during the contracting phase the lack of IT knowledge increases the contracting costs.

6.1.11 Risk 11

This risk points out that it is possible that outsourcing advantages do not cover overhead costs:

Outsourcing advantages might not cover outsourcing overhead costs

These costs can be created when a firm does not have sufficient contract and negotiation skills. Contract negotiations can take long. A standardized contract can be a solution for this risk. Therefore the contract form is the output attribute that relates to this input attribute.

This proposition addresses the same attributes as proposition 1 A. It has though another context and is therefore indicated as proposition 1 B.

Proposition 1 B

Proposition: Firms with limited contract and negotiation skills should use an outsourcing arrangement based on a standardized contract.
Context: Contract negotiations can take long when one of the parties are not experienced. This can increase the contracting costs and increases the overhead of the project.

6.1.12 Risk 12
This risk points out that an outsourcing arrangement can create a lock-in effect for a buyer:

*Lock-in effects can occur due to an outsourcing arrangement*

When a firm is small the impact of a bad supplier selection can be very large. The lock-in effect is higher than normal, due to the limited resources a small firm has. Therefore it is important that a small firm uses *limited contract periods* to decrease this risk.

**Proposition 13**

Proposition: Small firms that do not have experiences with a specific supplier should start with a contract duration of a maximum of 12 months.

Context: Due to the fact that the market of IT outsourcing suppliers, which focus on SMEs, is not transparent, it is difficult to benchmark the quality of a supplier. Therefore a small firm should negotiate a short contract, which can have the possibility to renew. Moreover a bad supplier choice can have a large impact on a small firm.

6.1.13 Risk 13
It is possible that a buyer pays for an IT service is actually does not need. The following risk addresses this possibility:

*Outsourcing contract might not fit (paying for service a buyer does not need)*

The situation that a buyer pays for an IT service it does not need can be created when the need of a buyer is very specific. The *specificity* of an IT process makes it more difficult to use a *contract form* that is standardized, due to the uniqueness of the requested IT service.

The next proposition addresses such a situation.

**Proposition 14**
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Proposition: Firms that want to outsource an IT process with a high degree of specificity should not use a standardized contract.

Context: When an IT process is specific it is difficult to find a standardized contract for it. Moreover, it is possible that when a buyer uses a standardized contract it increases the possibility that the buyer pays for services it does not need.

6.1.14 Risk 14

The last risk looks to the quality of service of an IT process.

*May not receive the needed QoS, due to a deficient SLA*

As mentioned earlier, the *size of a buyer* can have influence on the dedication of a supplier, especially when it differs significantly with the *size of the supplier*. This situation can influence the *contract type* that is used during an IT outsourcing project.

The following proposition addresses one input attribute and two output attributes.

**Proposition 15**

Proposition: A small firm that outsources to a medium sized supplier should use a performance-based contract.

Context: A small firm is just a small customer for a medium sized supplier. Therefore the supplier does not have a big incentive to provide the small firm with the right quality of service. That is why a buyer should pay, according to the performance of the supplier. The performance criteria should be well identified.

6.2 Additional propositions

The risks have not generated propositions that address the following attributes:

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk preference</td>
<td>Buyer</td>
</tr>
<tr>
<td>Contract and negotiation skills</td>
<td>Buyer action plan</td>
</tr>
<tr>
<td>Implementation plan</td>
<td>Buyer action plan</td>
</tr>
</tbody>
</table>

**Table 24 - Attributes that have not been addressed by the propositions**

This leads to the following conclusion. Based on the decision model we can address all risks. This is a positive conclusion, because it indicates that the model addresses the right attributes.
However, not all attributes will be tested by the generated propositions. Therefore we add manually some propositions that are not risk driven, but are constructed to test the whole decision model.

**Proposition 16**

Proposition: Firms that have a low risk preference and that want to outsource an IT process should write an implementation plan to minimize the risk of organizational problems.

Context: When a firm outsources an IT process it can be (partly) intertwined with its organizational processes. When a firm has a low risk preference it should address this potential problem by writing an implementation plan to adapt the firm to the new situation.

**Proposition 17**

Proposition: Firms that have limited contract and negotiation skills should gain these skills when they start with an IT outsourcing project.

Context: When a firm is in the selection phase of an IT outsourcing project and it does not have the right skills to negotiate, it probably will increase the total outsourcing costs. Therefore it should train its own procurer or hire external advice.

### 6.3 Conclusion

Table 25 maps the identified risks of chapter 3 with the objects and their attributes of chapter 5. When there is a relation between a risk and an attribute, it is pointed out with a cross. At the right side of the table a number is given to show which proposition is derived from which mapping. A proposition is constructed via one input attribute and one or two output attributes. There are two propositions which have double contexts. They are specified with an A or B in the table.
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<table>
<thead>
<tr>
<th>Attributes</th>
<th>Input</th>
<th>Output</th>
<th>Buyer action plan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Size</td>
<td>IT Knowledge</td>
<td>Contract and negotiation skills</td>
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<tr>
<td>IT outsourcing project may exceed budget</td>
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<tr>
<td>Possible opportunism of supplier, due to problems with measuring performance of supplier</td>
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<td>Possible unfair contract terms, due to an incorrect power balance during contract negotiations</td>
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<tr>
<td>Possible over dependence on supplier, due to lock-in effects</td>
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<tr>
<td>Inexperience of managing a relationship might create conflicts</td>
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<td></td>
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<tr>
<td>Supplier might under perform, which can result in business loss</td>
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<td>An IT service might not fit the needs of a small firm, due to a lack of IT knowledge within a small firm</td>
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<tr>
<td>May not receive the needed QoS</td>
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<td>IT outsourcing project might be inefficient</td>
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<td>Outsourcing advantages might not cover outsourcing overhead costs</td>
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<td>Lock-in effects can occur due to an outsourcing arrangement</td>
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<td>Outsourcing contract might not fit (paying for service a buyer does not need)</td>
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</tr>
<tr>
<td>May not receive the needed QoS, due to a deficient SLA</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Additional propositions</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 25 – IT outsourcing risks mapped to the attributes of the decision model**

The next chapter validates the formulated propositions. Based on the validated propositions, recommendations are build.
7 Expert Opinion Method

Chapter 6 has defined a list of propositions. These propositions establish the basis for the recommendations of this research project, which are given in the next chapter. The recommendations are guidelines, which support IT managers of small firms, with taking decisions during the selection process of an outsourcing IT project. The goal of this chapter is to get insight into the specified propositions, to be able to build the recommendations. The Expert Opinion Method is used as a validation method. The corresponding sub research question is:

How and to what extent can the propositions be validated?

Experts of small firms are used to validate the propositions. They rate each proposition and give their personal feedback. Moreover, they give their opinion about the importance of each proposition.

7.1 Goal

As mentioned above, the goal of this chapter is to get insight into the propositions of chapter 5. A possible relationship between these two variables is explored. Moreover, the importance of each proposition is looked at. This level can be seen as a check variable, due to the fact that it gives insight into if a specific proposition adds value. This results into two scales:

1. The level of agreement with a proposition
2. The level of importance of a proposition

These levels are based on the opinion of the experts of small firms. Additionally, the level of consensus between the experts is investigated. When there is a lot of disagreement, a proposition needs further research.

It is important to address that the level of agreement and the level of consensus differ significantly. The level of agreement indicates to what extent the experts agree with a proposition. The level of consensus points out if the experts agree with each other (i.e. if they rate a proposition all the same).

The levels are used in the next chapter to build recommendations and to address issues for further research.

Here an example is provided to clarify the goal of this chapter. The example is based on the first proposition of the last chapter. This proposition is formulated as follows:

Firms with limited contract and negotiation skills should use an outsourcing arrangement based on a standardized contract.
Each proposition consists of at least two variables: an independent variable and a dependent variable. Figure 18 gives a graphical overview of proposition 1.

![Figure 18 – Overview of proposition 1](image)

In this chapter it is explored, if there is, according to the experts, a relationship between the independent variable (i.e. the input attribute low contract and negotiation skills) and the dependent variable (i.e. the output attribute standardized contract form). It is important to address that when a proposition consists of three variables, only that specific combined relationship is explored and not the attributes separately. Based on these insights, recommendations for IT managers can be provided.

It is important to emphasize that this is an explorative research. The main goal is not to fully validate each proposition, but to create insight into the relationships of the propositions. This information can be a starting point to test this subject further. This explains as well the choice of the Expert Opinion Method.

### 7.2 Methodology

In this paragraph the approach of the Expert Opinion Method is explained. This is important to keep the results transparent. The Expert Opinion Method is a method that aims to reach consensus within a group of experts. It is derived from the Delphi Method that is used to combine the knowledge of persons with different types of expertise. The Delphi Method is based on the premises that one person can not oversee a problem from all possible perspectives and is mostly used as a forecasting method (Okoli and Pawlowski, 2004). Therefore it is less suitable for this research. However, the Expert Opinion Method, which is in fact based on three characteristics of the Delphi Method, is a sound approach to reach consensus within a group of experts.

In an Expert Opinion Method a group of experts is asked to give their opinion about the specified propositions. The Expert Opinion Method has the following three characteristics that are all based on the Delphi Method:

1. Structuring of information flow
2. Feedback of experts
3. Anonymity of the experts
The profile of the experts of the Delphi Method differs significantly from the one of the Expert Opinion Method. The Delphi Method uses experts with different types of expertise to oversee a problem from all possible perspectives, while the Expert Opinion Method uses experts with the same type of expertise to create consensus about a specific topic.

The feedback of the experts is collected via the following process:

**Structuring of information flow**

The contributions from the experts are collected via an online questionnaire. In the questionnaire they rate a list of propositions. Furthermore, they can give their personal comments concerning these propositions. The questionnaire consists of two rounds. The second round is used to create consensus between the experts. The average rating of each proposition and the qualitative feedback is given as input for the second round. During the second round, the experts can reformulate their opinion about the propositions based on feedback of the first round. Due to the fact that experts are used with the same profile the number of rounds taken is two. If there would have existed a great deal of differences between the experts, two rounds would not have been sufficient.

Figure 19 gives a graphical overview of the results between the two rounds. The quantitative data of round 1 and round 2 can be found in appendix VII. Additionally, the qualitative data of round 1 can be found in appendix VIII.

**Feedback of experts**

Participants can comment on their own opinion. After the first round they can revise their earlier statements. In group meetings, experts tend to stick to previously stated opinions and often conform too much to a group leader. The Expert Opinion Method prevents such a situation.

**Anonymity of the experts**

All experts remain anonymous. Their identity is not revealed, even after the completion of the validation method. This stops them from dominating other experts in the process using their authority or personality. It frees them to some extent from their personal biases and it minimizes the "bandwagon effect". The bandwagon effect is the observation that people often do or believe things because many other people do or believe the same. Anonymity also counters the "halo effect". The halo effect refers to the cognitive bias which in a series of perceptions the interpretation of later ones are influenced.
by perception of former ones. Said another way, if we are told that we are seeing a person that has just returned from psychiatric treatment, we will tend to interpret otherwise neutral behaviours as indicators of mental illness (WWW4).

At last, anonymity allows the experts to freely express their opinions, encourages open critique and admitting errors by revising earlier judgments. This improves the value of the data.

In total sixteen outsourcing experts have filled in the questionnaire. To be sure that the respondents are experts with an adequate level of experience a profile has been created.

7.2.1 Profile of experts
It is important that the experts have adequate experiences to be able to judge the propositions. An expert should fulfil at least the following criteria. An expert should:

1. Work at a small firm.
2. Take IT outsourcing decisions.
3. Have outsourced at least 2 (different) IT processes.
4. Have worked with at least 2 (different) IT outsourcing suppliers.
5. Have negotiated at least one IT outsourcing contract with a contract period of at least 12 months.

The data of this chapter is based on experts, which have met these criteria.

The contact data of the experts has been found via online reference cases of suppliers that offer IT processes to small firms. In this way, the firms that have been called, had experience with at least one IT outsourcing supplier.

The number of IT experts is not large enough to identify or naturalize differences within industry sectors. Due to the approach of this project it is not possible to address these differences.

7.2.2 Questionnaire
A questionnaire is used as survey type. It consists of three parts. First of all, a short introduction is given about IT outsourcing and small firms. Moreover, a context is given per proposition. As a result the experts can put the propositions into context. Secondly, the propositions are rated by the level of agreement. This reflects the opinion of each expert to what extent they think that the given relationship of a proposition exists. Next to the rating they can provide additional qualitative information, which is used in the second round. At last, the questionnaire asks to the experts how important they think each proposition is. Additionally, they can provide feedback next
The selection process of IT outsourcing within small firms

to the level of importance. The design of the questionnaire is given in appendix VI.

The following scales are used to rate the propositions.

<table>
<thead>
<tr>
<th>The level of agreement</th>
<th>The level of importance</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>Very trivial</td>
<td>1</td>
</tr>
<tr>
<td>Disagree</td>
<td>Trivial</td>
<td>2</td>
</tr>
<tr>
<td>Neutral</td>
<td>Neutral</td>
<td>3</td>
</tr>
<tr>
<td>Agree</td>
<td>Important</td>
<td>4</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>Very important</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 26 - Scales for rating the propositions

A scale of five values has been chosen. This is an ordinal scale level. In the next paragraph the values of each scale are used. This means for example that when an expert strongly disagrees with a proposition it will get the value one (1) and when it strongly agrees it will get the value five (5).

The following proposition is given as an example to clarify the two ratings:

*Global warming is caused by carbon dioxide (CO2)*

Lately, this topic has been discussed a lot by experts and by public. Slowly the level of consensus is increasing in a way that experts agree with this proposition. There are though some people who do not care that much about global warming, which can be rated via the level of importance.

7.3 Results

The data is gathered via an online questionnaire. Descriptive analysis is used to analyse the data. The main goal of the Expert Opinion Method is to create consensus about the level of agreement and the level of importance of each proposition. Figure 20 gives an overview of the possible outcomes per proposition.
The level of agreement and the level of importance are indicated by the mean of the results of the rated propositions of the specified scale (table 26). The level of consensus is specified by the standard deviation of the results of both levels.

The standard deviation addresses how large the differences are in a list of results. When the standard deviation is low (i.e. close to zero) the level of consensus is high. The maximum variance is around two in the case of a scale of five values and sixteen respondents.

In the next subparagraphs per proposition all the data and results are given. The following information is provided:

1. Graphs of round 1 and round 2 of the level of agreement.
2. Graphs of round 1 and round 2 of the level of importance.
3. The average score (i.e. mean) of the level of agreement and the level of importance based on the results of the second round.
4. The standard deviation of the level of agreement and the level of importance based on the results of the second round.

The qualitative data of each proposition that has been provided by the experts in the first round is not discussed here, as it is reflected in the quantitative results of the second round. Please see appendix VIII for a complete overview.

To get a better insight into the distribution of the scores, a graphical overview of the results is given. After all the propositions have been discussed, an overview is provided in the next paragraph in which quadrant (figure 20) each propositions can be positioned. In this paragraph only the distribution of the levels is discussed.
7.3.1 Proposition 1

All the data and results are presented per proposition. First the formulation of the proposition is given again:

Firms with limited contract and negotiation skills should use an outsourcing arrangement based on a standardized contract.

The following four graphs give an overview of the level of agreement and the level of importance of both rounds. On the left the results of round 1 are given and on the right the results of round 2 are given. The recommendations of the next chapter are only based on the results of the second round.

Figure 21 – Proposition 1 - Level of Agreement and Level of Importance

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 1 - Agree Level - P1</td>
<td>16</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>3,38</td>
<td>1,088</td>
</tr>
<tr>
<td>Round 2 - Agree Level - P1</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3,38</td>
<td>0,957</td>
</tr>
<tr>
<td>Round 1 - Importance Level - P1</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3,31</td>
<td>0,704</td>
</tr>
<tr>
<td>Round 2 - Importance Level - P1</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3,38</td>
<td>0,806</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The selection process of IT outsourcing within small firms

**The level of agreement**
Table 27 presents the descriptives of proposition 1. It gives an overview of the distribution of the results. A low range and a low standard deviation indicate more consensus between the experts. The maximum standard deviation with this number of respondents and this scale is two. The minimum standard deviation is zero. It is important to address that the level of consensus can not be measured alone by the standard deviation and the range. For instance, the standard deviation of the level of agreement of round two has decreased, but the opinion of the experts has polarised. Therefore this proposition needs further research on the level of agreement.

**The level of importance**
The experts have reached quite some consensus on the level of importance of proposition 1. The number of people who agree with this proposition has increased by two in the second round. The standard deviation however has increased slightly. This is caused by the value *trivial*, which is increased by one.

7.3.2 Proposition 2
The second proposition is formulated as:

*Firms that want to outsource uncertain IT processes should use an outsourcing arrangement with a contract duration of a maximum of 12 months.*

The next figures give an overview of the results of the first and second round.
The selection process of IT outsourcing within small firms

Figure 22 - Proposition 2 - Level of Agreement and Level of Importance

Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 1 - Agree Level - P2</td>
<td>16</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>3.06</td>
<td>.854</td>
</tr>
<tr>
<td>Round 2 - Agree Level - P2</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3.13</td>
<td>.806</td>
</tr>
<tr>
<td>Round 1 - Importance Level - P2</td>
<td>16</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>3.25</td>
<td>.931</td>
</tr>
<tr>
<td>Round 2 - Importance Level - P2</td>
<td>16</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>3.00</td>
<td>1.033</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 28 - Proposition 2 – Descriptives

The level of agreement
This level converges a little between the first and the second round, based on the decreasing range and decreasing the standard deviation. However, the experts still do not agree with each other, as there is a group that disagrees and a group that agrees with the proposition.

The level of importance
In the second round there is an increased level of consensus of the values neutral and important. Due to the fact that there are still four experts who have a different opinion the standard deviation is still quite high. This proposition needs further research on this level, as it does not provide a sound answer.

7.3.3 Proposition 3
This proposition is formulated as:

Firms that want to outsource uncertain IT processes should use an outsourcing arrangement which is flexible.
The level of agreement

This proposition has converged considerably in the second round, as 13 experts agree on the same level of agreement. The descriptives provide the same result, as the range has decreased from 3 to 1 and the standard deviation has decreased as well.

The level of importance

In the first round there was already quite some consensus between the experts on the level of importance. In the second round the consensus has increased slightly, as one of the experts changed his mind to go from neutral to important.
Proposition 4

This proposition is formulated as:

*Firms which have limited IT knowledge should use an outsourcing arrangement based on a performance-based contract.*

**Table 30 - Proposition 4 – Descriptives**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 1 - Agree Level - P4</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>4.00</td>
<td>.966</td>
</tr>
<tr>
<td>Round 2 - Agree Level - P4</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>4.06</td>
<td>.680</td>
</tr>
<tr>
<td>Round 1 - Importance Level - P4</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3.81</td>
<td>.834</td>
</tr>
<tr>
<td>Round 2 - Importance Level - P4</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3.63</td>
<td>.719</td>
</tr>
</tbody>
</table>

The level of agreement

The level of agreement of this proposition was not clear yet in the first round. In the second round, the opinions of the experts have converged to a great extent, as 12 experts instead of 8 experts agree with this proposition. The standard deviation as well has decreased.
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7.3.5 Proposition 5

This proposition is formulated as:

Small firms should outsource to IT outsourcing suppliers of the same size or suppliers which have a focus on small firms.

![Figure 25 - Proposition 5 - Level of Agreement and Level of Importance](image)

<table>
<thead>
<tr>
<th>Round</th>
<th>Agree Level</th>
<th>Importance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>P5</td>
<td>N</td>
<td>Range</td>
</tr>
<tr>
<td>Round 1 - Agree Level - P5</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>Round 2 - Agree Level - P5</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>Round 1 - Importance Level - P5</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Round 2 - Importance Level - P5</td>
<td>16</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 31 - Proposition 5 – Descriptives
The selection process of IT outsourcing within small firms

**The level of agreement**
In the first round there is little consensus between the experts about this proposition. It seems that only one expert changed his mind in the second round from *strongly agree* to *agree*. It is clear that this proposition needs further research.

**The level of importance**
The consensus level of the second round has decreased as the range of the results has increased. This is remarkable and shows that the opinions of the experts are polarizing.

### 7.3.6 Proposition 6
This proposition is formulated as:

*Firms that have limited contract and negotiation skills should use outsourcing arrangements that are flexible.*

![Figure 26 - Proposition 6 - Level of Agreement and Level of Importance](image)
The selection process of IT outsourcing within small firms

### Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 1 - Agree Level - P6</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3.63</td>
<td>.806</td>
</tr>
<tr>
<td>Round 2 - Agree Level - P6</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3.69</td>
<td>.873</td>
</tr>
<tr>
<td>Round 1 - Importance Level - P6</td>
<td>16</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>3.63</td>
<td>.619</td>
</tr>
<tr>
<td>Round 2 - Importance Level - P6</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3.56</td>
<td>.727</td>
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<tr>
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<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 32 - Proposition 6 – Descriptives**

The level of agreement

The sixth proposition has reached already quite some consensus in the first round. In the second round 12 experts of the 16 experts agree with this proposition. However, there are still 3 experts which disagree with this proposition. Therefore the standard deviation increases slightly. As it are only 3 experts, this proposition is not considered as a polarizing proposition.

The level of importance

This proposition is an example that usually experts take a side in the second round, if they had a neutral opinion in the first round. The opinions of the experts have converged, from two groups of trivial and important, to one group of important.

### 7.3.7 Proposition 7

This proposition is formulated as:

Firms that have limited relationship management skills should gain this expertise when they decide to outsource an IT process.
Figure 27 - Proposition 7 - Level of Agreement and Level of Importance

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 1 - Agree Level - P7</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3,44</td>
<td>1,094</td>
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<tr>
<td>Round 2 - Agree Level - P7</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3,50</td>
<td>0,894</td>
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<td>Round 1 - Importance Level - P7</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3,06</td>
<td>0,929</td>
</tr>
<tr>
<td>Round 2 - Importance Level - P7</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3,13</td>
<td>1,025</td>
</tr>
</tbody>
</table>

The level of agreement
In the first round there is no consensus between the experts. As there is a high range and the standard deviation is more than 1. In the second round however, it seems that some experts have revised their opinions to agree with this proposition.

The level of importance
The experts do not agree with each other how important this proposition is. There is a lot of disunion as the range is high. In the second round there is no convergence of their opinions. Therefore it stays unclear how important this proposition is for the experts.

7.3.8 Proposition 8
This proposition is formulated as:

*Firms that want to outsource secondary IT processes should outsource to suppliers which have operational excellence as a strategy.*
The level of agreement
Proposition 8 converges in the second round. The range decreases, but there is still disunion about if the level of agreement should be neutral or agree. Due to the fact that the range is only 1 and the groups are divided into two groups, which are almost the same size, it seems logically that the experts agree on this proposition to the extent of a value that lays between neutral and agree. In a number this would be 3.5.

The level of importance
The results of the second round slightly converge. There is however still a small polarization between the group of experts that thinks that the
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The proposition is trivial and the group that thinks that the propositions is important.

7.3.9 Proposition 9
This proposition is formulated as:

A firm that has limited IT knowledge about a specific IT process that it wants to outsource, should acquire sufficient in house IT knowledge to be able to measure the performance of the IT process.

![Figure 29 - Proposition 9 - Level of Agreement and Level of Importance](image)

**Table 35 - Proposition 9 – Descriptives**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 1 - Agree Level</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3.13</td>
<td>1.088</td>
</tr>
<tr>
<td>Round 2 - Agree Level</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3.31</td>
<td>1.250</td>
</tr>
<tr>
<td>Round 1 - Importance</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3.56</td>
<td>1.814</td>
</tr>
<tr>
<td>Round 2 - Importance</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3.31</td>
<td>1.078</td>
</tr>
</tbody>
</table>

The level of agreement
The results of the first and the second round make it clear that there is no consensus about this proposition between the experts. A possible explanation that can be given is that the proposition has been defined ambiguous. This lack of clarity can have resulted in the division of the results.

**The level of importance**

The level of importance as well has polarized. This can have the same origin that is mentioned of the level of agreement. Further research is needed and the proposition needs to be revised.

### 7.3.10 Proposition 10

This proposition is formulated as:

*Firms that want to outsource an IT process, which is uncertain, should outsource to a supplier which has a high risk preference.*

![Figure 30 - Proposition 10 - Level of Agreement and Level of Importance](image-url)
Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 1 - Agree Level - P10</td>
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<td>2</td>
<td>2</td>
<td>4</td>
<td>3.13</td>
<td>.719</td>
</tr>
<tr>
<td>Round 2 - Agree Level - P10</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3.31</td>
<td>.946</td>
</tr>
<tr>
<td>Round 1 - Importance Level - P10</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3.25</td>
<td>.683</td>
</tr>
<tr>
<td>Round 2 - Importance Level - P10</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3.44</td>
<td>.892</td>
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<tr>
<td>Valid N (listwise)</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 36 - Proposition 10 – Descriptives

The level of agreement
The level of consensus of this proposition is low. Especially as it converges in the second round even more. This is as well indicated via an increasing range and an increasing standard deviation. It could be possible the definitions such as uncertainty are ambiguous or not clear for the experts. Further research is needed.

The level of importance
The same counts for the level of importance. The range increases and the standard deviation as well. Further research is needed.

7.3.11 Proposition 11
This proposition is formulated as:

Firms that want to outsource a complex IT process, should use an outsourcing arrangement with a contract duration of at least 24 months.
The selection process of IT outsourcing within small firms

Figure 31 - Proposition 11 - Level of Agreement and Level of Importance

Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 1 - Agree Level - P11</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3.13</td>
<td>.885</td>
</tr>
<tr>
<td>Round 2 - Agree Level - P11</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3.19</td>
<td>1.109</td>
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<tr>
<td>Round 1 - Importance Level - P11</td>
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<td>3</td>
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<td>4</td>
<td>2.63</td>
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<td>Round 2 - Importance Level - P11</td>
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<td>3</td>
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<td>4</td>
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<td>.834</td>
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<td>Valid N (listwise)</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 37 - Proposition 11 - Descriptives

The level of agreement
This proposition is an example of polarisation. The results of the first round can almost be described by a normal distribution. The second round however experts who have answered neutral in the first round, they split up in disagree and agree (i.e. polarize).

The level of importance
The level of consensus increases for this proposition in the second round, but it is still not clear, as there are only 8 experts who agree with each other on, how important proposition 11 is.

7.3.12 Proposition 12
This proposition is formulated as:

Firms that do not have sufficient IT knowledge should outsource using a standardized contract.
The selection process of IT outsourcing within small firms

Figure 32 - Proposition 12 - Level of Agreement and Level of Importance

Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 1 - Agree Level - P12</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3.19</td>
<td>.834</td>
</tr>
<tr>
<td>Round 2 - Agree Level - P12</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>4</td>
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<td>.873</td>
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<tr>
<td>Round 1 - Importance Level - P12</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3.19</td>
<td>.655</td>
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<tr>
<td>Round 2 - Importance Level - P12</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3.25</td>
<td>.775</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The level of agreement

The results of proposition 12 converge in the second round to the opinion agree. However the is still a group of experts who have a different opinion (disagree or neutral).

The level of importance

The level of importance changes from a focus on a neutral level of importance, to a situation where the opinions are divided.
7.3.13 Proposition 13
This proposition is formulated as:

*Small firms that do not have experiences with a specific supplier should start with a contract duration of a maximum of 12 months.*

![Graphs showing level of agreement and importance](image)

**Figure 33 - Proposition 13 - Level of Agreement and Level of Importance**

<table>
<thead>
<tr>
<th>Proposition 13</th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 1 - Agree Level - P13</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3.25</td>
<td>.856</td>
</tr>
<tr>
<td>Round 2 - Agree Level - P13</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3.31</td>
<td>.873</td>
</tr>
<tr>
<td>Round 1 - Importance Level - P13</td>
<td>16</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>3.25</td>
<td>1.183</td>
</tr>
<tr>
<td>Round 2 - Importance Level - P13</td>
<td>16</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>3.44</td>
<td>1.153</td>
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<tr>
<td>Valid N (listwise)</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 39 - Proposition 13 – Descriptives**

The level of agreement
The Expert Opinion Method does not seem to influence the opinions of the experts in the second round of this proposition. It seems that only one expert has changed its mind. There is though a group of 9 experts who agree with this proposition.
The selection process of IT outsourcing within small firms

The level of importance
The results of this level have converged in the second round. However, the range of the results is very high (4). This is as well indicated by the standard deviation. To derive a conclusion from the results it can be interesting to interview the experts an additional time to understand their distinct opinions.

7.3.14 Proposition 14
This proposition is formulated as:

Firms that want to outsource an IT process with a high degree of specificity should not use a standardized contract.

Figure 34 - Proposition 14 - Level of Agreement and Level of Importance
The selection process of IT outsourcing within small firms

Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
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<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

Table 40 - Proposition 14 – Descriptives

The level of agreement
This proposition is an example of converging results, as the range and the standard deviation decrease considerably. Thirteen experts agree with this proposition, which is high within a group of only sixteen respondents.

The level of importance
The level of consensus after the second round is limited. The distribution however almost looks like a normal distribution.

7.3.15 Proposition 15
This proposition is formulated as:

Small firms that outsource to a medium sized supplier should use a performance-based contract.
The selection process of IT outsourcing within small firms

Figure 35 - Proposition 15 - Level of Agreement and Level of Importance

Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
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<td>.719</td>
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<td>5</td>
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<td>.885</td>
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<td>3</td>
<td>2</td>
<td>5</td>
<td>3.63</td>
<td>.885</td>
</tr>
</tbody>
</table>

Table 41 - Proposition 15 – Descriptives

The level of agreement
Thirteen of the sixteen experts agree with this proposition. The results have converged to a great extent.

The level of importance
The results of the second round can be explained by the fact that it seems that some experts prefer to give a neutral opinion in the first round and based on the results of the first round decide what their opinion really is. The level of importance changes slightly from neutral to important.

7.3.16 Proposition 16
This proposition is formulated as:

Firms that have a low risk preference and that want to outsource an IT process should write an implementation plan to minimize the risk of organizational problems.
The selection process of IT outsourcing within small firms

Figure 36 - Proposition 16 - Level of Agreement and Level of Importance

Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
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<td>5</td>
<td>3.25</td>
<td>1.000</td>
</tr>
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<td>3.50</td>
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<td>.775</td>
</tr>
<tr>
<td>Round 2 - Importance Level - P16</td>
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<td>3</td>
<td>2</td>
<td>5</td>
<td>3.63</td>
<td>.806</td>
</tr>
</tbody>
</table>

Table 42 - Proposition 16 – Descriptives

The level of agreement

In the first round the results were polarised (disagree and agree). In the second round the results have converged to agree, as nine of the sixteen experts gave the same opinion.

The level of importance

The results of the first round differ from the results of the second round, as in the second round there are two groups with different opinions (neutral and important). One of the causes could be that the granularity of the scale of the level of importance was not sufficient.
7.3.17 Proposition 17

This proposition is formulated as:

Firms that have limited contract and negotiation skills should gain these skills when they start with an IT outsourcing project.

Figure 37 - Proposition 17 - Level of Agreement and Level of Importance

Table 43 - Proposition 17 – Descriptives

The level of agreement

The results of the first round are polarized. In the second round the opinions of the experts converge to an extent that they agree with the proposition. There are however still four experts who disagree. Therefore this proposition needs further research.
The level of importance
There are mainly thee groups that have a different opinion about the level of importance of this proposition (trivial, neutral, important). Further research is therefore needed.

7.4 Differences between round 1 and round 2
The Expert Opinion Method exists out of two rounds. Therefore, the outcome of this method are two samples of the same group of experts. It is interesting to investigate if the results of each round differ significantly. In this way an additional insight is created if the experts have radically changed their opinions after the first round.

As the results of the Expert Opinion Method are based on only sixteen respondents and the scale of the data is of an ordinal level, only nonparametric tests can be performed.

To test the samples, a Mann-Whitney test was performed. This research has also looked to a Chi-Square test. One of the requirements for this test is that the data is of a nominal scale. The results of the questionnaire however are of an ordinal scale. Therefore the Mann-Whitney test fits our needs better. It is a more powerful test, due to the fact that it uses an ordinal level, which contains more information.

The Mann-Whitney test shows that the results do not differ significantly between round 1 and round 2. This is logical, due to the fact that a person normally does not change his opinion radically (e.g. change his opinion from strongly disagree to strongly agree). It is more obvious that a person refines his opinion in the second round (i.e. only one step, for instance change from agree to strongly agree or the other way around). This brings only small differences in the data and thus the results show that the data of round 1 do not differ significantly from the data of round 2. The results of the test can be found in appendix IX. The low number of respondents has as well contributed to a lower significance between the two rounds.
7.5 Conclusion

The main goal of this chapter is to create insight into the propositions of chapter 6. We have used the Expert Opinion Method to create consensus between a group of experts. The results of this method are given in table 44. They are based on the results of the second round. The descriptives of all propositions are summarized in appendix VII.

The level of consensus in table 44 indicates to what extent the opinions of the experts are the same within the group. The level of agreement differs significantly with the level of consensus, as it indicates to what extent the experts agree with a specific proposition. The level of agreement and the level of importance are indicated by means of ratings. The levels of consensus are indicated via the following scale: + / 0 / -. They are based on the following criteria:

- A “+” is given when the experts have reached consensus about a proposition. At least more than half of the group of respondents (i.e. ≥ 9 experts) have the same opinion and the results are converged.
- A “0” is given when the results of the second round have not converged or polarized. These propositions need further research.
- A “-” is given when the results have polarized (i.e. when there are two groups that have a clearly different opinion). These propositions need further research as well.

For example, the results of the level of agreement of the first proposition have polarized. There are two distinct groups, with different opinions (disagree and agree). Therefore a “-” is given in the table. The level of importance has converged slightly, but there are still three groups with a different opinion (trivial, neutral and important). Therefore an “0” is given. This proposition needs further research on this level. An additional round of the Expert Opinion Method could be a solution.
### Agreement Importance

<table>
<thead>
<tr>
<th>Proposition</th>
<th>Level of agreement</th>
<th>Consensus on the level of agreement</th>
<th>Level of importance</th>
<th>Consensus on the level of importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Firms with limited contract and negotiation skills should use an outsourcing arrangement based on a standardized contract.</td>
<td>3,4</td>
<td>-</td>
<td>3,4</td>
<td>0</td>
</tr>
<tr>
<td>2. Firms that want to outsource uncertain IT processes should use an outsourcing arrangement with a contract duration of a maximum of 12 months.</td>
<td>3,1</td>
<td>-</td>
<td>3,0</td>
<td>-</td>
</tr>
<tr>
<td>3. Firms that want to outsource uncertain IT processes should use an outsourcing arrangement which is flexible.</td>
<td>3,8</td>
<td>+</td>
<td>3,7</td>
<td>+</td>
</tr>
<tr>
<td>4. Firms that have limited IT knowledge should use an outsourcing arrangement based on a performance-based contract.</td>
<td>4,1</td>
<td>+</td>
<td>3,6</td>
<td>0</td>
</tr>
<tr>
<td>5. Small firms should outsource to IT outsourcing suppliers of the same size or suppliers which have a focus on small firms.</td>
<td>3,8</td>
<td>0</td>
<td>3,7</td>
<td>-</td>
</tr>
<tr>
<td>6. Firms that have limited contract and negotiation skills should use outsourcing arrangements that are flexible.</td>
<td>3,7</td>
<td>+</td>
<td>3,6</td>
<td>+</td>
</tr>
<tr>
<td>7. Firms that have limited relationship management skills should gain this expertise when they decide to outsource an IT process.</td>
<td>3,5</td>
<td>+</td>
<td>3,1</td>
<td>-</td>
</tr>
<tr>
<td>8. Firms that want to outsource secondary IT processes should outsource to suppliers which have operational excellence as a strategy.</td>
<td>3,6</td>
<td>+</td>
<td>3,0</td>
<td>0</td>
</tr>
<tr>
<td>9. A firm that has limited IT knowledge about a specific IT process that it wants to outsource, should acquire sufficient in house IT knowledge to be able to measure the performance of the IT process.</td>
<td>3,3</td>
<td>-</td>
<td>3,3</td>
<td>-</td>
</tr>
<tr>
<td>10. Firms that want to outsource an IT process, which is uncertain, should outsource to a supplier which has a high risk preference.</td>
<td>3,3</td>
<td>-</td>
<td>3,4</td>
<td>-</td>
</tr>
<tr>
<td>11. Firms that want to outsource a complex IT process, should use an outsourcing arrangement with a contract duration of at least 24 months.</td>
<td>3,2</td>
<td>-</td>
<td>2,8</td>
<td>0</td>
</tr>
<tr>
<td>12. Firms that do not have sufficient IT knowledge should outsource using a standardized contract.</td>
<td>3,3</td>
<td>0</td>
<td>3,3</td>
<td>-</td>
</tr>
<tr>
<td>13. Small firms that do not have experiences with a specific supplier should start with a contract duration of a maximum of 12 months.</td>
<td>3,3</td>
<td>0</td>
<td>3,4</td>
<td>0</td>
</tr>
<tr>
<td>14. Firms that want to outsource an IT process with a high degree of specificity should not use a standardized contract.</td>
<td>3,8</td>
<td>+</td>
<td>3,6</td>
<td>0</td>
</tr>
<tr>
<td>15. Small firms that outsource to a medium sized supplier should use a performance-based contract.</td>
<td>3,9</td>
<td>+</td>
<td>3,6</td>
<td>0</td>
</tr>
<tr>
<td>16. Firms that have a low risk preference and that want to outsource an IT process should write an implementation plan to minimize the risk of organizational problems.</td>
<td>3,5</td>
<td>+</td>
<td>3,6</td>
<td>0</td>
</tr>
<tr>
<td>17. Firms that have limited contract and negotiation skills should gain these skills when they start with an IT outsourcing project.</td>
<td>3,4</td>
<td>0</td>
<td>3,3</td>
<td>0</td>
</tr>
</tbody>
</table>

**Table 44 - Overview of the results of the Expert Opinion Method per proposition**
The selection process of IT outsourcing within small firms

This overview provides a basis to the recommendations of the next chapter. Furthermore, it offers a starting point for further research in this area. Especially the propositions that do not have a high level of consensus, need further research.

The following two plots (figure 38) are given to interpret the results from different perspectives. This increases the insight into the propositions. They give an overview of how the level of importance and the level of agreement are related with each other per proposition.

The left figure shows an overview of all propositions that are rated with a “+” for the level of consensus on the level of agreement. The right figure shows an overview of all propositions that are rated with a “0” or a “-” for the level of consensus on the level agreement.

Please take note that the level of consensus on the level of importance is not taken into account in these figures.

![Figure 38 - Overview of propositions with high consensus on the level of agreement (left) and low consensus on the level of agreement (right)](image)

The axis of the figures is indicated by scales that were used in the questionnaire. One (1) stands for strongly disagree or very trivial and five (5) stands for strongly agree or very important. The propositions situated in the right upper quadrant are the most interesting propositions, as the experts agree with the propositions. They are of the opinion that the propositions add value (i.e. are important) when decisions have to be made during the selection process of an IT outsourcing project within a small firm, in order to mitigate IT outsourcing risks.

It is remarkable that there are no propositions in which the experts have reached consensus to (strongly) disagree with a proposition as well as (very)
trivial propositions. This can be derived from figure 38 as there are no propositions situated in the left lower corner of the quadrant.

The figures indicate that the experts have reached consensus about eight of the seventeen propositions. These propositions can be used in the next chapter to build the recommendations. The other propositions will be discussed as well in the next chapter. There we will try to find possible reasons for the diverging reactions of the experts. With this information further research can be performed.
8 Recommendations and further research

This chapter provides recommendations that are relevant during the selection process of an IT outsourcing project for IT managers in small firms, in order to mitigate IT outsourcing risks. First, the main research question is repeated. The answer to the research question is based on the eight validated proposition of chapter 7. Afterwards, the limitations of this research project will be given. As this research project has an explorative nature, another goal beside the main research question is to provide a starting point for further research in this area.

8.1 Research question

The objective of this research project is to provide recommendations to IT managers in small firms, which are relevant during the selection process of an IT outsourcing project. It is meant to recognize and mitigate the risks that come with the implementation of IT outsourcing. This can be summarized in the following research question:

Which recommendations can be given to small firms during the selection process of an IT outsourcing project, in order to mitigate the risks that come with the implementation of IT outsourcing?

This project has started with identifying risks that come with the implementation of IT outsourcing. Based on these risks, outsourcing theories have been specified and examined. These theories and additional literature research formed the basis for the structure of a decision model, representing the selection process of an IT outsourcing project. Based on this decision model, some possible relationships have been identified. These relationships were formulated as propositions, based on the already mentioned IT outsourcing risks. Finally, the propositions were explored by way of an Expert Opinion Method, to obtain more insight into the importance of each proposition and into the extent of the experts’ agreement concerning the propositions. Finally, the experts reached consensus about eight of the seventeen specified propositions. These propositions are given here to provide eight recommendations to IT managers of small firms:

**Recommendation 1**

The first recommendation is formulated thus:

Firms that want to outsource uncertain IT processes should use an outsourcing arrangement that is flexible.

Firms need flexibility, as they usually operate in a dynamic technology and business environment, especially when the IT process they want to outsource is uncertain. IT managers should examine their IT processes before they
choose an outsourcing arrangement, in order to mitigate risks such as lock-in effects, which can have a high impact when an IT process is uncertain.

**Recommendation 2**
The second recommendation is formulated thus:

_Firms which have limited IT knowledge should use an outsourcing arrangement based on a performance-based contract._

Outsourcing is in fact a difficult business case, as the business goals of buyer and supplier are usually not entirely aligned. The buyer often wants to reduce costs, while the supplier wants to make profit by charging the buyer as much as possible. When a firm does not have sufficient IT knowledge to judge if the behaviour of a supplier is reasonable, a firm should negotiate an outsourcing arrangement based on the performance of the supplier, as it mitigates the risk that a supplier shows strategic behaviour. One disadvantage of this approach is that it may be quite complicated for a buyer to specify the criteria for the performance of the supplier beforehand.

**Recommendation 3**
The third recommendation is formulated thus:

_Firms that have limited contract and negotiation skills should use outsourcing arrangements that are flexible._

When a firm has poor contract and negotiation skills it should be very cautious about the type of outsourcing arrangement it agrees on. A contract that is too tight can create over-dependence of the supplier. This can have quite an impact on a firm. Therefore, a firm with limited contract experiences should negotiate an outsourcing arrangement that is flexible (e.g. a short term of notice), to mitigate the risk of over-dependence.

**Recommendation 4**
The fourth recommendation is formulated thus:

_Firms that have limited relationship management skills should gain this expertise when they decide to outsource an IT process._

The operational or execution phase of an IT outsourcing project is an important phase. The success of this part of the project is largely based on the relationship between a buyer and a supplier. If a firm does not have sufficient skills to manage this relationship, it should gain this expertise when it decides to outsource an IT process. This mitigates the risk of conflicts between buyer and supplier. Moreover, it increases the probability that that the outsourcing project develops as desired.
Recommendation 5
The fifth recommendation is formulated thus:

Firms that want to outsource secondary IT processes should outsource to suppliers which have operational excellence as a strategy.

When a firm outsources secondary (i.e. operational) IT processes, it usually searches for cost reduction or a specific service level of an IT process. Therefore a firm should choose a supplier that holds operational excellence as a strategy, as this strategy focuses on reducing operational costs of an IT process and delivering an ensured level of quality. The choice for such type of supplier mitigates the risk that an IT outsourcing project is less efficient than performing the process in house. Moreover, as this type of suppliers is organized to deliver an agreed level of service, chances decrease that the supplier cannot deliver the agreed Quality of Service.

Recommendation 6
The sixth recommendation is formulated thus:

Firms that want to outsource an IT process with a high degree of specificity should not use a standardized contract.

A standardized contract may seem appealing to both buyer and supplier, as it reduces contracting costs. However, when a firm wants to outsource an IT process with a high degree of specificity, it should not use such a type of contract, as it increases the risk that the contract does not fit the needs of the buyer. Choosing a negotiated contract (i.e. not standardized) mitigates the risk that a firm pays for services it does not need.

Recommendation 7
The seventh recommendation is formulated thus:

Small firms that outsource to a medium sized supplier should use a performance-based contract.

A small firm is just a small customer for a medium size supplier. Therefore the supplier is not always motivated to provide the small firm with the best quality of service. That is why a buyer should pay according to the performance of the supplier. This mitigates the risk that a medium size supplier shows opportunism. The performance criteria should be well identified.

Recommendation 8
The last recommendation is formulated thus:

Firms that have a low risk preference and that want to outsource an IT process should write an implementation plan to minimize the risk of organizational problems.
When a firm outsources an IT process, its organizational processes can be affected. When a firm has a low risk preference, it should address this potential problem. It can mitigate this risk by writing an implementation plan to adapt the firm to the new situation.

These eight recommendations provide solutions during the selection process of an IT outsourcing project, in order to mitigate risks that come with the implementation of IT outsourcing within small firms. The propositions the experts did not reach consensus about, also show interesting results. For example, some propositions may need only one extra round to reach consensus. The experts whose opinion differed significantly from the rest of the group can be interviewed, in order to obtain a better understanding of those experts’ opinions. This information can lead to refined propositions and therefore to better results.

8.2 Limitations
There are a number of limitations to this research project. These limitations can be categorised as follows:

1. Limitations of the theories
2. Limitations of the decision model
3. Limitations of the validation method

Below these three categories are elaborated.

Limitations of the theories
As mentioned earlier, the theories used in this research project (Transaction Costs Economics and Agency Theory) do not have a focus on situational factors. Therefore, these theories do not take into account the characteristics of small firms. This causes a significant limitation of the used theories, as this research is focussed on small firms. As a result additional literature research was needed to address this limitation. Due to the novelty of the market, however, the number of articles with a focus on small firms that has been published in acknowledged journals is limited. Therefore the quality of this additional literature is difficult to judge.

Limitations of the decision model
The decision model of this research project is based on common outsourcing theories and additional literature research. As mentioned above, the quality of this additional literature is difficult to validate. Since the decision model is founded on this literature, it could have an impact on the validity of the structure of the proposed decision model. Yet, as this project is an explorative research, the model that it offers is open to critique and improvements.
Limitations of the validation method
The validation method used in this research project is the Expert Opinion Method. This method and our implementation of it has some limitations. As IT outsourcing is quite new within the market for small firms, it was hard to find respondents that fit the profile criteria. This limited number of respondents makes it difficult to validate if a relationship (i.e. proposition) within the decision model exists. In addition to this, the limited number of respondents makes it hard to identify differences between for instance industry sectors. One could imagine that a firm, which is active in the IT sector, thinks differently about IT outsourcing than a firm that is not active in this sector.

Another limitation is the fact that the online questionnaire has not been pre-tested. As a result, some questions or definitions, used in the online questionnaire, may have been less than completely unambiguous to the respondents. This can have resulted in polarizing propositions, as experts can have interpreted the questions differently. This might have happened for example with proposition 9 and proposition 10, as the results of these propositions are vastly polarized. A pre-test could have given additional insight into the granularity of the scale. Some propositions have two groups of experts, with almost the same opinion. This could be caused by a limited granularity of the scale. Proposition 8 might have this problem, as there are two groups, with almost the same opinion (i.e. neutral and agree).

Potentially the number of rounds of the validation method is not entirely adequate. There are several propositions that converge slightly in the second round, but not enough to build a recommendation based on such a proposition. Finally, the experts in the first round rated many propositions neutral. This could indicate that the experts did not give their opinion in the first round. It is not impossible that they copied the opinion of the group and used that opinion to answer the questionnaire in the second round. When, for example, the data are gathered during an interview such a situation can be prevented.
8.3 Further research

As this project has been an explorative research, it provides a starting point for further research. This paragraph does some suggestions about the research areas that could be examined further. Some suggestions are based on the identified limitations described in the previous paragraph. Three areas were specified:

1. This project has researched the Dutch IT outsourcing market. The risks that have been discussed are based on small firms and IT outsourcing suppliers situated in the Netherlands. It may be interesting to compare situations and developments of the Dutch market with those in other European countries. For instance, it is possible that Dutch small firms have different skills than small firms in other countries. This would imply a different approach of IT outsourcing within small firms in different countries and organisational cultures.

2. The validation method used is the Expert Opinion Method. Due to the fact that only sixteen experts have been examined, the results have a number of limitations as described in the previous paragraph. For instance, differences between industry sectors have not been taken into account. One could argue that a firm, active in the ICT sector, has a different approach when outsourcing an IT process, than a firm, active in a totally different sector. Besides, there are the differences due to various skill levels. A questionnaire for more respondents (>100) or a questionnaire aimed at a specific industry sector could go further into the nature of these differences. It might also be an option to change the validation method and work with case studies. This qualitative approach will probably result in more personally elucidated and valuable knowledge of interviewed IT managers. We acknowledge that the quality of the experts’ response is limited when a questionnaire is not provided in person, but online.

3. This research project has approached the market of IT outsourcing via a buyer perspective (i.e. small firms). The supplier perspective has only been touched superficially during the open interview, to identify IT outsourcing problems within small firms. Therefore it could be interesting to research further how IT outsourcing suppliers perceive IT outsourcing projects within small firms.

The identified areas form a starting point for further research in the area of IT outsourcing and small firms.
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Albers, G. (June 2006), Supplier, Company G

WWW:


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Appendix I - Glossary

It is important to address some basic definitions on which this research is based on. Therefore the most important definitions are formulated here:

1. Attribute – A single property of an object. An object is described by the values of its attributes. For example, a car can be described by its make, model, colour, and so on. These are the attributes of the car (WWW6).

2. Decision model - It is a simplified representation of a set of components of a process, system, or subject area, generally developed for understanding, analysis or improvement of the process. It can be divided into two parts. First of all, it gives an overview the main structure of a set of components. Secondly, it explains how the components are related to each other (GAO, 2007).

3. IT outsourcing - IT outsourcing can be defined as: “the transfer of an IT service, and when applicable the corresponding resources and employees, to a specialized service supplier, which provides services to an agreed quality of service and an agreed fee during a contract period” (Wijers, Beulen, Delen and van de Heisteeg, 2005).

4. IT service - “An IT service is a (series of) ongoing activities related to IT of more or less intangible nature, that normally (but not necessarily) take place in interactions between the customer and service provider, featuring a combination of service employees, physical resources/goods, and systems, which are provided as solutions to customer problems.” (Baaten, 2006)

5. Outsourcing arrangement – It includes contract characteristics and relationship forms. The scope of outsourcing arrangements between buyers and suppliers is extensive (Murray and Kotabe, 1999). At one end are short-term contracts designated to encourage flexibility. At the other exists full ownership of and/or merger between purchaser and providers (Kakabadse and Kakabadse, 2005)

6. Primary process – Primary processes are the fundamental activities or group of activities that are so critical to an organization's success that failure to perform them will result in deterioration of the organization (WWW1).

7. Problem – A problem can be defined as an undesirable situation. It refers to a situation, condition or issue that is still unresolved. In a broad sense, a problem exists when an individual becomes aware of a significant difference between what actually is and what is desired (WWW5).
8. Risk - A risk can be defined as the impact of a (doom) scenario times the likelihood or probability that the scenario comes true (Bahli and Rivard, 2003).

9. Risk Mitigation – The planning process in which one tries to think of ways to prevent identified risks from ever occurring, while at the same time coming up with a means of recovery should the risk become a reality in spite of all efforts (Willcocks, Lacity and Kern, 1999).

10. Secondary process – A process which supports a primary or business process, which is easy replaceable and has no strategic value (WWW1).

11. Selection process – The selection process or phase of an IT outsourcing project is the part after the make-or-buy decision and before the implementation part of the project. It focuses on selecting an IT outsourcing supplier and choosing an IT outsourcing arrangement. In Transaction Costs Economics this part is called the contact and contracting phase. Moreover, during this phase a firm should as well address the possible impact of the IT outsourcing project on its organization. This topic can also be called a buyer action plan, which can exist of an implementation plan for the firm that addresses these problems (Carmel and Nicholson, 2004).

12. Small firm – A small firm is a company with less than 50 employees and a turnover less than € 1 million (Loecher, 2000).
## Appendix II – Overview of interviews

<table>
<thead>
<tr>
<th>Company</th>
<th>Name</th>
<th>Function</th>
<th>Date</th>
<th>Transcript</th>
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<tr>
<td>A</td>
<td>Robbert van Geldrop</td>
<td>General Manager</td>
<td>12-06-06</td>
<td>Yes</td>
</tr>
<tr>
<td>B</td>
<td>Marijn Pijnenborg</td>
<td>Business Director</td>
<td>28-06-06</td>
<td>Yes</td>
</tr>
<tr>
<td>C</td>
<td>Marco Gianotten</td>
<td>Director</td>
<td>12-07-06</td>
<td>Yes</td>
</tr>
<tr>
<td>D</td>
<td>Keith Wallace</td>
<td>Director</td>
<td>13-06-06</td>
<td>Yes</td>
</tr>
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</table>

**Table 45 – Buyers**

<table>
<thead>
<tr>
<th>Company</th>
<th>Name</th>
<th>Function</th>
<th>Date</th>
<th>Transcript</th>
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</thead>
<tbody>
<tr>
<td>E</td>
<td>Michel Verspui</td>
<td>Director</td>
<td>05-07-06</td>
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<tr>
<td>F</td>
<td>Marc Gobes</td>
<td>Manager Managed Services</td>
<td>21-06-06</td>
<td>Yes</td>
</tr>
<tr>
<td>G</td>
<td>Gerard Albers</td>
<td>Business Manager SME</td>
<td>21-06-06</td>
<td>Yes</td>
</tr>
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</table>

**Table 46 – Suppliers**
Appendix III  – Transcripts

Company A - Interview with Robbert van Geldrop (12th of June)

Present:

Robbert van Geldrop  General Director
Paul de Grijp   Interviewer Technical University of Delft

The interview started at 14:00h

**Paul:** Which services does your company offer?

**Robbert:** An online backup service.

**Paul:** To whom do you offer these services?

**Robbert:** SOHO customers

**Paul:** Have you outsourced any (IT) process in your company?

**Robbert:** Our website, server and storage are hosted at our storage partner.

**Paul:** Which business models are coupled to these outsourced projects?

**Robbert:** Hosting of the software platform is coupled to selling subscriptions

**Paul:** Could you describe the characteristics of this (IT) process?

a. Primary / Secondary process
b. Contract Term (short/long)
c. Size / revenues (small / large)
d. Standardized (yes/not)
e. Dynamic requirements (yes/not)

**Robbert:** Our outsourcing partners complete our business model for everything but software development. The contracts are always short, since we keep opportunities open to upscale/downscale our partner relations.

**Paul:** How do you manage these projects?

a. Overhead / transaction costs?

**Robbert:** Contract negotiation overhead. SLA management.

**Paul:** How have you selected your outsourcing partner?

**Robbert:** this was based in networking contacts

**Paul:** Did you have any experience with outsourcing before you started this project?

**Robbert:** We outsourced part of our software development to Ukrain. It did not have satisfactory results, due to lack of management capacity and budget.
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Paul: Did you hire an external advisor on the topic of outsourcing?

Robbert: No.

Paul: What are the reasons that you have outsourced these processes?
   a. Growth?
   b. Flexibility / scalability?
   c. Investments?

Robbert: **Growth and flexibility**

Paul: Could you describe your core competences / processes of your company?

Robbert: **Software development and product development, branding and channel-building**

Paul: Could you describe the organization characteristics of your company?
   a. Size (small / large) **small**
   b. **Product** or service online backup software and services
   c. Innovative - **very**
   d. Flexible - **very**

Do these characteristics have any influence in how you have implemented IT outsourcing?

Robbert: **Yes, we focused solely to software development since it adds value to the backup process and is essential for disclosing reliable storage facilities to SOHO customers.**

Paul: Have you encountered any problems when implementing IT outsourcing in your organization?

Robbert: **Outsourcing part of our software development failed due to lack over overhead and budget**

Paul: Could you describe possible risks of IT outsourcing for your company?

Robbert: **Knowledge drain, resulting in inflexibility on the long term**

Paul: Are you interested in performing a case study about the following topic?
   a. If the company makes optimal use of IT outsourcing?
   b. Which business models are interesting for which outsourced IT processes

Robbert: **both**
Company B - Interview with Marijn Pijnenborg (28th of June)

Present:

Marijn Pijnenborg  Business Director
Paul de Grijp   Interviewer Technical University of Delft

The interview started at 13:00h

Paul: To which type of partners do you outsource and why?

Marijn: Funda outsources to small companies, because they are:

1. Innovative
2. Flexible
3. High quality (most important)

We do not outsource to large companies, because they have structured everything and separated roles within the company. That’s why they can’t be innovative and flexible.

Paul: Do company characteristics have influence on the type of outsourcing partner?

Marijn: The type of organization has a significant influence on the outsourcing strategy of the company. When you have a support helpdesk (not innovative) where everyone needs the same desktop environment it can be interesting to outsource to a large supplier, due to the high continuity of the service and low costs. When you are an innovative company, such as Funda, your outsourcing strategy is based on quality and innovativeness of your suppliers instead of costs and continuity (plays less a roll).

Paul: Does outsourcing decreases the flexibility of a company?

Marijn: It depends how you look at it. With outsourcing you could run 2-3 project next to each other and look after 6 months which projects has worked out the best. In this way it increases the flexibility.

Paul: What are nowadays reasons to outsource?

Marijn: They should provide innovativeness (new business opportunities) and be a sounding board to you.

Paul: Do you outsource operational tasks?

Marijn: It is important to outsource maintenance to keep our team small and flexible. We produce only to the specification phase. We also have a test environment where we build things in beta form.

Paul: What do you think of google beta environment?
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Marijn: I think Google is changing. It is very innovative, but the innovativeness is not coming from Google inside, but they buy it from outside. It is difficult when a company grows to keep the innovation. It is smart to create small teams.

Paul: Do small outsourcing suppliers offer enough continuity?

Marijn: I do not look to the continuity of a small outsource company. I look to the person who is sitting next to me. The continuity of large firms is also limited, when there is for example a take over.

Paul: Does the type of IT process have impact on the decision for continuity?

Marijn: For specific processes that are critical, continuity is more important.

Paul: Does Funda has the expertise to manage outsourcing relationships?

Marijn: Yes, we have project manager which has specific knowledge. Managing employees or outsourcing partners are different.

Paul: How do you choose your outsourcing parties?

Marijn: A pitch or we know already the company we need.

Paul: Have you used it outsourcing to create extra scalability / growth?

Marijn: When Funda started we used it outsourcing for this reason. When a company is in a growth phase a company needs outsourcing.
Company C - Interview with Marco Gianotten (28th of June)

Present:
Marco Gianotten  Director  28/06/2011
Paul de Grijp  Interviewer Technical University of Delft

The interview started at 14:00h in Amsterdam

P: There are some difficulties with outsourcing within small firms. Could you address some issues.

M: The QOS is often a problem. I don’t care abouts SLAs.

Small-medium  0 - 300
Mid-market  300 – 400
Large  > 2000

P: What do you do exactly with outsourcing.

M: We do two things with outsourcing:
Open office – network, backups, servers (No SLA, 3 persons, I can call them in the weekend). (Operational level)
Cysonet – All web servers (digital board room) and CRM database. (Tactical level)

In small companies you should not hire only one IT guy who should do all the IT processes. He needs colleagues who have the same type of work / interests. This is also a reason why you should outsource. It is difficult to keep the IT guy.

P: Have you outsourced your salary administration?

M: Yes.

P: At what type of company have you outsources this?

M: A small firm, where I can talk with the director if there are problems. Where I have the feeling that I can trust the guy. We outsourced to deliotte. This was a disaster. They promised a lot of things. The sales / account manager did not have anything to say on the release dates etc. Therefore if it didn’t work the account manager said that it wasn’t his fault. In small companies you are better in control (better contact with the delivery department).

I like to do business with people who also have their own business.

M: We have another kind of outsourcing within Giarte. We have build our own software development department in Bangladesh (strategic / tactical and operational level). There work 16 people. In Amsterdam there work 10 people.

We needed to offshore for two reasons:
We could not get people.
We did not have the money for 16 people in the Netherlands.

P: How do you manage this?
M: A colleague of mine manages this together with a local partner (ex-entrepreneur).

P: Where do you get your innovation? Also from your outsourcing partners?

M: Yes. In Bangladesh they also create innovative solutions.

M: There are some small companies which are opportunistic.

P: What are advantages of doing business with a small firm?

M: Sounding board (on tactical level).

P: Do you shop between suppliers?

M: No. Switching costs are relatively high.

P: When was Giarte founded?

M: We were first a publisher. Since 5 year we do surveys.

P: What are the future trends of IT outsourcing within the SME market?

M: There are two things that will happen the next years: Mid size companies need to outsource because it will be difficult to keep en get new IT personnel. Supportive IT processes (e.g. desktop management) will grow very fast the next years for the sme market. They need to do a lot of remote services for economies of scale. Break and fix does a company itself.

I think that a lot of large hardware parties (e.g. IBM / cysco) will offer outsourcing services to small firms.
Company D - Interview with Keith Wallace (15th of June)

Present:
Keith Wallace   Director
Paul de Grijp   Interviewer Technical University of Delft

The interview started at 13:00h

Paul: Which services does your company offer?

Keith: We offer a desktop environment through the internet to consumers.

Keith: There is more IT understanding in SME. That’s why it is now possible to buy expertise.

Keith: For SMEs IT plays a major part of business. SMEs are mostly run by entrepreneurs. Directors/entrepreneurs want personal service of suppliers. Ordina is to big. Small works with small.

Keith: SMEs want:
1. Individual service
2. Flexible service
3. Want to deal with a same sized company.
   a. Want to deal with people who have the same problems
4. Large outsourcing parties are too expensive (e.g. Ordina)
5. They want professionalism, but the price is more important

We have outsourced the following:
1. Hosting - Per month
2. Finance - Set amount
3. Sales - Commission based
4. Secretarial - Picks up the phone (payed per call)
5. Installation - High fee (only in the beginning)
6. Call center (helpdesk)- Set amount + # calls
7. Technical - Software engineer outsourcing is much more planned when it is outsourced.

Paul: Did you have problems during outsourcing projects with suppliers?

Keith: Yes, but because the companies where off the same size we could talk easy. The problems where:
1. Costs (cannot afford)
2. Underperformance suppliers
3. No mutual understanding

Paul: How was the contract formed?

Keith: We made a deal that we can change easy. I don’t like lock in effect. We prefer to pay a bit more instead of long contracts. Normally you can only win 5% if you take for example a year contract.

Paul: Do you see the SME market as one group regarding IT outsourcing?
Keith: No. I think that you have the following groups:
1. 1-25 employees. Director does everything. No legal people work in the company.
2. 25-50 employees. This companies have legal people. They look more for professionalism. Price is here less an issue.

Furthermore you shouldn't look only to size but to how big the administrative part of a company is. How many staff employees.

In the smallest group entrepreneurs want full control, this is why the whole SME market will not outsource. They see their company as their baby. They will only outsource when it is necessary.

Paul: What do you think of the IT outsourcing market for the SME market?

Keith: The IT outsourcing market is not transparent enough. This is why a lot of company don't do it.

Paul: Do you see a role of the Dutch government to stimulate IT outsourcing.

Keith: Current subsidies, such like WBSO don't help outsourcing. It is cheaper to let your own personal do the work due to subsidies. Government rules are not in favor for outsourcing. They should change it.

Paul: How did you select your outsourcing partners?

Keith: From my network. Or I looked to what my competitors where using.

Paul: Why did you outsource?

Keith: Three reasons:
1. It was cheaper
2. Expertise
3. To use the outsourcing party as a sounding board. It is free advice and it can create new business opportunities.

Paul: What are possible risks of IT outsourcing within SMEs?

Keith: You don't have full control and understanding of your IT processes any more. This can decrease your strategic flexibility.

Paul: Have you encountered any problems with IT outsourcing.

Keith: Yes, you should watch out that you don't see your outsourced employees as your own employees.
Company E - Interview with Michel Verspui (28th of June)

Present:
Michel Verspui   Director Conclusion
Paul de Grijp   Interviewer Technical University of Delft

The interview started at 9:00h in Utrecht

**P:** As you heard my introduction of IT outsourcing within small firms, what are things that come to your mind?

**M:** It is important which knowledge companies have about outsourcing. When they are not well informed outsourcing is difficult to realize.

**P:** What are your ideas of outsourcing in the future.

**M:** The company where I buy my internet connection should offer a service that my internet connection and my computer always works. The same as electricity from the wall.

**P:** I focus within my thesis on secondary IT processes. Could you give me an overview of the different type of processes?

**M:** Conclusion offers more BPO outsourcing and no ITO (e.g. desktop management). We have a focus on people outsourcing (example training courses for Eneco).

There are three layers for outsourcing

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>- Internet connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applications</td>
<td>- Desktop management</td>
</tr>
<tr>
<td>Business Processes</td>
<td>- High costs – Example energy companies</td>
</tr>
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</table>

An outsourcing relationship is very tight. Especially in large outsourcing deals. You can not change for one supplier to another one, due to high transaction costs. Therefore it is important to manage the outsourcing relationship in a good way.

Reason for Ordina to sell the ITO business. → They needed a better focus.

Maintenance costs can be reduced due to standardization of desktop configurations. Profit can be achieved as high as 60% due to standardization.

Infrastructure – can be standardized
Applications – are more difficult to standardize, but due to shared services economies of scale are possible
BPO – no economies of scale

Within large companies you can standardize several departments within a company. If you have achieved all possible economies of scale you can think of shared service centers with other companies in the same branch. The same counts for small firms.

All sport clubs can use a shared service center to retrieve all membership fees. Technology is enabling in such a case.
P: SMEs are very different from each other. How can they standardize if they are so unique? How far does it go?

M: You will never be able to standardize everything. You can standardize per branch.

Business Innovativeness  IT Innovativeness
Business complexity  IT complexity

P: What is your smallest customers?

M: We work for a lot of small customers. Conclusion exists of 30 small companies. There for we also do small project with a minimum of 50K.

M: We focus on the top 250 companies. Sometimes large companies do not want to outsource, due to in house economies of scale. Small companies do want to outsource and need it to be competitive.

M: Consultancy does not have a market in SMEs

M: Transparency is important for directors of SMEs. Otherwise they will not take the chance to outsource.

M: There will be BPO solutions per sector of industry (e.g. mechanical engineers / accountants). This is a business model for shared services. This is easier for small companies. Conclusion has a focus on horizontal markets (supportive processes).

Vertical solutions (per sector of industry). Horizontal solutions (e.g. financial processes). This approach enables to offer service to smaller firms, due to the scalability of the solution. Normally it would not be interesting for larger firms to offer this per specific firm, but now when you can see them as a whole it is a “large” company. Only the overhead (e.g. administrative processes) need to be standardized with the support of IT processes.

Advantages of a shared service business mode: continuity, economies of scale and offers company specific processes.

P: Are there problems with shared service implementations?

M: The largest problem has a personal side. It is always a problem of reorganization. It is difficult to go from 400 to 200 people. This is also the case in small companies.

P: How can Conclusion put all the tacit knowledge?

M: People leave per year with a 5% of rotation of personnel. Normal service companies have a rotation of 25%. With only 5% we can keep the knowledge loss under control.

M: We use a central database with knowledge. This is in fact also a reference system. Who has done what when.
Company F - Interview with Marc Gobes (21st of June)

Present:

Marc Gobes       Manager Managed Services
Paul de Grijp     Interviewer Technical University of Delft

The interview started at 10:00h in Naarden

Paul: Could you give me a short introduction of Nobel van Dijk and its customers?

Marc: Nobel van Dijk has a few large customers with an average of 6000 laptops.

Paul: What are other customers of Nobel van Dijk?

Marc: We focus on the SME market. We are up scaling to a larger segment. Selling to the 1-50 segment is difficult to sell all our services. We prefer 50-150. Customers of 1-50 workplaces only buy one component of the whole services and not buy the total managed services. Our experience is that is more difficult to sell large contracts to SME, because that they are too expensive.

Paul: Do SME companies trust the supplier?

Marc: In SME companies there are always employees who do the IT next to their job. We offer an escape option when that employee doesn’t have a specific expertise. They can call us than for expertise.

Paul: Which services do you offer?

Marc: Here you have our folder.

Paul: Do you offer helpdesk services to support their services?

Marc: No, we deliver most of the time a helpdesk for operational ICT within a company. We are not a call-center.

Paul: How large is Nobel?

Marc: 200 employees

Paul: What happens with the ICT personnel when a company switches to outsourcing?

Marc: When a company outsources its ICT it normally puts all its ICT personnel on their core business. There are not many ICT employees of our customers who come working at us (transition).

Paul: What do you think are the motivations of SME companies to outsource their IT processes?

Marc:

<table>
<thead>
<tr>
<th>Motivations</th>
<th>1-50</th>
<th>50-500</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Continuity</td>
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Delft University of Technology
Paul: What is the business model for your services and do they differ for the type of organization you offer them.

Marc: No, we have one business model, which is focused on the SME. For 100 plus companies we sometimes create a special business case. I can make an offer to SME within 10 minutes. It is impossible to create a special business case for small firms, due to small contracts.

Paul: How does the business model look like?

Marc: It is based on network components, desktop environment, how many call do I get per month (we have experience with this and also the level of education of the company who wants to outsource. Also we look to how old the network is. Our model is built on fixed and variable costs.

Paul: Do you have startup costs?

Marc: Only when we have to upgrade the old network for example. Less when our own people have implemented it already.

Paul: What is your smallest customer?

Marc: Our smaller customer has 20 employees.

Paul: Are there other criteria for your smallest customer?

Marc: No, but 20 computers with only one server is not big enough. These customers can take for example one component of managed services, such as server management (which has a standard price).

Paul: Do you sell more total managed services contracts or per component?

Marc: We sell more components than total contracts.

Paul: Do you have other business units than the Managed Services?

Marc: We have consultants (service division) and sales

Paul: What are the services within managed services?

Marc: Server management, security, desktop environment.

Paul: Which types of IT process do SME normally outsource? (primary/services)

Marc: We manage a lot of hardware + OS software at the location of the customer. The specific applications which run on these systems, the customer does it himself. Is not interesting because it needs specific expertise.
Paul: What is the length of a contract?

Marc: Managed Services is more than one year. Normal management is most of the time one year.

Paul: What happens when an SME increase or decrease?

Marc: We are flexible with growth and getting smaller.

Paul: Do you ask minimal guarantees for the size of the contract?

Marc: No, we are not asking for this.

Paul: Are your customers in a special branch?

Marc: No, only accounting, television (Hilversum)

Paul: Are there other business models for really small firms?

Marc: No, we have not seen firms who work together to create size.

Paul: What is your focus for the next years? For example even lower than 20 companies?

Marc: No, we want customers which are around 50 and 100 employees.

Paul: Why, is until 50 employees not interesting enough?

Marc: Firms until 50 employees have difficulties with signing contracts, due to the costs. They accept best effort basis instead of high expensive SLAs. They will use the IT service provider. They can deliver on best effort basis. We can than act as a backup.

Paul: Does personal contact play a roll?

Marc: No, we manage at the location of the customer. So we have a personal contact moment.

Paul: What is your vision of IT outsourcing for SME and large firms in the next years.

Marc: Companies larger than 250 have their own ICT personnel. They will do it their selves. SME (50-100) with only one ICT employee will have problems, because technology is getting more complex and therefore they will have a lack of expertise and need outsourcing or get a “vangnet”. They will outsource to the size of their own company, because than they will get the right attention. SME don’t hire expertise of IT outsourcing, because the consultants are too expensive. Also the IT department of an SME firm need to work very well, otherwise the core business will not work efficient.

<table>
<thead>
<tr>
<th>S (1-50)</th>
<th>M (50-250)</th>
<th>L (&gt;250)</th>
</tr>
</thead>
</table>

Marc: How have you selected your interviews?

Paul: I focus on open interviews, from buyer, supplier and integrator for SME until Large Enterprise.
The selection process of IT outsourcing within small firms

Company G - Interview with Gerard Albers (21st of June)

Present:
Gerard Albers  Business Manager Outsourcing
Paul de Grijp  Interviewer Technical University of Delft

The interview started at 13:00h in Utrecht

P: Could you give me a short introduction of Telindus

G: I am Business Manager Medium Enterprises. We sell network components, where margins are low. That’s why Telindus offers management of these components. Next to this Telindus offers desktop management (Object-if = outsourcing). Telindus has 2600 employees and is active in Europe, 140 employees in the Netherlands. From January 2006 we offer outsourcing to SME (5-500).

P: What is the smallest customer you have?

G: Min. 6 employees and max 1000 seats. Above 1000 seats Getronics and CapGemini, Logica. Our competition is Kender-Thijssen, SLTN. We actively search for customers between 10-500.

G: You have two type of IT processes

Non-business related IT process - Is for every one the same (network, server, OS, desktop). This is scalable and thus cheap.

Business related IT processes - Special applications. We offer this with our partners. We are a single point of contact for a customer.

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<th>It personnel</th>
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<th>20-50</th>
<th>&gt;50</th>
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<td></td>
<td>(someone does IT</td>
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<td></td>
<td>next to his job)</td>
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<tr>
<td>Director</td>
<td>Emotional with the</td>
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<tr>
<td></td>
<td>company</td>
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<tr>
<td>Sales cycle</td>
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<td>Short</td>
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<tr>
<td>DMU (Decision Making Unit)</td>
<td>Director</td>
<td>Director</td>
<td>Board</td>
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<td>Partner selection</td>
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Technical management – Looks if an application is up and running.
Functional management – Looks if the parameters are correct of the application.
The selection process of IT outsourcing within small firms

Business model ABC

A: Daily management of desktop  
B: Hardware, software and internet connection  
C: Projects

TCO – Total Costs of Ownership (direct and indirect)

P: Do companies of 5 employees have different treatment than 500 employees.

G: Yes. Firms (500 employees) have space with financial and legal issues. Small firms do not have room for negotiation. There is a standard ABC business model. You can also choose for A1 (e.g. telephone or server). The full A is € 50,- per month per employee. When you have a firm of 50 employees you have normally one ICT employee which costs 4000 Euro. When you outsource it costs 50*50 = 2500 Euro per month. This is cheaper.

P: How does it work when organization A calls more often than organization B?

G: We use fair use policy.

G: Normally there is 1 IT employee for 50-100 employees.

G: When you are a small firm there has to be a local employee (local component) which is the technical contact of Telinus. Because of this, the costs are lower for telindus and they can offer these services to small firms. The normal margin is 20-30%. When telindus has to drive to a customer they loose their margin. The service manager of telindus goes every 3-4 months to the customer and talks with the contract manager (financial management function).

P: What are differences between SME and Large customers?

G: SME want to outsource everything and Large customers want to outsource only a part.

P: What is your personal vision of IT outsourcing in the next years?

G: It is not the question if the SME will outsource, but when they will outsource. SME has not the money/expertise to keep up with all developments in ICT. At this moment SME does not get the maximum of ICT to support their core business

G: SME is getting more aware of the importance of ICT (continuity, security, availability).

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<td>Expertise</td>
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<td>New business opportunities</td>
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<td>Costs</td>
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<tr>
<td></td>
<td>Focus on core business</td>
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</table>

10-50 >50

Motivations for IT outsourcing

Continuity  
Security  
Expertise  
New business opportunities  
Costs  
Focus on core business  
Focus on core business (less, see under)  
Quality / Expertise  
Continuity (normal IT department works from 9-17. Telindus has 7x24)  
Costs (Telindus has scalability advantages)  
Difficult to keep IT personnel
<table>
<thead>
<tr>
<th>Available ICT policy</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
</table>

(You need HRM person and is expensive)

In group 1 the director has to do the IT and cannot focus on its core business, so higher impact.

G: It is difficult to keep IT personnel, due to the market developments the next years.
Appendix IV – IT outsourcing examples

To better understand the impact of outsourcing within a small company two examples are given (WWW2, 2006). Two different companies have outsourced parts of their processes. An implementation of these projects are given.

Outsourcing Example – Company A

Company A is a new business that sells specialised computer hardware from a small shop in the centre of town. It is a small business with 6 employees that all have specific roles. For the first three months, sales have not reached expected figures and although costs are being covered, profits are not evident. However, the employees do not have sufficient skills in sales techniques other than 'direct' sales (on-site).

"employees do not have sufficient skills"

Company A has therefore agreed to outsource 'sales' to external service providers. They will use a service to conduct telemarketing sales to businesses throughout the UK. Company A frequently introduces new offers and discounts which they find hard to reach the attention of the public. Consequently, they believe mail shots will be beneficial which they will outsource to a mailing company. The mailing company will use their own specialist mailing lists in addition to their professional design and editing skills to produce regular sales letters. Six months later and sales figures have increased significantly. Company A is now looking to increase their sales potential even further. Expert advice has suggested the use of a commercial web site to advertise products and for on-line sales orders. Company A is happy to employ another person to administer and process the on-line sales orders which will be received in the form of e-mail. However, they do not have the resources, space and skills to run and host a web site and are reluctant to giving up their current shop location which they believe is ideal. Respecting this, Company A has decided to outsource the web design to a professional that will regularly update the content. In addition, they will also outsource the web hosting. Company A expect all outsourcing companies to acknowledge their financial capability to come up with new and fresh ideas to drive sales potential to new levels.

Outsourcing Example – Company B

Company B is an independent garage that sells second hand cars. The increasing local competition has forced Company B to consider increasing their services and communications in order to increase competitiveness and stimulate growth. They have made plans to sell new cars and to provide a servicing department. In addition, they plan to provide a high degree of after-sales customer service by contacting customers by phone (e.g. calls, service reminders).
"prefer employees to concentrate on their core activity"

However, Company B has acknowledged the existing lack of skills and resources to complete such tasks and would prefer employees to concentrate on their core activity - obtaining and selling cars. Consequently, Company B has decided to outsource some processes to allow them to concentrate on core activities and to allow the process of "stepping up" to be more effective. Firstly, Company B has outsourced the management of customer details to a database management service. In addition, they have approached a call centre to outsource the process of customer service (contacting customers, calls, etc). By interact closely and regularly with the outsource companies, Company B expect them to come up with new ideas that will allow the process of data management and customer service to become more effective and competitive.
### Appendix V – Decision model

The selection process of IT outsourcing within small firms involves several factors that influence the decision-making process. The decision model includes inputs and outputs as follows:

**Input**
- **Type of buyer**
  - Size
  - Risk preference
  - IT knowledge
  - Relationship management
  - Contract and negotiation skills
- **Type of IT Process**
  - Type
  - Specificity
  - Complexity
  - Uncertainty

**Output**
- **Type of supplier**
  - Size
  - Competitive advantage
  - Risk preference
- **Type of outsourcing arrangement**
  - Contract type
  - Contract period
  - Flexibility
  - Contract form
- **Buyer action plan**
  - Implementation plan
  - IT knowledge
  - Relationship management
  - Contract and negotiation skills
Appendix VI – Questionnaire

Here an overview is given of the design of the questionnaire. Proposition 1 is used as an example.

**Figure 39 – Design of questionnaire - Round 1**

7. Do you have any experience regarding this proposition?

**Figure 40 – Design of questionnaire - Round 2**

**Proposition 1:**
Firms with limited contract and negotiation skills should use an outsource arrangement based on a standardized contract.

**Feedback:**
1. A firm with limited negotiation skills should reconsider the scale of the project, since a standardized contract will most likely benefit the supplier.
2. Always read the contract and change clauses that are not in your favour, remember the outsourcing company wants your money and there are a lot of competitors.

After having read the feedback and graph of the 1st round, please give again your opinion about the given proposition.
Appendix VII – Descriptives overview

### Round 1

#### Descriptive Statistics

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#### Figure 41 - Overview of the Level of Agreement – Round 1

#### Descriptive Statistics

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#### Figure 42 - Overview of the Level of Importance – Round 1
The selection process of IT outsourcing within small firms

Round 2

Descriptive Statistics

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Figure 43 Overview of the Level of Agreement – Round 2

Descriptive Statistics

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Figure 44 - Overview of the Level of Importance – Round 2
Appendix VIII – Qualitative data of round 1

Here an overview is given of results of the qualitative data of round 1.

1. The level of agreement

Proposition 1
1. A firm with limited negotiation skills should reconsider the scale of the project, since a standardized contract will most likely benefit the supplier.
2. Always read the contract and change clauses that are not in your favour, remember the outsourcing company wants your money and there are a lot of competitors.

Proposition 2
1. Outsourcing only works when you build a long term relationship. The first year it is getting used to each other, the second year and further it is building on a relationship.
2. One should wait until the process is certain, or add the process to an existing contract, where relationships and work processes allow short communication channels.
3. If you know that you are not going to switch in a year, than you should take the benefit of a longer agreement with lower cost.

Proposition 3
1. Being able to end the contract quickly has advantages, but so does long term development relationships with short, but long established, communication lines.

Proposition 4
1. When you do not have the knowledge you should “buy” availability.
2. All firms should. In outsourcing one does not acquire passive labour, but the answer to a technical shortfall.
3. Yes, but easy to say but difficult to execute.

Proposition 5
1. Small firms will become just a number for large outsourcing suppliers.
2. The relationship will be equally important to both parties.
3. Agree mostly, but large firms with over capacity can be a very good target for cut price short term projects.

Proposition 6
1. Outsourcing suppliers should be flexible, because a small firm can not see the future.
2. The supplier should think along and should address what is possible now and in the future.
Proposition 7
1. The scope should be long-term and this implies developing a good relationship.
2. Relationship Management skills are a key step to success in the project, through mistakes firms will always learn.

Proposition 8
1. Depends on how quickly and essential the secondary process is.

Proposition 9
1. In long term the suppliers opportunistic behaviour will damage the relationship even if the customer has not much knowledge. As long as the firm has a long term scope, this opportunistic behaviour will be detected. It must be part of the risk assessment.
2. Outsourcing is only ever an option when there is knowledge in-house of the work being undertaken. If this knowledge is absent, it becomes impossible to monitor and manage the process successfully.

Proposition 10
1. Just make the right agreements.
2. This will happen naturally.

Proposition 11
1. Some implementations may take less than two years with a sufficient team.
2. Sometimes time is of the essence, but long term contracts create a stable communication and norm basis that allows for optimal performance.

Proposition 12
1. Always read the contract.

Proposition 13
1. A contract duration of at least 3 years is needed. Shorter is not an option.
2. The firm should call references. That’s the most important lesson.
3. Try before you buy big - a good lesson for us all.

Proposition 14
1. When specifications are well defined it makes contractual negotiations much simpler.
2. Always negotiate a contract, the more you can specify the better your contract can be.

Proposition 15
1. No feedback

Proposition 16
1. Always write the implementation plan.
2. Firm and people are involved - outsourcing does not fully suit low risk preference companies.
3. One should always plan the process.

**Proposition 17**
1. Use a mediator
2. They will gain them - the hard way if necessary.
3. All of life is a learning process.

**2. Level of Importance**

**Proposition 1-17**
1. No feedback
Appendix IX – Mann-Whitney Test

This are the results of a Mann-Whitney Test of the data between the results of propositions of round 1 and the results of the propositions of round 2 for the Level of Agreement.

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