Sourcing the retained organisation in IT outsourcing

An explorative research on how to determine an appropriate sourcing strategy for the retained organisation

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Preface

This research thesis is the main deliverable for the graduation module of the System Engineering Policy Analysis and Management (SEPAM) Master of Science program of the faculty of Technology, Policy and Management at the Delft University of Technology. This thesis was written during an internship at KPMG IT Advisory - Financial Services.

This research thesis explores the possible sourcing strategies and respective rationales of an IT outsourcing organisation to appropriately source its retained organisation. A successful retained organisation is identified in the literature as crucial for the success of IT outsourcing. However, in our knowledge no literature exists on how to do this. This thesis is thus the first initiative in researching how to determine an appropriate sourcing strategy for the retained organisation.

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Abstract

The challenges of IT outsourcing (ITO) have leveraged the importance of a successful retained organisation. As service integrator and coordinator responsible for aligning the demand and supply of outsourced IT functions, the retained organisation is a vital part of an outsourcing organisation. However, the retained organisation is moreover unsuccessful in fulfilling its responsibilities due to the lack of the appropriate IT capabilities. Accordingly, this thesis explores how an outsourcing organisation can determine an appropriate sourcing strategy for these IT capabilities to increase the success of its retained organisation. Accordingly, the main research question of this thesis is; how can an outsourcing organisation source the essential IT capabilities of its retained organisation to manage and govern its outsourced IT functions more successfully?

To answer this research question a theoretical sourcing framework is developed that presents the different theoretical perspectives on how to source the essential IT capabilities in a competitive advantageous manner. This framework presents and relates the essential IT capabilities for a retained organisation based on the management and governance framework of Feeny and Willcocks (1998). The possible sourcing strategies for obtaining these IT capabilities are based on the sourcing continuum of Wibbelsman and Maiero (1994) as cited by Dibbern et al. (2004). Determining the most competitive advantageous sourcing strategy is based on the theoretical perspectives of Transaction Cost Theory (TCT) and Resources Based View (RBV).

Applying the sourcing framework in a case study has indicated the applicability and usability of the used theories in determining a sourcing strategy for the retained organisation. The case study analyzed the retained organisation of a medium side bank from the Netherlands, which just recently developed a prototypical retained organisation. Consequently, the obtained insight should be applicable for other outsourcing organisation in the financial sector. Note however that this is the first scientific initiative on this specific subject. Practitioners should therefore implement the theoretical sourcing framework with caution as much additional research is required to increase its validity. Indeed, additional research is needed that incorporates the sourcing rationales of a potential service supplier to leverage the internal validity of the framework. Furthermore, additional research is needed to apply the framework with other outsourcing organisation to increase its external validity.

Insights from applying the framework showed that it can be theoretically viable to co- and outsource IT capabilities of the banks’ retained organisation. However, further research is needed to determine the benefits, risks and constraints of doing so. The results showed that for this case study the sourcing
determinants of TCT and RBV complemented each other, resulting into a more exhaustive perspective on how and why to source. Although TCT and RBV have shown to be useful in determining a sourcing strategy for the retained organisation, prior research identified that they do not cover all the complexities of ITO. Additional research is therefore required that incorporates other theoretical perspectives by which to determine a sourcing strategy.

Feedback of the case study showed that an outsourcing organisation will have changing priority concerning the IT capabilities during the sourcing lifecycle. These changing priorities may affect the validity of the sourcing framework. Consequently, future research on the sourcing framework should analyze what the affects are of these changing priorities. Furthermore, the case study showed that the interrelatedness of the IT capability can lead to operational risks as out- or co-sourcing an IT capability may frustrate the operations of the related IT capabilities. Future research on the framework should thus determine what these affects and risks are.

The sourcing framework offers the means for practitioners to look in a more fundamental way to how they can source their retained organisation. The framework is focused on the decision making process and less on the outcome or success of the developed sourcing strategy. Accordingly, future research is concerning the outcome of implementing a sourcing strategy for the retained organisation. The theoretical implications of this researched are concerned the applicability of the used theories in the context of the retained organisation. Although future research is needed, feedback from the case study offered useful insights concerning the relevance and usability of these theories. Furthermore it showed that the framework offered a viable representation of the relations of these theories. Furthermore, as no prior research focussed on how to appropriately source the retained organisation, the developed sourcing framework and subsequent findings are the first contributions to the scientific literature on how to develop a more successful retained organisation

Keywords: IT outsourcing (ITO), Retained Organisation, IT Capabilities, Sourcing Strategies, Transaction Cost Theory, Resourced Based View, Theoretical Sourcing Framework
Readers’ Guide

The structure of this thesis intends to be self-evident. The research questions are answered chronologically and the chapters aim to elaborate each subject in a coherent and logical manner. The research can broadly be divided into four parts; the introduction, the theoretical part of the research based on a desk research (chapter 2, 3 and 4), the empirical part of the research based on a case study (chapter 5) and the conclusion (chapter 6). To really appreciate the complexity and interrelatedness of all the subjects of this research, readers are invited to read the whole thesis. However, if this is not possible:

- Readers interested in the results of this research should focus on the introduction (section 1.2 and 1.3.1 in particular), the reflections of each chapter (section 2.5, 3.4, 4.4 and 5.4) and the conclusion (chapter 6)
- Readers interested in the methodology of this research should read the introduction (section 1.3 in particular) and the first paragraphs of each of the chapters (sections 3.1, 4.1 and 5.1)
- Readers interested in the developed sourcing framework should read chapter 5 and 6
- Readers interested in how to apply the framework should read chapter 5 and 6, and appendix B and C
- Readers interested in IT outsourcing should read section 1.1 and chapter 2
- Readers interested in the retained organisation should read the introduction (section 1.1 en 1.2), chapter 2 and chapter 3
- Readers interested in the possible sourcing strategies and their determinants should read the introduction (section 1.1 en 1.2), chapter 2 and chapter 4

In the appendix of this thesis (appendix A) the scientific article based on this thesis can be found.
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Glossary

This glossary presents an overview in alphabetical order of the most relevant terminology used in this thesis.

**Co-sourcing**
Supplying the provision of IT functions and the related workforce and assets through uniting the capabilities and resources of both the outsourcing organisation and its supplier (based on Kaiser and Hawk, 2004)

**Degree of outsourcing**
The percentage of the total IT functions budget spent on outsourcing, ranging from 0% to 100% (Hirschheim, Heinzl and Dibbern, 2006 p.109)

The degree of outsourcing can be divided into;
- **Total Insourcing**: “Occurs when a company spends 80% or more of its IT budget to obtain IT services from an internal IT department ”
- **Selective Sourcing**: “Occurs when a company spends less than 80% and at least 20% of its IT budget to obtain IT services from external vendors ”
- **Total Outsourcing**: “Occurs when a company spends 80% or more of its IT functions budget to obtain IT services from external vendors ”

**Insourcing**
Deliberately supplying the provision of IT functions and the related workforce and asset from within the own organisation (based on Hirschheim and Lacity, 2000 and Delen, 2005)

**Insourcing (from the viewpoint of a service supplier)**
Supplying the provision of IT functions and, if applicable, the related workforce and assets, for a specific client organisation, throughout the duration of the contract in correspondence with the agreed level of quality and financial compensation structure (Delen, 2005 p. 16)

**IT capabilities**
The ability to mobilize and deploy IT-based resources in combination or copresent with other resources and capabilities (Bharadwaj, 2000 p.171)
**IT governance**
The framework for decision rights and accountabilities to encourage desirable behaviour in the use of IT (Weill, 2004 p.4)

**IT functions**
IT functions can be characterised as self contained organisational commodities, differentiators etc., that include such common tasks as systems operations, functional management, applications management, network and communications management, helpdesk and user support, system planning and management (Dibbern et al., 2004 p.11)

**IT resources**
The (1) tangible resources comprising the physical IT infrastructure components, (2) the human IT resources comprising the technical and managerial IT skills, and (3) the intangible IT-enabled resources such as knowledge assets, customer orientation, and synergy (Bharadwaj, 2000 p. 171-172)

**Multisourcing**
The disciplined provisioning and blending of business and IT functions from the optimal set of internal and external providers in the pursuit of business goals (Cohen and Young, 2006 p.1)

**Organisational arrangement**
The formal structure by which responsibilities and tasks, and the respective resources and capabilities, are allocated amongst an organisation and its supplier(s) (based on Dibbern et al., 2004)

**Outsourcing, IT outsourcing, ITO**
Transferring the provision of IT functions and, if applicable, the related workforce and assets, to a specialised service provider and subsequently receiving these IT functions throughout the duration of the contract in correspondence with the agreed level of quality and financial compensation structure (Beulen et al., 2006 p.20)

**Outsourcing (ITO) configuration**
A high level description of the set of choices the organisation makes in crafting its IT outsourcing portfolio (Cullen et al., 2005 p.1)

**IT Sourcing**
The organisational arrangement instituted to obtain and exploit IT functions (Dibbern et al., 2004, p.11)
**Sourcing Strategy**

The high-level plans and decisions that should guide the institution of an organisational arrangement towards attaining and sustaining competitive advantageousness IT functions in coherence with middle- and long-term goals

**Retained organisation**

The organisational arrangement instituted to manage and govern the supply and demand of IT functions in coherence with business goals

**Technostructure**

The technostructure is an apparatus for group decision - for pooling and testing the information provided by numerous individuals to reach decisions that are beyond the knowledge of any one (Galbraith, 1978 p.78)
1 Introduction

Since the late 80’s, with the rise of the information age, the practice of IT Outsourcing (ITO) has obtained a significant amount of attention from the professional and scientific world (see Dibbern, Goles, Hirschheim, and Jayatilaka, 2004; Willcocks, Lacity and Cullen, 2006a). The effects of globalisation, the emergence of e-Business and the growing importance of value chain unbundling and integration have made IT outsourcing a cornerstone in the search for IT quality and efficiency (Hirscheim, Heinzl and Dibbern, 2006; Papazoglou and Ribbers, 2006). In the last 20 years IT outsourcing has become one of the fastest growing practices in the world, evolving and expanding into multiple and diverse market segments. In so doing, the global revenues of ITO have risen from $40 billion in 1995 to exceeding $200 billion in 2005 and expected to grow 7% annually for the coming years (Willcocks et al., 2006a).

Outsourcing (parts of) the organisations’ information systems to one or more external service suppliers is however not without risks. Many organisations struggle with the organisational and technological complexities of implementing a successful IT outsourcing strategy (see Lacity and Willcocks, 2006). The “very mixed successes and all too much conflicting advices” in recent years confirm this struggle and illustrate the need to better understand these challenges and how to confront them (Willcocks and Cullen, 2007a p.2). Accordingly the objective of this thesis is to add valuable insights for the scientific field of ITO and in so doing aid practitioners in dealing with some of the inherent challenges of IT outsourcing. This is done by researching the different options outsourcing organisations have for obtaining the essential capabilities to govern and manage the practice of outsourcing more successfully. This introduction will clarify the objectives for this research, present the relevant research questions and describe the methodology used to research these questions.

1.1 Research motives

The invasiveness and complexity of IT outsourcing has made it a fascinating research field. Much has been published concerning its use and misuse in the last two decades. Practitioners have designed and implemented diverse outsourcing configurations to control the risks and harvest the benefits of outsourcing. Scholars have analyzed the outsourcing phenomenon, elaborated its intricacies and researched the many diverse and idiosyncratic ITO configurations. The collaborative experience and accumulated research in ITO has led to a broad overview of its potential (see Hui and Beath, 2002; Dibbern et al., 2004). Nevertheless, the mixed results of ITO confirm that still much has to be learned before it can be classified as a truly mature business strategy (Mahnke, Overby and Vang, 2003; Fairchild, 2004; Willcocks and Cullen, 2007a).
The growing complexity of information systems and their growing influence and impact on overall business performance, has leveraged the value of IT outsourcing. Hence, organisations increasingly depend on IT vendors to provide complex and business crucial IT services for which an organisation often does not have the expertise and/or resources to appropriately develop and implement them themselves (see Kern and Willcocks, 2001; Lacity and Willcocks, 2006). This dependency however increases the strategic risks of outsourcing as lock-in effects with suppliers intensify. To reduce this dependency and (still) obtain the required IT functions, organisations have adopted more complex sourcing strategies, which are moreover labelled as multisourcing (see Cohen and Young, 2006; Computable, 2008a). A multisourcing organisation employs multiple “best of breed” service suppliers, which enables it to mitigate lock-in effects and allows it to change suppliers more easily. Multisourcing thus increases the flexibility and control outsourcing organisations have over their ITO configuration (Lacity and Willcocks, 1998; Carmel and Agarwal, 2002).

However, as can be predicted, multisourcing considerably increases the complexity of outsourcing. It lays great emphasis on the abilities of an outsourcing organisation to align the diverse IT requirements with different often competing service suppliers. Figure 1.1 gives an illustration hereof, the figure shows an outsourcing organisation with various IT demands which are supplied by different service suppliers. As such, the organisation needs to ensure that IT functions supplied by different sometimes competing suppliers can interchange information and operate properly. It should thus cope with the increased technical complexities of enabling flexibility and interoperability in these separate supplied but interdependent information systems (see Surie, 2007). In addition, outsourcing organisation need to cope with the increased organisational complexities of aligning the demand and supply of IT functions. This is necessary to ensure that the business IT requirements are correctly elicited and processed, and that service
suppliers deliver the demanded IT services (Cohen and Young, 2006; Levina and Su, 2008; Computable, 2008b).

Unfortunately, recent publications on IT outsourcing and its success identified that the latter aspect is most problematic (see Delen, 2005; Gottschalk and Solli-Saether, 2006; Willcocks, Feeny, and Olson, 2006b; Willcocks and Cullen, 2007a; KPMG, 2007). Aligning the demand and supply of IT functions is most often a new business function fulfilled by employees reassigned from the recently outsourced IT functions. In general these employees have little experience in managing and governing a network of interdependent internal and external service suppliers. Outsourcing organisations thus often lack the required IT capabilities to cope with the organisational challenges of ITO. Hence, an analysis of the global sourcing market found that more than 55% of the problems encountered in ITO relate with these organisational inabilities (KPMG, 2007). Prior research has identified that not possessing these IT capabilities will disrupt the overall business performance and ultimately affect the outsourcing satisfaction (Willcocks and Craig, 2007; Cohen, 2008). Consequently, motivated by this problem, this thesis has researched the possibilities an outsourcing organisation has in obtaining the capabilities needed to manage and govern their outsourced IT functions more successfully.

![Figure 1.2 - The Retained Organisation as coordinator of the demand and supply of IT functions](image)

**1.2 Research objectives**

The growing complexity of IT and the subsequent use of more complex sourcing strategies emphasises the role of the so-called *retained organisation* (Gewald and Helbig, 2006). The retained organisation is in charge of coordinating and aligning the IT demand of the business/end-users with the IT supply of the (internal and external) service suppliers (see figure 1.2). As such, it is the definite part of an organisation that should be able to govern and manage the network of ITO relations (see Wijers and Joha, 2005). Accordingly, as identified in the previous section, it is thus the retained organisation that is often inadequately resourced and as a result lacks the required capabilities to cope with the organisational challenges of IT outsourcing (see Willcocks et al., 2006b; van der Haar, 2008).
To obtain the required capabilities for their retained organisation, outsourcing organisations have used diverse sourcing strategies. They, for example, reorganized and re-educated their employees or recruited other more qualified personnel for the retained organisation. Another, more drastic approach, was to outsource capabilities of the retained organisation to an external service supplier (see Accenture, 2006; Quint, 2007a;b). Such a sourcing strategy touches on the innovative and evolutionary character of ITO by moving it further on the “cutting edge” of what can be outsourced. However, it is also controversial as business activities and responsibilities closer to the core of an organisation will need to be transferred to a service supplier, which increases operational and strategic risks (see Feeny and Willcocks, 1998; Quinn, 1999). Although these different practical examples exist, the scientific literature has yet to research the relation between the capabilities required by a retained organisation and the possible sourcing strategies to acquire them.

Consequently, motivated by the problems occurring when the essential IT capabilities of the retained organisation are not appropriately sourced - and the lack of existing scientific literature on how to acquire them - the objective of this thesis is to explore how an outsourcing organisation can successfully source the essential IT capabilities of its retained organisation. Accordingly, the following main research question can be formulated;

*How can an outsourcing organisation source the essential IT capabilities of its retained organisation to manage and govern its outsourced IT functions more successfully?*

**Main research question**

### 1.3 Research methodology

To answer this main research question we first need to better understand what a retained organisation is and determine which IT capabilities are essential for the retained organisation to become more successful. Subsequently, we need to explore how a retained organisation is to appropriately acquire these capabilities. This entails researching possible sourcing strategies and determining how to choose an appropriate sourcing strategy. Finally, by combine these findings and exploring their relations in determining a sourcing strategy for an actual retained organisation, sufficient insights should be obtained to answer the main research question. Below we present the different sub-research question and elaborate the research methods used to analyze the research questions.
1.3.1 Research questions

The previous discussion described the different subjects that need to be researched. Accordingly, the main research question can be delineated into the following sub-questions;

1) **What are the essential IT capabilities of a retained organisation?**
   a) **What is a retained organisation?**
   b) **What are its essential IT capabilities?**

2) **What sourcing strategies can an organization employ?**

3) **How can an appropriate sourcing strategy be determined?**

4) **How are the essential IT capabilities of the retained organisation, the possible sourcing strategies and respective sourcing determinants related in contemporary practice?**

1.3.2 Research methods

The main research question focuses on a subject that has obtained (in our understanding) no prior scientific attention. Nevertheless, ample (scientific) literature exists on IT outsourcing, sourcing strategies, the retained organisation and IT capabilities. By extrapolating relevant findings from the literature it should be possible to answer the first three sub-research questions. Subsequently, by exploring how these findings are related in determining a sourcing strategy for the retained organisation, it should be possible to answer the last research question. These requirements encompass the combination of different research methods to come to the intended qualitative results (Verschuren en Doorewaard, 2005). Consequently, the following research methods are used;

➢ **A desk research (literature review) to answer questions 1, 2 and 3**

The first three research questions are interpretative and descriptive in nature. A desk research can therefore be used to analyze the existing literature. This research method is preferred as it allows for processing and analyzing a high amount of rich information in a short time span. Where available, literature was obtained from leading scientific journals (see Lowry, Romans and Curtis, 2004) and of leading authors in the respective field of IT outsourcing, sourcing and (IT) strategy. Furthermore, where relevant, insights were obtained from practitioners press. The search terms used focussed on IT outsourcing, IT capabilities, sourcing strategy, IT strategy, retained organisation, sourcing decisions and sourcing rationales and determinants. Furthermore, references of these sources where consulted to obtain even more insight into the contemporary research field of ITO. Subsequently, insights were obtained in
the views of different authors, their stand on sourcing and IT outsourcing and the frequencies in which they are referred to. Accordingly, a wide knowledge base was obtained that allowed for a strong theoretical conceptualisation of the subjects under scrutiny.

In conceptualising these subjects multiple iterative steps were made to answer the three first questions. These iterations are omitted from this thesis for reasons of readability, however they where crucial to leverage the comprehensiveness of this thesis and thereby its scientific value. The iterations where triggered by new insights from the literature and feedback from discussions with supervisors, colleagues at KPMG and practitioners from both service suppliers and outsourcing organisations.

➢ An in-depth case study to analyze question 4
As the used literature is not tailored to the specific context of the retained organisation, it is necessary to explore their relations in contemporary practice. Hence, empirically testing the findings from the desk research has not only strengthened our understanding on the subject at hand, it has also determined the usefulness and accuracy of the used theories in the context of this thesis. To answer the fourth research question we have first combine the findings from the desk research into a conceptual framework. Subsequently, this framework has been implemented in a case study to explore the relations of the findings, which has allowed us to answer the main research question.

According to Yin (2003) a case study is next to a survey the most appropriate research method to study real life contemporary events where the researcher has no control over the research variables. Furthermore, a case study is a more appropriate research method then a survey when the relevant research variables are difficult to operationalize and labour intensive to research (de Looff, 1995). Sourcing the retained organisation is such an activity; we do not have control over the sourcing strategy of an outsourcing organisation, which excluded the possibility for an experiment. And, as we will see in chapter 4, the research variables are difficult to operationalize, which excluded the possibility for a survey. A case study is thus the most appropriate research method to empirically investigate the developed sourcing framework. In the figure below an overview is given of the research methodology.
1.4 Research scope and relevance

Outsourcing organisations are more and more taking control in driving and designing their sourcing strategy (Lacity and Willcocks, 2006). Understanding how to source the retained organisation is a crucial subject herein. Accordingly, the scope of this research is on the outsourcing organisation and its struggle in obtaining the appropriate IT capabilities for its retained organisation. However, the sourcing strategy for the retained organisation does not only affect the outsourcing organisation. It also affects the IT service suppliers that are managed and governed by the retained organisation (and vice versa). This affect
is however not researched in this paper due to; (1) the lack of literature on the behaviour and role of the service suppliers in ITO (see Mahnke et al., 2003) and (2) the limited timeframe for this research. Figure 1.4 illustrate the different possible relations in the context of the retained organisation and demarcates the scope taken for this research.

Furthermore, this research focuses on the decision-making process concerning a sourcing strategy for the retained organisation (the first step in the sourcing life cycle). The focus is less on the ex ante outcome or success of the sourcing strategy. Note however that the main research question is concerned with obtaining a *more successful* retained organisation. Success is a *crucial* aspect in the decision-making process. As this research focuses on the decision-making process, *success* is therefore demarcated as (1) **acquiring the appropriate IT capabilities for the retained organisation** and (2) **sourcing them in a competitive advantageousness manner for the outsourcing organisation**. The focus of this research is thus on what and why certain IT capabilities are essential for the retained organisation and on how and why these IT capabilities should be obtained. As we will see, these subjects have been separately researched in various prior studies. However, in our knowledge, no available literature has related them specifically in the context of the retained organisation.

The relevance of this research and the scope taken herein is twofold: *The practical relevance* is supported by the challenges of outsourcing organisation to obtain a more successful retained organisation. The retained organisation is a subject that has obtained an increasing amount of attention in recent years. Hence, the 2008 Dutch Outsourcing Congress of the Platform Outsourcing Nederland (PON) was solely dedicated to the retained organisation. *The scientific relevance* of this research is concerned with the exploration of the retained organisation and its relation to existing theories on IT capabilities and possible sourcing strategies and their rationales. As aforementioned this relation has obtained no prior attention in the literature. Accordingly, this thesis intends to take the first steps in filling this information gap and thus add valuable insights for the scientific field on IT outsourcing and the retained organisation in particular.
Based on the dimensions of relevance in empirical research on information systems (see Benbasat and Zmud, 1999), this research is relevant because it is:

- **Interesting**: As aforementioned, this research addresses the challenges of obtaining a more successful retained organisation which is perceived by practitioners and researchers as crucial for the success of IT outsourcing.

- **Applicable**: The objective of this research is to come to a more fundamental understanding of how an outsourcing organisation should source its retained organisation. Accordingly, through the intended theoretical framework, this research should offer practitioners the ability to determine an appropriate sourcing strategy for their own retained organisation.

- **Current**: Due to the increasing complexity of the outsourced IT functions and the use of a multisourcing strategy, the retained organisation has obtained more and more attention in recent years. Concurrent with the theme of the 2008 PON congress, the challenges concerning how to develop and implement a retained organisation is more than ever a current subject.

- **Accessible**: This thesis intends to combine both practical and theoretical insights. Furthermore, it intends to do so in an understandable and structured manner. Hence, special attention has been given to increase the readability, structure and logic of this thesis, which are all intended to increase the accessibility.

### 1.5 Structure of the thesis

Next to the research design, figure 1.3 also illustrates the structure of the paper. Accordingly, chapter 2 elaborates the research domain of ITO and presents the relevant subject used in the thesis. As such, it introduces the relevant definitions, practices and trends within the field of ITO and elicits the relevance of this research even further. The second chapter thus act as the platform upon which the remainder of the research is structured.

In chapter 3 the first sub-research question (1a and 1b) are analyzed. Accordingly, in this chapter the retained organisation and its IT capabilities essential for it are elaborated.

Chapter 4 researches the second and third sub-research questions. It analyzes what a sourcing strategy is and presents a sourcing continuum in which different sourcing strategy are illustrated. Furthermore it described how to determine an appropriate sourcing strategy based on the rationales of an outsourcing organisation and a potential service supplier.
Subsequently, chapter 5 analyzes the fourth research question by combining the findings from the previous three sub research questions into a framework and exploring this framework in practice by applying it in a case study.

The final chapter, chapter 6, discusses the findings, their relevance for theory and practitioners, discusses possibilities for future research and reflects on this research.

In the appendix the scientific paper of this thesis, the used interview protocol and the interview results can be found.
2 Background; exploring the research domain

Based on the findings form an extensive literature review this chapter explores the current research field of ITO. It introduces concepts and terminology relevant for the following chapters and delineates the reasons for this research in more detail. Hence, this informative chapter is to be considered as relevant background for the remainder of the research.

2.1 What is IT outsourcing?

In the late 80’s Eastman Kodak kick-started ITO by entering into a strategic alliance with different service suppliers led by IBM. In so doing, Eastman Kodak legitimized IT outsourcing, triggered international interest for it and opened the field for academic work (see Lacity et al., 1996). During these last two decades the approaches to ITO evolved. In correspondence with the growing business value of the fast evolving information technologies, the focus of ITO grew from a technological oriented decision to a value chain shaping business strategy (DiRomualda and Gurbaxani, 1998; Mahnke et al., 2003).

The general concept of “IT outsourcing” covers a broad spectrum of outsourced activities and configurations. It is therefore not surprising that the terminology used for ITO differs amongst studies (Gilley en Rasheed, 2000). Nevertheless, Delen (2005) distinguished two recurring topics in the ITO literature, being; (a) transferring business assets to an external party and (b) receiving these assets in return as a service during a predefined period of time against favourable contracted terms. In coherence with these two topics Beulen et al. (2006 p.20), described a more comprehensive classification of ITO, which is used for this thesis. Beulen et al. (2006 p. 20) defined IT outsourcing as;

“transferring the provision of IT functions and, if applicable, the related workforce and assets, to a specialised service provider and subsequently receiving these IT functions throughout the duration of the contract in correspondence with the agreed level of quality and financial compensation structure”

This definition describes the transition of IT functions from the client side to the supplier side, which is also known as vertical or horizontal disintegration. Figure 2.1 gives a simple illustration hereof. Furthermore, the definition of ITO does not exclude providing an IT function that the client previously did not possess. In this case outsourcing refers to vertical or horizontal integrations (see Cheon et al., 1995; Barthélemy and Quelin, 2001). In this thesis IT functions are defined as follows;
“IT functions can be characterised as self contained organisational commodities, differentiators etc., that include such common tasks as systems operations, functional management, applications management, network and communications management, helpdesk and user support, system planning and management” (Dibbern et al., 2004 p.11)

IT functions encompasses all the technological and human resources concerned with the IT portfolio of an organisation. Examples of possible outsourced IT functions are; outsourcing the development and maintenance of business applications, outsourcing the hardware provisions (e.g. desktops and mainframes), outsourcing the development and maintenance of the IT infrastructure and outsourcing the IT support helpdesk(s). In the following chapters (especially in chapter 3) the different kinds of IT functions are differentiated in more detail.

IT and IS
IT is generally used to describe the technological components (hardware and software) of an information system (IS). The literature however uses the terms IT outsourcing and IS outsourcing interchangeably. Because IT outsourcing is more frequently used in the literature, this thesis uses it to describe both IT and IS outsourcing. The same can be said concerning IT functions. Where the literature uses such terms as; IS and IT services, functions or activities, this thesis uses the term IT function(s).

ITO and BPO
Next to IT, organisations have increasingly outsourced specific business processes (Delen, 2005). This so-called business process outsourcing (BPO) allows organisations to outsource supporting business processes such as; human resources or financial and accounting services. However, as with ITO, the practice of BPO expended and nowadays also parts of the core operation, such as customer care or resource management, are the focus for potential outsourcing. These business processes are often directly or indirectly dependent on specific IT functions. Therefore, BPO service suppliers include diverse IT functions in their services. This thesis however does not differentiate between the different kinds of
service suppliers. As the identified problem relates to the governance and management of outsourced IT functions, this thesis only focuses on ITO. The possible similarities between BPO and ITO are not considered.

2.2 Why IT outsourcing?

The introduction depicts outsourcing as a valuable business strategy to become more (cost) efficient and gain competitive advantages. Cullen and Seddon (2004) describe that in some countries more than 95% of businesses use external service suppliers to obtain the sought level of IT competence. The estimated global ITO revenues of $200 billion for 2005 portray the benefits businesses perceive by outsourcing. Hirschheim and Lacity (2000) observed however that many ITO contracts were not successful and needed to be renegotiated or terminated within less than two years. Willcocks and Cullen (2007a p.10) predicted that “a third of large-scale deals, those involving complex processes and 80 per cent of the outsourcing budget, could fail – with a further third having mixed results”. So why do businesses outsource, even when success in IT outsourcing seems difficult to attain?

Kakabadse and Kakabadse (2002) identified different reasons, such as; realising greater economies of scale (cost reduction), improving service quality, enhancing the cost discipline, allocating risks, accessing new technologies, leveraging business resources and/or focussing solely on core competencies. They also found that companies in the EU and the US had different emphasis concerning these reasons. Concurrently, Cullen, Seddon and Willcocks (2008) identified 25 goals for implementing ITO and found that these goals are temporal in nature as organisations adjusted them over time. Accordingly, Dibbern et al. (2004) argue that context plays an important role in understanding the reasons organisations have for ITO. Organisations more often base their decision to outsource “on the particular set of circumstances they face” (Watjatrkul, 2005 p.390). Indeed, the diverse ITO configurations developed and implemented in the last 20 years, illustrate the different motives outsourcing organisations have (see Cullen et al., 2005).

A brief history

“ITO transitioned in a short period of time from a relatively simple straightforward proposition to a complex aggregation of multiple options and permutations. It has expanded from a relative handful of large firms to numerous organisations of all sizes” (Dibbern et al., 2004 p.80).

In the early days of ITO, the outsourcing market was dominated by several large service suppliers supplying relative standard IT solutions. Organisations outsourced for the greater part to reduce the overhead on their IT expenditures and/or to let external IT service suppliers cope with their “dirty
laundry”. When the hype of outsourcing cooled down and the first unsuccessful contracts where discontinued, it became clear that reducing costs and/or getting rid of problematic IT functions should not be the predominant reasons for ITO (see Lacity and Hirschheim, 1995). Moreover, practitioners began to identify the quality of the received service and denominated it as a pursuable motive (see Millar, 1994; Quinn, 1999; Hirschheim and Lacity, 2000). Concurrently, more specialised service providers began to enter the market, operating in specific market niches. This increased the potential and quality of outsourcing and together with the option to outsource offshore to low-wage countries triggered a second outsourcing wave (Camel and Agarwal, 2002; Kakabadse and Kakabadse, 2005).

However, organisations began to realize that ITO led to the loss of internal business competence, which increased the lock-in with a supplier. Furthermore, outsourcing more complex IT functions increased the need for external service suppliers that are able to deliver more specific and idiosyncratic IT functions. Consequently, to mitigate the lock-in effects with a supplier and to ensure the required IT functions could be appropriately supplied, some outsourcing organisations started to employ multiple suppliers. Although this considerably increased the complexity of outsourcing, it gave outsourcing organisation more flexibility as they could choose “best of breed” service suppliers (see Currie, 1998; Gallivan and Oh, 1999).

As ITO matured, outsourcing organisation began to implement different sourcing strategies depending on the kind of IT function and service suppliers. For some functions outsourcing organisation shortened the standard ITO contract terms, which promoted the flexibility of outsourcing organisation, allowing them to better anticipate on external uncertainties, such as; changing economic climates and the impacts of new innovations (Kakabadse and Kakabadse, 2005). This sometimes even enabled introducing competition between service suppliers (Cohan and Young, 2006). However, for other more business critical and intricate IT functions, outsourcing organisations had other more strategic motives for ITO (see McMellan, 1995; DiRomualda and Gurbaxani, 1998; Mahnke et al., 2003). Hence, to anticipate on the operational and strategic risks of outsourcing those kinds of IT functions, outsourcing organisations focussed on developing stronger relationships with their service supplier(s). Consequently, how to develop stronger and more trustful relationships between an outsourcing organisation and its supplier(s) has obtained more attention in the recent ITO literature (see Gottschalk and Solli-Saether, 2006; Hirscheim et al., 2006; Blumenberg et al., 2008).

The trends in ITO have strong similarities with the emergence of so-called network organisations. The term network organisation depicts the growing tendency of organisations to focus solely on their core competencies. Consequently, “networks of strategically structured business cells are created” which cooperate through institutionalised (long-term) relationships to bring their products or services to the market
With the appropriate coordination mechanisms, network organisations are deemed superior than market and hierarchically based organisations (see Gulati, Norhia and Zaheer, 2000). As described in the introduction, the scope of this thesis is concerned with improving the success of a main coordination mechanism of an outsourcing organisation; the retained organisation. Indeed, the tendency towards developing a network organisation leverages the importance of the retained organisation and consequently the relevance of this research.

**Theoretical basis for outsourcing**

Duncan (1998) describes that the rationales of an organisation to outsource can be explicated by the theories of the firm. The “theories of the firm” relates to the fundamental question why an organisation exists and what its functional boundaries (its scale and scope) should be (see Porter 1980; Williamson, 1981; Steensma and Corley, 2001). In other words, what is the added value of the organisation in its respective market and how can it ensure or increase this value?

IT outsourcing is considered as a sourcing strategy that enables organisations to obtain the intended business value for their information technologies and IT functions (Cheon et al., 1995; Barthélemy and Quelin, 2001). However, when should an organisation choose to outsource a specific IT function or when should it choose to keep it in-house? There exist different theoretical perspectives on the theory of the firm that illuminate this sourcing dilemma (see Kern et al., 2002; Hui and Beath, 2002). However, research found that there is not a single “theoretical lens” that holistically and systematically can describe why organisations should choose a specific sourcing strategy (see Hui and Beath, 2002; Dibbern et al., 2004; Gottschalk and Solli-Saether 2005). This subject is described in more detail in chapter 4, when researching research question 2 and 3. However, because the term sourcing is frequently used in this research it is befitting to define it. In this thesis sourcing is defined as;

“the organisational arrangement instituted to obtain and exploit IT functions” (based on Dibbern et al., 2004)

Accordingly, an organisational arrangement is defined as;

“the formal structure by which responsibilities and tasks, and respective resources and capabilities, are allocated amongst an organisation and its supplier(s)” (based on Dibbern et al., 2004)

Note that the definition of sourcing does not prescribe who is responsible for a respective IT function. Outsourcing is to be considered as a sourcing strategy by which an external supplier is made responsible for the organisational arrangements of a particular IT function. The question why an IT function should
be outsourced is interdependent with the question what to outsource. Hence, one can only determine why
functions should be outsourced if it is possible to differentiate what is to be outsourced and vice versa.
In the next section the question what to outsource is analyzed in more detail.

2.3 What IT functions should be outsourced?

As with the question why businesses outsource, the answer to the question what businesses outsource
differs per case. As aforementioned, organisations value their specific IT functions differently and as a
consequence have different rationales for outsourcing them. Dibbern et al. (2004) identified that IT
functions are outsourced inconsistently amongst outsourcers, except for the ITO planning and
management which are most often kept in-house. Outsourcing organisations have thus different views on
which IT functions in their IT landscape can (or cannot) be outsourced. The results hereof can be
identified in the many diverse and idiosyncratic ITO configurations outsourcing organisation have
implemented (see Cullen et al., 2005).

Kern and Willcocks (2001) described that the IT landscape of an organisation should be considered as a
portfolio from where demarcated IT functions can be selected. However, more complex IT functions are
often interrelated with each other and therefore difficult to differentiate by themselves. Accordingly,
Rijsenbrij and Delen (2004) and Ross and Beath (2006) emphasize the necessity of using enterprise
architecture models to distinguish and separate intertwined IT functions. They state that without the use of
enterprise architectures it is almost impossible to successfully identify what IT functions are source-able.

A business case for outsourcing

Source-able IT function, as described by Delen (2005), is an IT function or combination hereof, which
service suppliers are willing and able to supply. Hence, after demarcating separate IT functions through
the use of enterprise architecture models and determining the rationales for outsourcing them, an
outsourcing organisation can formulate a sourcing strategy for it. This sourcing strategy is then translated
into a business case (see Delen, 2005). In this business case the trade-offs of the perceived risks and
benefits for outsourcing are described. The same is done by a potential service supplier, as it eventually
needs to insource the respective IT function. Subsequently both the value proposition of the supplier and
the business case of the outsourcing organisation need to be balanced and properly synthesized (see
Levina and Ross, 2003). If this iterative process leads to a positive outcome for both sides, outsourcing
can be deemed as a marketable and thus viable business opportunity (see Delen, 2005; Gottschalk and
Solli-Saether, 2005). Hence, outsourcing organisations should take into account that outsourcing is only
viable if service suppliers are able and willing to supply the demanded IT functions by making a profit in
doing so. Concurrently, a service supplier should be able to successfully insource an IT function. In this thesis *insourcing* is defined as the antonym of outsourcing, thus;

> “supplying the provision of IT functions and, if applicable, the related workforce and assets, for a specific client organisation, throughout the duration of the contract in correspondence with the agreed level of quality and financial compensation structure” (Delen, 2005 p.16)

Note that this definition is from the viewpoint of a service supplier. Insourcing from the viewpoint of an organisation is defined as;

> “deliberately supplying the provision of IT functions and the related workforce and asset from within the own organisation” (based on Hirschheim and Lacity, 2000 and Delen, 2005)

The context in which the term insourcing is used should automatically depict the definition that should be used.

**The degree of outsourcing**

Depending on the outcomes of the sourcing strategy and the related business cases an organisation will have a certain degree of outsourced IT functions. The “degree of outsourcing” is a useful description to classify outsourcing organisations. The degree of outsourcing is defined as;

> “the percentage of the total IT budget spent on outsourcing, ranging from 0% to 100%“ (see Hirscheim, et al., 2006 p.109)

The degree of outsourcing can be divided into three categories; Total outsourcing, Selective Sourcing and Total Insourcing (see figure 2.2). As described above, outsourcing organisation rarely outsource all their IT functions. Outsourcing organisation can deliberately keep “aspects of their IT functions in-house to retain current and future business advantages and flexibility, while others may be safely outsourced” (Willcocks et al., 2006a p. 12). Accordingly, the three categories can be defined as followed.

- **Total Insourcing:** “occurs when a company spends 80% or more of its IT budget to obtain IT services from an internal IT department” (Hirscheim et al., 2006 p. 109)
- **Selective Sourcing:** “occurs when a company spends less than 80% and at least 20% of its IT budget to obtain IT services from external vendors” (Hirscheim et al., 2006 p. 109)
- **Total Outsourcing:** “occurs when a company spends 80% or more of its IT functions budget to obtain IT services from external vendors” (Hirscheim et al., 2006 p. 109)
Lacity and Willcocks (1998) found that selective outsourcing achieved higher cost efficiency than the other two categories. Cullen et al. (2005) identified that most of the outsourcing deals fall in the selective sourcing category. Whereby total outsourcing is depicted as the least favourable outsourcing category due to the risks related to the lock-in effect with its supplier(s). However, Rouse and Corbitt (2003) found that there were no statistical differences for costs saving or flexibility between selective sourcing and total outsourcing. These contradicting results are explained by the inconsistent and therefore incomparable manner by which the success of ITO is measured (see Dibbern et al., 2004; Willcocks et al., 2006a).

Consequently, we can conclude that consistent with the “why” question, there is more than one answer to the “what” question. Outsourcing organisations use dissimilar IT functions which they value differently and therefore have different IT functions that they foresee as source-able. The choice what to outsource thus depends on the sourcing strategy of an organisation and on the ability to employ capable and willing service suppliers.

### 2.4 How to outsource?

The findings of the previous two sections bring us to the pertinent question of “how to outsource”. Literature on how to outsource is readily available and describes many different subjects and viewpoints. Hence, Dibbern et al. (2004) identified that the kind of relationship between client and suppliers, and the contractual agreements they institute are important subjects to understand how to outsource. Cullen et al. (2005 and 2006) argue that these subjects are part of the ITO configuration. Thus depicting the implemented ITO configurations allows us to elucidate how an organisation has outsourced. The choices and option of an ITO configuration relevant in the scope of this research are described in more detail below.

**IT outsourcing configurations**

The previous sections acknowledged the idiosyncratic ITO configurations implemented by outsourcing organisation. In this thesis an ITO configuration is defined as;
“a high level description of the set of choices the organisation makes in crafting its IT outsourcing portfolio” (Cullen et al., 2005 p.1)

Hence, previous research has indentified the different choices and respective options an organisation can make when outsourcing an IT function (see de Looff, 1995; Cullen et al., 2005; Lee, 2006; Hirscheim, et al., 2006). These choices are concerned with, for example; the amount of suppliers, the length of the contract, the type of relationship with the supplier(s), the compensation structure, the ownership of the IT function, etc. Accordingly, these different choices and their respective options can be used to elucidate the particular ITO configuration an outsourcing organisation can or has implemented. As will see in chapter three, the sourcing strategy and resulting ITO configuration influences the requirements for the retained organisation responsible for managing and governing the IT functions. The choices concerning the amount of suppliers, the type of relationship with the supplier(s) and the contractual agreements with the supplier(s) are the most pertinent subjects that influence the retained organisation. These choices are therefore described in more detail below. Note that in section 3.2 the relation between these subjects and the retained organisation is elaborated further.

**Multisourcing**

In the scope of this thesis, one of the more relevant choices in the ITO configuration of an outsourcing organisation is the choice to use multiple suppliers. As described earlier, an organisation that makes use of more than one IT service supplier is considered an organisation that is multisourcing. By multisourcing an organisation makes use of a deliberate sourcing strategy to anticipate on particular and dynamic business demands. Based on Cohen and Young (2006 p.1) multisourcing is defined as;

“the disciplined provisioning and blending of business and IT functions from the optimal set of internal and external providers in the pursuit of business goals”

Multisourcing thus consist of employing multiple suppliers in a total or selective degree of outsourcing. As such, it allows an organisation to deliberately choose to outsource particular IT functions for which “best of breed” suppliers can be chosen. It thereby increases the flexibility and control an outsourcing organisation has over its sourcing strategy, as lock-in effects are diminished and the bargaining power of an outsourcing organisation increased.

As described in section 2.2, the growing interest in multisourcing coincides with the emergence of network organisations. Although perceived as superior to market or hierarchical organisations, network organisations significantly increases the organisational challenges of aligning a network of suppliers (Papazoglu and Ribbers, 2006; Levina and Su, 2008). Multisourcing increases the interdependencies
between end-users and suppliers and thereby intensifies the required coordination efforts to integrate separately supplied IT functions. It also emphasises the need to effectively demarcate the liabilities between suppliers and build the appropriate relationships to effectively cope with contingencies. As described in the introduction, multisourcing lays more emphasis on the capabilities of the outsourcing organisation to manage and govern the increased technical and organisational complexities. In other words, more emphasis is laid on the capabilities of the retained organisation.

**Type of relationships**
The previous section described the possibility to develop different types of relationships in multisourcing. Accordingly, the kind of relationship that is instituted between client and supplier has a significant impact on the outcome of an ITO deal (see Gottschalk and Solli-Saether, 2006; Blumenberg et al., 2008). The characteristics and rationales for outsourcing should determine the appropriate relationship needed between client and suppliers. Hence, when an IT function is considered as a commodity there is little added value in building a strong relationship with a supplier (Kern and Willcocks, 2001). An outsourcing organisation should thus, in coherence with its outsourcing strategy, commit to an appropriate type of relationship that corresponds to the requirements of the outsourced IT function (see Lepeak et al., 2007). In figure 2.4 an overview is given of the continuum of possible ITO relationships. This continuum runs from a transactional, on arms length, relationship which is adequate for supplying commoditized IT functions, to a strategic alliance (or partnership) which is appropriate when outsourcing complex, business critical and/or dynamic IT functions.

**Figure 2.4 - The Relationship Continuum (Lepeak et al., 2007)**

- Focus on cost savings and price competition
- Minimal information sharing
- “Commodity” Service
- Minimal Process integration
- High Trust in not required for success
- Business strategy shared with providers and joint objectives developed
- Providers rewarded for improving productivity and business effectiveness
- Key client and providers executives are effective joint decision makers
- Communications are open and flexible
- Significant process integration
- High trust is required for success
- Co-developed and jointly owned business strategy
- Risks and rewards shared
- Tangible business benefits expected
- Proven history of high trust and joint success
Accordingly, Carmel and Agarwal (2002) described that an outsourcing organisation should invest the required amount of time, knowledge and capital to develop the appropriate type of relationship as it has a large impact on the quality level of the received services. Hence, it can strengthen the understanding between client and supplier and aid them in overcoming problems, enhance flexibility and/or endorse innovations in the service delivery. Indeed, an appropriately instituted relationship leverages the value of the ITO practice (see Fairchild, 2004; Gottschalk and Solli-Saether, 2006).

**Contractual agreements**

Important outcome of the sourcing strategy are the eventual outsourcing contracts. Hence, the choices made concerning the ITO configuration will ultimately be translated into one or more contracts. A contract and the related service level agreements stipulate the responsibilities of the supplier(s) and delineate how they will be compensated (Lacity and Hirschheim, 1995). The contractual agreements made between a client and its supplier(s) ensures their commitment to the ITO deal and institutionalizes the required relationship(s).

An ITO contract should be described as tightly as possible. However, where uncertainty is high, for example; due to market dynamics, the complexity of a particular IT functions and/or the bounded rationalities of the outsourcing parties involved, this is impossible. The relationship between client and supplier becomes more relevant herein. Hence, when a contract is loosely formulated a stronger more trustful relationship is needed to anticipate on potential strategic behaviours and the increase of coordination costs (see Kern and Willcocks, 2001; Groenewegen and Koppenjan, 2005).

Another aspect related to the relationship between the client and suppliers is the duration of a contract. The contract terms for ITO are moreover no less than one year (short-term) and no more than ten years (long-term) (Lacity and Willcocks, 2006). The literature identified different reason to use short- or long-term contracts. Lacity et al. (1996) identified that organisation should choose short-term contracts to stay flexible and in control. Other studies indicate the need to consider long-term alliances to decrease uncertainty and allow for the necessary learning curve between outsourcer and supplier(s) (see Earl, 1996). Camel and Agarwal (2002) argued that it is the natural evolution of businesses implementing ITO. They go through different outsourcing stages; starting with short-term contracts that mature into long-term alliances.

**Outsourcing trends**

As can be delineated from the previous sections, how to outsource has become increasingly more complex. Hence, organisations are outsourcing more intricate and business critical IT functions, whereby more often multiple service suppliers are employed. Accordingly, the current (research) field of
outsourcing focuses moreover on two trends; on the one hand on implementing a successful multisourcing strategy and on the other hand on building the appropriate type of relationships between the end-user(s) and supplier(s). Both trends are acknowledged in the literature and coincide with the development of network organisations as described earlier (see Fairchild, 2004; Gottschalk and Solli-Saether, 2006; Cohen and Young, 2006; Papazoglou and Ribber, 2006; Blumenberg et al., 2008).

This development denotes the importance of value chain integration and the consequent need for service integrators (see Sambamurthy and Zmud, 2000; Papazoglou and Ribbers, 2006). In other words, it signifies the need for an effective retained organisation that possesses the essential capabilities to manage and govern the interdependent relations between the client organisation and its service supplier(s) (as identified in the introduction). Thus, the trends in ITO denote the relevance of this research. Indeed, how to successfully outsource is strongly related with the success of the retained organisation to manage and govern the internal and external service suppliers (see Oosterhaven, 2008a;b). Accordingly, the following chapters focus on the possibilities of an outsourcing organisation to obtain the IT capabilities for its retained organisation to more successfully manage and govern these complex outsourcing relations.

2.5 Reflection

“The outsourcing of IT products and services has evolved from a solution to the problem of incompetent IT management to a key competence of IT management” (Sambamurthy and Zmud, 2000 as cited by Hui and Beath, 2002 p. 4). This chapter offers insights into the research domain of ITO and relevant aspects in the scope of this research. Based on the findings from an extensive literature review, this chapter elaborated three subjects; why to outsource, what to outsource and how to outsource. By describing these three subjects relevant concepts for the remainder of the thesis have been introduced and explicated. Concurrently, insights were obtained concerning current trends in ITO. Hence, research has identified that outsourcing organisations implement diverse sourcing strategies for their IT functions. They have distinct IT functions, which they value differently and as a consequence have idiosyncratic rationales to outsource them. Thus, what, why and how to outsource depends greatly on the characteristics of outsourcing organisation, which is represented by the diverse ITO configurations that have been implemented. Furthermore, even though best practices and management guides exist that support the design and implementation of a sourcing strategy, there is no blueprint to a successful ITO configuration. Every outsourcing trajectory has its own particularities, which moreover demands an individual approach.

Two trends have been identified that leverage the significance of the required capabilities for an outsourcing organisation; these are multisourcing and building the appropriate type of relationships. Both trends are interdependent and coincide with the growing tendency towards the unbundling of value chains
and resulting network organisations. These trends denote the importance of so-called service integrators that ensure the different parties involved in the network cooperate properly. Accordingly, these trends signify the importance of the so-called retained organisation. As described in the introduction, obtaining an effective retained organisation is perceived as problematic though crucial for the success of ITO.
3 The retained organisation and its capabilities

The introduction and previous chapter demarcated the problem statement and emphasized the need to better understand what the purpose is of the retained organisation and what its essential capabilities are. Consequently, these subjects are researched in more detail in this chapter.

3.1 Research method; desk research

In this chapter the following research question is analyzed;

- **What are the essential capabilities of a retained organisation?**

This question can be divided into two sub questions, being; (a) what is a retained organisation and (b) what are its essential capabilities? The first sub question is answered in section 3.2, the second question in section 3.3. The answers to these questions are based on the findings of a desk research. Most of the literature on the retained organisation can moreover be found in practitioners press (see Oosterhaven, 2008a). However, the underlying principles that depict the activities of a retained organisation can be extrapolated from existing scientific publications. Therefore both sources of literature are used to research what a retained organisation is. The IT capabilities of the retained organisation are based on the Feeny and Willcocks IT Management and Governance framework. This is the only framework in the scientific literature that focuses on the IT capabilities needed to manage and govern outsourced IT functions. As such, this framework elucidates the IT capabilities essential for the retained organisation. Accordingly, the following literature is used to analyze the two sub-research questions;

- The findings on the retained organisation are based on; Kern and Willcocks (2001); Joha (2003); Fairchild (2004); Wijers and Joha (2005); Gewald and Helbig (2006); Lepeak et al. (2007); Quint (2007a,b); Fijneman et al. (2008); Oosterhaven (2008a,b); van der Haar (2008).
- The essential capabilities of the retained organisation are based on the Feeny-Willcocks IT Governance and Management Framework (see Willcocks and Feeny, 1998; Willcocks et al, 2006a;b). This framework focuses specifically on the IT capabilities that should be retained in IT outsourcing. It has been the subject of research in subsequent studies (see Heijden, 2001; Joha, 2003; Shi, Kunnathur and Ragu-Nathan, 2005; Beulen, 2007). Furthermore, the authors themselves have also recently evaluated it; see Willcocks et al. (2006b;c).
**3.2 The retained organisation**

In this paragraph the following research question is analyzed; *what is a retained organisation?* The introduction and second chapter identified the relevance of the so-called retained organisation. The name “retained organisation” relates to the IT functions that are retained in house when outsourcing. According to Dibbern et al. (2004) this relates to the planning and managing of IT functions. For this thesis the retained organisation is demarcated as the part of the outsourcing organisation that manages and governs the organisations’ IT functions. The literature uses different terms to describe the retained organisation, such as; service integrator, service organisation, residual IT organisation or demand and supply organisation. Due to the lack of consensus in the terminology the term “retained organisation” is used in this thesis.

The retained organisation is considered as the mediator between the business (client organisation) and the internal and external service supplier(s) (see figure 3.1). As such, it itself fulfils a distinct IT function; that of aligning the expectations of both the business and the service suppliers concerning the used and supplied IT functions (Gewald and Helbig, 2006). Hence, the retained organisation elicits and synthesises the IT requirements (the “need to haves” and “nice to haves”) of the business and subsequently manages and governs the service suppliers to ensure the intended added value for outsourcing is obtained (Kern and Willcocks, 2001; Joha, 2003; van der Haar, 2008). Ultimately, the purpose of the retained organisation is to ensure the business is able to use and exploit the demanded and/or required IT functions.

![Figure 3.1 - A generic model of the retained organisation (Wijers and Joha, 2005 p.8)](image)

In figure 3.1 a generic model is given that illustrate the multiple relations the retained organisation has to manage and govern (see Wijers and Joha, 2005). As illustrated by the figure, the retained organisation sits in-between the “business” and the “suppliers”. The localised part of the retained organisation elicits the requirements of the business which it communicates with the centralised part of the retained organisation.
or directly with the supplier. The centralised part of the retained organisation balances and prioritises the different IT requirements and assigns the appropriate service supplier(s) to them. It monitors the service delivery of the supplier(s) supply and ensures that this is done in accordance with the instituted contracts and service level agreements (see Joha, 2003; Wijers and Joha, 2005; Oosterhaven, 2008b). As identified in the introduction the retained organisation plays an important role in the success of ITO. Hence, it does not only manage and govern the relation between the business and end-users and the service suppliers (as described above) it is also in charge of maintaining the power balance between the outsourcing organisation and the service supplier(s). This is necessary to decrease the opportunistic behaviour of the service supplier but also that of the end-users. Figure 3.1 illustrates that the IT functions supplied by internal supplier(s) also need to be managed and governed by the retained organisation. Even though the commercial relationships between an external supplier and an internal IT division differ, it is crucial that internal and external suppliers cooperate to effectively deliver the required IT functions, especially when multisourcing (see Cohen and Young, 2006).

3.2.1 The responsibilities of the retained organisation

The literature refers to both the theoretical disciplines of IT management and IT governance to describe the responsibilities of the retained organisation (see Joha, 2003; Delen, 2005; Gewald and Helbig, 2006; Quint, 2007a; Lepeak et al., 2007). To better understand these responsibilities, both disciplines are described shortly before elaborating the responsibilities of the retained organisations further.

IT Governance

The previous sections elucidated the responsibilities of the retained organisation to manage and govern the relationship between the demanding and the supplying parties. IT governance has a crucial role herein, as it relates the business focus and the IT management by allocating the appropriate responsibilities amongst the relevant actors (Fijneman et al., 2008). The literature has not yet agreed upon a definite definition for IT governance, nonetheless the definition of Weill (2004) as highlighted by Brown and Grant (2005) seems most appropriate within the context of this thesis. Accordingly, IT governance can be defined as;

“the framework for decision rights and accountabilities to encourage desirable behaviour in the use of IT” (Weill, 2004 p. 4)

These frameworks enable an organisation to locate the top-down responsibilities for managing; a) the performance of IT resources, b) the IT related expenditures, c) the IT-related risks, and d) the optimal contribution of IT functions to business goals (see Fijneman et al., 2008, p. 204). As such, IT governance
is considered as an essential capability of the leadership of the IT function. Hence, it is necessary to appropriately institute contractual agreements, designate responsibilities and rights, prioritize specific projects and instigate control and coordination mechanisms to ensure all parties involved (can) comply with the strategy and goals of the business. Note that some of these goals may include the compliance to regulations and legislations brought forth by government (think of SOX or Basel).

IT governance is particularly relevant in ITO, as external suppliers have contractually designated responsibilities to supply specific IT functions. Through an appropriate IT governance design the information streams and interactions between the client and different suppliers can be effectively structured and prioritized throughout the different levels of management. Accordingly, the retained organisation plays a central role in governing these designated decisions-rights and accountabilities. It should do that in such a manner that all suppliers involved can play their part in attaining the clients’ postulated business goals (Fairchild, 2004; Wijers and Joha, 2005). However, the introduction mentioned the difficulties and challenges encountered herein. The idiosyncratic and dynamic nature of ITO makes it difficult to define the correct level of detail in the institutional agreements between client and its suppliers (see section 2.5). These difficulties will become apparent during contingencies, when an outsourcing organisation may demand ad-hoc problem solving together with standardized service delivery from interdependent service suppliers. Evidently, “multiple contingencies” will test the effectiveness of the instituted IT governance structure to cope with non-regular situations (see Sambamurthy and Zmud, 1999). Hence, only through an appropriate governance structure a network of end-users and service suppliers can be effectively managed (see Cohen and Young, 2006; Levina and Su, 2008). IT governance is thus critical for the success of IT outsourcing especially when multisourcing. Hence, it is a critical responsibility of the retained organisation.

IT Management

Weill (2004) distinguishes IT governance from IT management by stating; “IT governance is not about what specific decisions are made. That is management. Rather, governance is about systematically determining who makes each type of decision (a decision right), who has input to a decision (an input right) and how these people (or groups) are held accountable for their role” (Weill, 2004 p.4 as cited by Brown and Grant, 2005 p.697). IT governance is about who is managing and why, the question how to manage IT is concerned with the discipline of IT management. This discipline has been a subject for research since the first information systems were developed and implemented. It can be defined as;

“The managerial efforts associated with planning, organizing, controlling, and directing the introduction and use of IT within an organisation” (Boynton, Zmud and Jacobs, 1994)
The different areas of IT management are based on the paradigm of Looijen (2004). This paradigm has been the basis for renowned IT management frameworks such ITIL, ASL and BISL. The depiction of Looijen (2004) is used as it covers the necessary subjects relevant to illustrate the managerial function of the retained organisation. According to Looijen (2004) IT management can be divided into three key management areas;

- **Functional management**
  Functional management is concerned with the functionality of the different IT functions and how these relate to the requirements of the business and the end-users. It is aimed at evaluating and maintaining the existing IT functionalities and concurrently eliciting and developing new requirements and functionalities. Functional management is thus concerned with translating business demands and goals into processes that can be fulfilled or supported by IT functions.

- **Application management**
  Application management is concerned with selecting, developing, implementing, evaluating and maintaining applications, databases and other software that fulfils and supports the IT functionalities demanded by end-users. Based on the requirements determined by the functional management, different applications are developed and implement whereupon the required functionalities can be executed and accessed by the end-users.

- **IT infrastructure management (technical management)**
  The used applications require the infrastructures (the hardware) upon which they can be executed and accessed. Accordingly, IT infrastructure management is concerned with selecting, implementing, evaluating and maintaining the needed technical components, such as; communication networks, database centres, work stations, etc, and supportive software. Hence, IT infrastructure management is responsible for the platform(s) upon which the required applications can be executed and accessed.

Next to the three areas of management, IT managers make decisions on three levels of management; on *strategic* (long-term), *tactical* (mid-term) and *operational* (short-term) levels. Thus, in coherence with the instituted governance structure, the IT organisation has different management assessing and directing IT functions in three different areas and three different levels of management (see Looijen, 2004; Joha, 2003).
When an organisation is outsourcing a specific IT function, parts of its IT management is transferred with it. Note that the definition of IT functions, as described in section 2.1, already implies this. How much of these areas and levels of management is outsourced, depends on the business case of the outsourcing organisation and that of its supplier(s) (see section 2.3). The literature moreover agrees that common and standardized IT functions, such as an IT infrastructure and its operational management are more frequently outsourced than the strategic or functional management of IT functions (see Dibbern et al., 2004; Cullen et al., 2005). Figure 3.2 visualizes the more common relation between the degree of outsourcing and the areas and levels of IT management. The higher the degree of outsourcing the more IT management is outsourced. Hence, when organisations outsource little to none, they tend to outsource only their IT infrastructure. When organisations outsource more, what is outsourced tends to expend gradually from IT infrastructure management towards functional management and from respectively operational to strategic management (see Kern and Willcocks, 2001; Dibbern et al., 2004).

**The retained organisation**

The kind and degree of outsourced IT functions affects the areas and levels of IT management that are kept in-house and thus the responsibilities of the retained organisation. Hence, if all the IT management apart for the functional management on a strategic level is outsourced, the responsibilities of the retained organisation will differ from those when only IT infrastructure management on an operational level is outsourced. In other words, the organisational arrangements for the retained organisation depend on the sourcing strategy of an outsourcing organisation and the consequently implemented ITO configuration. The following examples demonstrate this (see also section 2.5).

- When the outsourcing organisation has outsourced a high amount of intricate IT functions, more emphasis is laid on the retained organisations’ ability to appropriately elicit and align the demand and supply between the business and the service suppliers.
• When more suppliers are employed, more emphasis is laid on the retained organisation ability to manage the interdependencies between the suppliers and the business.
• When a stronger relationship with a supplier is required, more emphasis is laid on the retained organisation ability to develop and cultivate this relationship.
• When more flexible contracts are instituted, more emphasis is laid on the retained organisation to manage and govern these contracts.

The idiosyncratic nature of ITO and its affect on the idiosyncrasy of the retained organisation can also be identified in the literature, by the different scopes and representation used to illustrate the responsibilities of a retained organisation (see Oosterhaven, 2008a; Quint, 2007a). Nevertheless, although specific responsibilities of the retained organisation can differ amongst outsourcing organisation, its main responsibility remains the same. Therefore we can define the retained organisation as:

“*The organisational arrangement instituted to manage and govern the supply and demand of IT functions in coherence with business goals*“

The retained organisation is thus seen as the part of an outsourcing organisation responsible for the link between the demanding side and supplying side. This definition does not prescribe who is demanding IT functions or who is supplying them. As described by Looijen (2004) the demanding side can be end users (the business) with functional demands concerning certain IT functions. However, it can also be an internal application developer demanding certain functionalities from the outsourced IT-infrastructure. How a retained organisation manages and governs the demand and supply of IT functions is dependent on the sourcing strategy of the outsourcing organisation and thus on what their goals and strategies are for the retained organisation.

![Figure 3.3 - A representation of the demand and supply in IT management when outsourcing](image-url)
Figure 3.3 shows the playing field of the retained organisation. Hence, the dotted line shows the information stream concerning the demand and supply of IT function throughout the different levels and areas of IT management. As described by Maes (2003) this kind of information can travel horizontally, vertically or diagonally throughout the different levels of the organisation. The dotted line illustrate where the responsibilities of the retained organisation lies. As aforementioned, the retained organisations’ responsibility focuses on eliciting the demands of the end-users and aligning them with the supply of the (internal and external) service suppliers. The retained organisation should thus manage and govern the streams of information from the demanding side towards the supplying side and vice versa. Concurrently, on the cutting edge of what is outsourced and what is insourced (the purple half-moon in figure 3.3) lies the “point of focus” for the retained organisation. On this intersection many of the efforts of the retained organisation are centralised.

We can conclude from this discussion that the general responsibilities of the retained organisation can be delineated as; managing and governing the demand and supply of sourced IT functions. Furthermore, we can conclude that the requirements for the retained organization are affected by the characteristics of the outsourcing organization and its sourcing strategy. Accordingly, to fulfil its main responsibility a retained organisation requires certain capabilities. In section 3.3 we take a closer look at these essential capabilities, which should enable the retained organisation to fulfil its responsibilities.

### 3.2.2 The organisational structure of the retained organisation

The previous section described that the information streams concerning the demand and supply of IT functions originates from different organisational levels, which depend on the idiosyncratic sourcing strategy of the outsourcing organisation. Due to this idiosyncrasy, it is still somewhat unclear what the organisational arrangements are for the retained organisation. To better understand these organisational arrangement this section presents a model for the organisational structure of the retained organisation. The definition of the retained organisation, as demarcated in the previous sections, is comparable to the description of the technostructure as described by Galbraith (1978). Galbraith defined the technostructure as;

"The technostructure is an apparatus for group decision - for pooling and testing the information provided by numerous individuals to reach decisions that are beyond the knowledge of any one" (see Galbraith, 1978, p. 78).

The technostructure "embraces all who bring specialized knowledge, talent or experience to group decision-making. This, not the management, is the guiding intelligence - the brain - of the enterprise."
There is no name for all who participate in group decision-making or the organization which they form. I propose to call this organization the Technostructure” (see Galbraith, 1978, p. 71 as quoted by Munk, 2006). The technostructure of an organisation is dedicated to designing, controlling, planning, standardizing and helping the organisation to adapt to its environment and attain its business goals (see Mintzberg, 1993). According to Mintzberg the activities of the technostructure are predominately fulfilled by business architects and analysts. However, Galbraith (1978) uses a more elaborate approach to this taxonomy and also incorporates line-managers and other staff specialists as part of the technostructure.

The definition for the technostructure correspond to the responsibilities of the retained organisation, as it is dedicated to controlling, managing, designing and helping the organisation in acquiring its goals. Moreover, the technostructure as described by Galbraith seems most appropriate to portray the organisational structure of the retained organisation. This belief is furthermore strengthened by the fact that the definition of Galbraith allows line-managers and staff specialist to be a part of the technostructure. This coincides with the governance structure of the retained organisation as identified by Wijers and Joha (2005) (see figure 3.1). Hence, the literature of IT governance identified three generic governance structures; centralised, decentralised and federal (see Weill, 2004). Accordingly, Wijers and Joha (2005) found that the federal governance structure is most appropriate for the retained organisation. A federal structure allows the retained organization to elicit and manage business demands on the local level and align, direct and control the service suppliers and end-users on a centralized level. This
concurrently allows the retained organization to benefit from both the economies of scale and scope. The localised line managers and staff specialists together with the centralised business architects and analysts of the retained organisation coincides indeed with the technostructure as defined by Galbraith (1978).

Figure 3.4 presents an illustration of the organisational structure of the IT organisation of an outsourcing organisation according to the five organisational structure framework of Mintzberg (1993). In this figure an outsourcing organisation that has selectively outsourced some of its IT functions. The retained organisation is represented by the purple oval. It thereby illustrates the different scopes taken of both Mintzberg and Galbraith concerning the technostructure. Hence, the retained organisation as illustrated in figure 3.4 coincides with the description of Galbraith, whereas Mintzberg’s technostructure is confined to the left oval describe as technostructure. Accordingly, the federal structure of the retained organisation is represented by the centralised business analysts (the technostructure according to Mintzberg) and the decentralised line and general IT managers.

3.3 The essential capabilities of the retained organisation

“There is a strong appeal for the outsourcing organisation to effectively arrange its capabilities to ensure that deals and responsibilities between the demand and supply run immaculate” (Oosterhaven, 2008a, p.42). This statement signify that an outsourcing organisation should ensure that its retained organisation possess the capabilities to effectively fulfil its responsibilities. Hence, as described in the introduction, lacking these capabilities will hamper the success of the retained organisation and consequently the success of ITO. This section therefore focuses in more detail on the capabilities essential for the retained organisation and thus on research question 1b; what are its essential IT capabilities?

3.3.1 IT capabilities and resources

Grant (1991 p.133) argues that resources and capabilities are “the constants upon which a firm can establish its identity and frame its strategy, and they are the primary sources of the firm's profitability”. Resources and capabilities are not the same however. According to the resource-based theory of the firm; “capabilities reflect the ability of firms to combine resources in ways that promote superior performance” (Bharadwaj et al., 1999 p.378). Capabilities are thus positioned on a higher level than resources, which is confirmed by Araya et al., (2007 p.630) whom state that “although an organization needs resources to execute its functions, they are not actually valuable if those capabilities that enable their adequate exploitation are not available”. Hence, the success of a capability depends on the combination, allocation and availability of the appropriate resources (see Teece et al., 1997; Peppard and Ward; 2004; Bhatt and Grover; 2005)
This research focuses on acquiring the appropriate IT capabilities. Hence, Bharadwaj (2000 p.171) defined IT capabilities as;

“the ability to mobilize and deploy IT-based resources in combination or copresent with other resources and capabilities”

This definition relates strongly with the capabilities of the retained organisation. As aforementioned, the IT capabilities and IT resources of the retained organisation are directly interrelated with the capabilities and resources of the business and the service suppliers (see figure 3.5). Corresponding to the tangible and intangible classification of resources (as described by Grant, (1991)) Bharadwaj delineated IT resources into; “(1) the tangible resource comprising the physical IT infrastructure components, (2) the human IT resources comprising the technical and managerial IT skills, and (3) the intangible IT-enabled resources such as knowledge assets, customer orientation, and synergy” (Bharadwaj, 2000 p. 171-172). In the context of the retained organisation IT capabilities moreover encompasses the human IT and intangible IT-enabled resources.

The responsibilities of the retained organisation and the corresponding IT resources it requires, can thus be extrapolated from the IT capabilities it should posses. Indeed, an outsourcing organisation should revere these capabilities as the guiding principle for the roles and responsibilities of these resources (see Bhatt and Grover, 2005). As such, an outsourcing organisation should ensure that the essential IT capabilities are appropriately represented in the retained organisation. How to appropriately source these capabilities is the main focus of the following chapter. In the next section the essential IT capabilities for the retained organisation are presented.
3.3.2 The IT Governance and Management Framework

Prior research has extensively researched the relation between IT capabilities and business performance (see Teece et al., 1997; Bharadwaj; 2000; Peppard and Ward; 2004; Araya et al., 2007). Hence, scholars developed many different frameworks that describe the IT capabilities required to obtain a successful IT function (see Hirscheim et al. (2006 p. 347-378) for an overview). Of these frameworks, the “IT governance and management” framework of Feeny and Willcocks (1998) specifically looked at the IT capabilities needed to successfully manage and govern ITO. This framework thus elucidates in essence the IT capabilities essential for the retained organisation. The framework presents nine distinct IT capabilities essential to effectively manage and govern IT outsourcing (see figure 3.6). According to Gewald and Helbig (2006) and Beulen (2007) this framework delineates in effect all the IT capabilities essential for the retained organisations. These nine capabilities are;

![IT Governance and Management Framework](image)

**Capability 1: IT Governance**

As describe earlier, the leadership of the retained organisation should be able to effectively determine who is responsible for which IT functions. This leadership capability depicts the ability of the retained organisation to allocate the appropriate resources according to the different capabilities. Consequently, IT governance should ensure that the outsourcing organisation is capable in managing the interdependencies amongst itself and the service supplier(s). It should furthermore ensure that the service supplier(s) deliver the value adding end-products demanded by the end-users. In other words, we can conclude that this capability is related to all other capabilities, as the instituted governance structure depicts their priority (see also section 3.2)
**Capability 2: Business Systems Thinking**

Business system thinkers deliberate which (new) IT/e-business technologies can be used to support and/or leverage existing or new business processes in coherence with business goals. This more strategically oriented demand capability is concerned with the strategic alignment of IT and business processes. It can be seen as the link between business requirements and IT demands as it should “ensure that IT capabilities are envisioned in every business process” (Willcocks et al., 2006c p.30).

**Capability 3: Relationship Building**

This capability is essential to involve end-users with IT. As such, it facilitates a wider dialogue, increases mutual understanding, trust and to strengthen the cooperation between the business and the IT specialist. This cooperation is necessary to get the business engaged in IT issues to more effectively tackle possible contingencies.

**Capability 4: Designing Technical Architecture**

As described in section 2.3, knowing what to outsource depends on the capability of designing technical architectures. This capability enables the retained organisation to specify distinct IT functions by creating a coherent blue print of the IT portfolio. This blue print can then act as decision platform by which to better anticipate on changes, manage interrelationships and cope with the technical and organisational complexity of the organisations’ IT functions. As argued by Rijsenbrij and Delen (2004) and Ross and Beath (2006), the success of ITO depends greatly on this capability.

**Capability 5: Making Technology Work**

This capability relates to the ability of the retained organisation to identify and handle acute problems disowned by others. It also includes the ability of the retained organisation to identify solutions for business demands that “cannot be satisfied by standard technical approaches”. The retained organization thus demands “fixers who excel, are extraordinarily productive and can work within a wide range of technical regimes” (see Feeny and Willcocks, 1998 p.13).

**Capability 6: Informed Buying**

This capability links the business demands with a sourcing strategy that corresponds to business needs and goals. This requires a thorough understanding of the external market of IT/e-Business services and the existing internal capabilities. Furthermore, the retained organization should be able to “lead the tendering, contracting and service management processes”. This capability overlaps the whole spectrum from IT demand to supply, as it links the business demand defined by the business system thinker with the most appropriate supplier in the market.
**Capability 7: Contract Facilitation**

As described in the previous chapters, contractual agreements between a client organisation and its service supplier are essential in ITO. These are often detailed contracts with elaborate service level agreements and as many end-users receive multiple services from different supplier, it is necessary to have a single point of contact to increase effective coordination. Hence, through this central facilitation, problems and conflict between users and supplier(s) can fairly and promptly be resolved in coherence with the instituted agreements and relationships. This capability, together with the relationship building capability, has similarities with process management in complex decision-making processes as elaborated by Bruijn, Heuvelhoff and in’t Veld (2002). Accordingly, this capability should be critical for the success of the retained organisation especially when multisourcing.

**Capability 8: Contract Monitoring**

This capability is moreover seen as the traditional capability of the retained organisation. Hence, many organisations see contract monitoring as the most important responsibility of the retained organisation (see Wijers and Joha, 2005). This capability is the main source for information concerning the relationship with the suppliers and their service performance. Hence, contract monitoring holds service suppliers to account in coherence with the instituted agreements and performance standards of the service market. On these bases an outsourcing organisation can grade its service supplier and evaluate its outsourcing portfolio.

**Capability 9: Vendor Development**

This capability, together with contract monitoring, can be seen as pure supply management capabilities. Vendor development ensures that the short and long-term potential added value of the supplied service is analysed and identified. This capability is necessary to ensure that that the commercial relation between client organisation and service supplier(s) remains a win-win situation. Outsourcing organisations invested many resources in developing and implementing an outsourcing relationship with its suppliers. It is therefore in the interest of the outsourcing organisation to ensure that these efforts were not in vain.

These nine capabilities exemplify the need for the appropriate human resources that posses the technical and organisational expertise to grasp IT and business issues. Indeed, the combination of these two skills requires high-performers with the interpersonal talent to successfully interact with and in-between the IT experts and programmers, business managers and key end-users (see Willcocks et al., 2006b). The different time horizons of these capabilities need to be taken into account. Hence, synthesizing long-term goals with short-term imperatives will challenge the leadership of the retained organisation to allocate and resource the appropriate capabilities (see Feeny and Willcocks, 1998). In other words, challenges exist in appropriately prioritizing the nine capabilities. These difficulties also relate to the maturity of the retained
organisation and more importantly with the degree and kind of IT functions outsourced (see also section 3.2). For example; when less IT functions are outsourced, less of the contract monitoring, vendor development and contract facilitation capabilities are demanded. Consequently, the framework is not an instant fix. It should be seen as an evolutionary process in which the necessary resources and capabilities have the ability to mature and conform to the idiosyncratic manner by which the IT portfolio of an organisation is sourced.

3.3.3 Findings on the framework

The framework of Feeny and Willcocks (1998) has recurrently been tested in the literature in the last decade (see Van der Heijden, 2001; Joha, 2003; Shi et al., 2005; Gewald and Helbig, 2006; Willcocks et al., 2006b,c; Beulen, 2007). The authors themselves have also recently evaluated it and found their framework yields “significant better results in terms of control of IT destiny, effective working with business units, supplier management and better control of financial aspects of IT” (Willcocks et al., 2006b p.14). They nevertheless found that due to the high requirements of the employees needed for the retained organisation, outsourcing organisation have difficulties in employing the right people. They furthermore identified that if “a particular capability was missing or under-staffed problems arose” (Willcocks et al., 2006b p.4). Indeed, these findings coincide with the problem statement of this thesis.

Empirical research on the Feeny and Willcocks framework from Van der Heijden (2001) and Shi et al. (2005) assessed all but the Designing Technical Architecture and Making Technology Work capabilities. The authors confirmed the applicability of all the seven capabilities in IT management and governance theory through comparative factor analyses. Joha (2003) in evaluating the framework by comparing it to other IT management and governance frameworks found support to include an IT specific project management capability. Beulen (2007) successfully tested the framework in a modest research for organisations implementing a global sourcing strategy. This research did not find additional capabilities, even for two companies that implemented a multisourcing strategy. Although, Beulen (2007) too argued that an IT specific project management capability may be distinct to the retained IT function.

A discussion exists on the applicability of project management as a distinct IT capability in the framework (see Willcocks et al., 2006b). Although Feeny and Willcocks (1998) acknowledge its relevance, they argued that project management is an organisational capability and not specifically an IT capability of the IT functions. Furthermore, Willcocks et al. (2006) did not add a project management capability even when revisiting their framework. Accordingly, this research thesis uses the framework as described above. Specific attention will be given to determine if a project management capability is distinct to the retained organisation when exploring these findings in practice.
Subsequently, we can conclude that the framework of Feeny and Willcocks is the most appropriate representation of the essential IT capabilities required by the retained organisation in scientific literature. And even though it is predefined list that does not take organisation-specific aspects into consideration, research has shown its applicability for different outsourcing organisations. We can therefore state that according to the literature this framework elucidate the essential IT capabilities for a retained organisation to successfully manage and govern the demand and supply of IT functions.

### 3.4 Reflection

Based on the findings of a literature review this chapter analyzed what the responsibilities are of a retained organisation and described what the essential IT capabilities are for a retained organisation to fulfil these responsibilities. Accordingly, this chapter research the first two (1a and 1b) research questions. Hence, *what is a retained organisation? and what are its essential IT capabilities?*

**The research questions**

In analyzing the first question we found that the idiosyncratic nature of ITO influences the responsibilities of the retained organisation. Hence, the sourcing strategy of the outsourcing organisation depicts which responsibilities the retained organisation needs to fulfil. Coinciding with the idiosyncratic sourcing strategies of outsourcing organisation, the literature presents different models on what a retained organisation is and on how it should be arranged. Nevertheless, we concluded that the main responsibility of the retained organisation can be defined as: managing and governing the demand and supply of IT functions between the end-users (the business) and the service suppliers (see figure 3.3). Accordingly, the following definition could be determined for the retained organisation; *the organisational arrangements instituted to manage and govern the supply and demand of IT functions in coherence with business goals.*

The general organisational structure of the retained organisation can be compared with that of the technostructure as described by Galbraith (1978). Figure 3.4 gives an illustration hereof. The retained organisation, as technostructure of the IT department of an organisation, is responsible for aligning, balancing and controlling the communication and collaboration between the business/end-users and the service suppliers. It elicits and/or determines the IT requirements of the different business departments in a decentralized manner. It than balances and prioritizes these requirements and conveys them to the IT supplier(s) (internal or external) in a centralized manner (see figure 3.1). Subsequently, the retained organisation governs the supplied IT functions and ensures the supplied services are compliant to the contractual agreements. In so doing, the retained organisation is active on all managerial levels (operational, tactical and strategic) and the different managerial areas of IT (IT infrastructure, application and functional management). The decentralised and centralised parts of the retained organisation
represent its federal governance structure. This governance structure is identified in the literature as the most efficient as it enables a retained organisation to benefit from both economies of scale and scope.

To fulfil its responsibilities the retained organisation requires certain IT capabilities. These IT capabilities are the focus of the second research question (question 1b). The literature has developed many frameworks which describe the IT capabilities necessary to increase the business performance of the IT function. However, only one of these frameworks was relevant in the scope of this thesis. Hence, the IT management and governance framework of Feeny and Willcocks is perceived by the literature to describe all the essential IT capabilities necessary to manage and govern ITO. In other words, it presents all the IT capabilities essential for the retained organisation. The framework identifies nine IT capabilities; **IT Governance, Business System Thinking, Informed Buyer, Designing Technical Architecture, Relationship Building, Contract Facilitation, Contract Monitoring, Making Technology Work, Vendor Development.** These IT capabilities describe the different areas where the retained organisation should be active and indicates the kind of resources needed to fulfil these activities and responsibilities. Hence, an IT capability can be determining as; “a distinctive set of human resource-based skills, orientations, attitudes, motivations and behaviours that have the potential, in suitable contexts, to contribute to achieving specific activities and influencing business performance” (Willcocks et al. 2006c p.29). According to the theory an outsourcing organisation should acquire these IT capabilities to ensure the retained organisation can perform appropriately and with these IT capabilities the appropriate IT resources that posses the IT and business skills to interact on the cutting edge of the retained organisation between end-users and service supplier(s).

**The methodology**

It was possible to obtain the needed insights concerning the first research question via a desk research, even though the available literature on the retained organisation is still very much in its infancy. The practitioners press has described more on the subject of the retained organisations, scientific literature however lacks. Therefore relevant insights were obtained by extrapolating findings from related literature concerning the IT function of an organisation, IT governance, IT management and IT capabilities. As such, more scientific research should be needed that specifically focussed on the role of the retained organisation in different outsourcing configurations. The same can be said about the IT capabilities of the retained organisation. Although, the framework of Feeny and Willcocks has frequently been cited in the literature, empirical research on these IT capabilities is scarce. Furthermore, as aforementioned, the literature on the role of the service supplier in ITO is almost none existent.
4 Sourcing strategies and their rationales

The previous chapter described the essential capabilities of the retained organisation. Accordingly, this chapter analyzes the second and third research question by elaborating the possible sourcing strategies and corresponding theoretical rationales for sourcing the retained organisation.

4.1 Research method; desk research

In this chapter the second and third sub-research questions are elaborated;

- What sourcing strategies can an organization employ?
- How can an appropriate sourcing strategy be determined?

As in the previous chapter, these questions are analyzed on the basis of a desk research. Again, the desk research uses a mix of different literature sources to analyze these two research questions. To be able to answer the first research question we first need to understand what a sourcing strategy exactly is. Although the literature often uses the term, it has not been satisfactorily defined. Therefore we have firstly elaborated what a “sourcing strategy” is, based on the findings of (among others); Porter (1980); Grant (1991); Teece et al., (1997) and Gulati et al., (2000). Subsequently, we delineated the possible sourcing strategies an organisation can employ based on the sourcing continuum of Wibbelsman and Maiero (1994) as cited by Dibbern et al., 2004.

The second research question is analyzed in section 4.3. How to determine an appropriate sourcing strategy is based on two theoretical perspectives; “Transaction Costs Theory” and “Resourced Based View”. These theories are portrayed by the relevant literature as the two most pertinent perspectives by which to assert an appropriate sourcing strategy. Accordingly, the following literature is used to elaborate these theories and their relation to the sourcing strategies.

- For Transaction Costs Theory; Lacity and Willcocks (1995); Aubert, Patry and Rivard (1996); Weber and Aubert (2001); Barthélemy and Quelin (2001, 2006); Aubert, Rivard and Patry (2004).
- For Resource-Based View; Cheon, Grover and Teng (1995); Duncan (1998); Roy and Aubert (2000, 2002); King (2001); Aubert and Weber (2001); Watjatrakul (2005); Espino-Rodríguez and Padrón-Robaina, (2006)
4.2 Sourcing the retained organisation

In section 2.2 a definition for sourcing was given; “the organisational arrangement instituted to obtain and exploit IT functions” - whereby an organisational arrangement was classified as; “the formal structure by which responsibilities and tasks, and the respective resources and capabilities, are allocated amongst an organisation and its supplier(s)”. The definition of sourcing does not prescribe how the organisational arrangement should be instituted. This is determined by the sourcing strategy. The literature on (IT) sourcing often uses the term sourcing strategy to describe the manner by which an organisation has procured specific functions (see Bozarth, et al., 1998; King, 2001; Mahnke et al., 2003; Willcocks et al., 2006a; Cohen and Young, 2006). However, we could not find a comprehensible definition for the term “sourcing strategy”. This paragraph therefore elaborates what a sourcing strategy encompasses and presents a definition for it. Concurrently, it presents a sourcing continuum which elucidates the different sourcing strategies relevant for this research and describes their relations with the retained organisation.

4.2.1 Strategies for sourcing

In this research, the term strategy is used to describe the high-level plans and decisions that should guide an organisation to attain and sustain competitive advantage in coherence with middle and long-term goals (see Teece, et al., 1997). The strategic challenge in sourcing is to effectively translate business goals into a strategy that will guide the organisation to these potential competitive advantages. Corresponding to the scope and main research question of this research, a sourcing strategy should guide an organisation towards the most successful retained organisation. In other words, a retained organisation should obtain its essential IT capabilities in a competitive advantageousness manner (see section 1.4). According to Gulati et al. (2000), an organisation has three different sources for competitive advantages:

- Acquiring an explicit market position (see Porter, 1980);
- Developing valuable and inimitable resources and capabilities (see Grant, 1991) and;
- Embedding in strategic relationship networks (see Gulati et al., 2000).

Accordingly, a sourcing strategy elicits the manner by which an organisation prioritizes these different sources of competitive advantage in obtaining and exploiting their IT functions. Hence, (1) acquiring an explicit market position can be obtained by cost leadership and through uniqueness by differentiation (see Porter, 1980). Thus by obtaining and exploiting IT functions at less cost than competitors or acquiring unique IT functions tailored to the wishes of the end-users. (2) Developing valuable and inimitable resources and capabilities are necessary to obtain and sustain competitive advantages over competitors. Such capabilities and resources should enable an organisation to acquire valuable and unique IT functions...
and enable the organisation to anticipate more efficiently and effectively on dynamic changes in the market (see Grant, 1991; Duncan, 1998). Finally, (3) *embedding in relationship networks* coincides with the emergence of network organisations, where organisations are interdependent on each others’ value adding potential. These so called strategic networks enable organisation to build unique long-term relationships in which resources (IT functions), risks and market opportunities are shared. As such, it allows the networked organisation to create synergies between resources and capabilities and subsequently increase their competitive position in the market (see Gulati et al., 2000).

![Figure 4.1 - Sources for competitive advantages](image)

In describing these three sources for competitive advantage, we touched upon many of the issues described in the previous chapters when elaborating on the reasons for IT outsourcing. Hence as described in section 2.2, ITO has been implemented to; acquire specific IT functions, increase the quality of IT functions, realize economies of scale and scope, etcetera. All these reasons coincide with the three sources for competitive advantage. Indeed, an outsourcing organisation must have concluded that they needed to outsource certain IT function so as to attain and/or sustain competitive advantages. Accordingly, in coherence with these findings, the following definition for “sourcing strategy” can be formulated;

“the high-level plans and decisions that should guide the institution of an organisational arrangement towards attaining and sustaining competitive advantageousness IT functions in coherence with middle- and long-term goals”

In other words, a sourcing strategy determines how an IT functions should be sourced to ensure it attains and/or sustains the most competitive advantages for the organisation. Indeed, as elaborated by Chew and Gottschalk (2008), developing and implementing an appropriate sourcing strategy increases the success rate of ITO and the overall performance of an organisation. The main research question focuses on acquire the IT capabilities the retained organisation needs to become more successful. In the previous chapter we described these essential IT capabilities. Now we will focus on which sourcing strategy will
enable an organisation to acquire these capabilities in a competitive advantageous manner. Thus; we will analyze what specific sourcing strategies exist and why and when such a strategy should be preferred.

### 4.2.2 Possible sourcing strategies; the sourcing continuum

As described above, the literature has different views on what is meant by a sourcing strategy. Consequently, many different variants of sourcing strategies have been described based on the location of the suppliers, the type of IT functions, the type of contractual agreements instituted, etcetera (see Hirschheim and Lacity, 2000; Dibbern et al., 2004; Delen, 2005; Cullen et al., 2005). However, a more comprehensible approach to the different sourcing strategies has been described by Wibbelsman and Maiero, (1994) as cited by Dibbern et al. (2004). They recognized that all IT functions are sourced, either internally or externally and on that basis typified a holistic sourcing continuum wherein different distinct sourcing strategies are positioned (see table 4.1).

This sourcing continuum, although little used in the literature, is based on the fact that an organisation always has to determine an appropriate sourcing strategy for each of its IT functions. It gives a logical and tangible overview of the possible organisational arrangements by which an organisation can obtain and exploit its IT functions. Hence, these organisational arrangements can either be internalized, externalized or a combination hereof. Hence, an organisation has to choose to either; (1) fulfil the responsibilities for an IT function themselves, (2) share the responsibility with a service supplier or (3) transfer the responsibilities to a service supplier. Accordingly, the sourcing continuum illustrates a range from insourcing to outsourcing, divided by a new term; co-sourcing. Co-sourcing is achieved through cooperation between the service supplier(s) and the client organisation. This means that in co-sourcing both sides share certain responsibilities that when combined enable the outsourcing organisation to deliver the demanded IT function. Based on the description of insourcing and outsourcing, co-sourcing can be defined as;

> “supplying the provision of IT functions and the related workforce and assets through uniting the resources and capabilities of both the outsourcing organisation and its supplier”

Wibbelsman and Maiero (1994) found that these three main strategies can be divided into seven sub-strategies that characterize distinct approaches to the three main sourcing strategies (see table 4.1). Although these sub-strategies do not intend to be all inclusive, they do divide the three strategies into an elegant and useful manner for this thesis. Arnold (2000) developed a similar sourcing continuum based on different governance structures, although this framework did not focus on IT, it has strengthened our belief that the sourcing continuum of Wibbelsman and Maiero is an accurate representation of the...
possible sourcing strategies an organisation can implement. Note that the terms used in the sourcing continuum should not be confused with the *degree of outsourcing* as described in section 2.3. The *degree of outsourcing* is determined by the total sum of IT budget spend on the different sourcing strategies. This implies that an organisation can implement a different sourcing strategy for each of its demarcated IT functions, depending on the competitive advantages it perceives by sourcing it.

Table 4.1 - The sourcing continuum (Wibbelsman and Maiero, 1994 as cited by Chakrabarty, 2006 p. 22)

<table>
<thead>
<tr>
<th>Main Strategy</th>
<th>Sub-strategy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insourcing</strong></td>
<td><strong>OK as is</strong></td>
<td>This strategy is perceived as being content with the status quo, the IT functions are supplied internally as this is seemingly the best alternative</td>
</tr>
<tr>
<td></td>
<td><strong>Fix and Keep in-house</strong></td>
<td>This is a strategy where the IT functions are kept in-house, but where the organisation acknowledges the need to obtain better practices and become more efficient and effective.</td>
</tr>
<tr>
<td><strong>Co-sourcing</strong></td>
<td><strong>Rehabilitation and Return</strong></td>
<td>This is a strategy where an IT function is reformed through cooperation with a third party, but the IT function is kept in-house</td>
</tr>
<tr>
<td></td>
<td><strong>Transition Assistance</strong></td>
<td>This is a strategy where certain IT functions are overtaken by a third party and whereby the internal IT department has the opportunity to develop the required skills</td>
</tr>
<tr>
<td></td>
<td><strong>Capability Development</strong></td>
<td>This is a strategy where a third party has a long-term responsibility for a part of the IT functions. This enables the internal IT department to develop new core capabilities</td>
</tr>
<tr>
<td><strong>Outsourcing</strong></td>
<td><strong>Option to Reverse</strong></td>
<td>This is a strategy whereby a supplier is solely responsible for the outsourced IT functions. However, there is a specific plan that enables the IT functions to be back-sourced if necessary</td>
</tr>
<tr>
<td></td>
<td><strong>Divest Completely</strong></td>
<td>Portrays the strategy whereby an IT function is permanently outsourced. It is seen as non-core business function of the outsourcing organisation</td>
</tr>
</tbody>
</table>

In section 2.3 and 2.4 we described that after choosing a specific sourcing strategy a client organisation will develop a business case for it. The client organisation will ask the same from potential service supplier(s) through a “request for information” and when relevant a subsequent “request for proposal”. Subsequently, both the value proposition of the service supplier(s) and the business case of the client organisation need to be evaluated and balanced. This process is represented in diverse sourcing lifecycles (see KPMG, 2007). The first phase of such sourcing lifecycles all start with defining a sourcing strategy and translating it into an initial business case. After synthesizing this business case with the value proposition of potential service supplier(s) the sourcing strategy is developed further and eventually implemented. A sourcing strategy is always the result of synthesizing the demands of the client organisation with the abilities and willingness of the market to supply these demands. It should thus be supported by all parties involved (see also section 2.3). This interdependency and its effect on the rationales of an organisation to choose a certain sourcing strategy for its retained organisation are elaborated in more detail in chapter 5.
4.2.3 Possible sourcing strategies for the retained organisation

In chapter 3 we delineated that the retained organisation is responsible for the management and governance of the demand and supply of IT functions. To fulfil this responsibility we have determined that it should acquire the appropriate IT capabilities in a manner that enhances (or maintains) the competitive advantages of the retained organisation. As exemplified in the introduction, organisations have implemented different sourcing strategies to do so. Two of these examples were concerned with an insourcing strategy, being; (1) reorganize and re-educate the remaining employees and (2) recruit more qualified personnel. These two examples both fall into the “Fix and Keep In House” sourcing strategy. The other two examples described the possibility to co-source and outsource the retained organisation. Hence, Quint (2007a) elaborated a strategy where a service supplier assists an organisation in obtaining a successful retained organisation. This strategy falls into the co-sourcing category and, depending on the context in which it is implemented, coincides with the “Rehabilitation and Return” or with the “Transition Assistance” sub-sourcing strategy. In the sourcing example of Accenture (see Accenture, 2006) the retained organisation is partly outsourced for a longer period of time (4 years), which coincides with the “Option to Reserve” sourcing strategy. What these example show is that the different sourcing strategies for the retained organisation can too be positioned on the sourcing continuum of Wibbelsman and Maiero (see table 4.1). Indeed, these examples illustrate the usability of the sourcing continuum to describe how the retained organisation can or is sourced.

As described in chapter 3, a retained organisation has many different responsibilities that should be addressed by the appropriate (human) resources. We found that the governance and management framework of Feeny and Willcocks (1998) delineated the essential IT capabilities the retained organisation should tender. Accordingly, we concluded that if the retained organisation is to successfully fulfil its responsibilities, its resources should together ensure that these capabilities are sufficiently represented. As a consequence, we can state that the sourcing strategy for the retained organisation should determine how the essential capabilities should be acquired. Accordingly, a sourcing strategy for the retained organisation can be described as; “The high-level plans and decisions that should guide the allocation of the essential IT capabilities to attain and sustain a competitive advantageous retained organisation in coherence with middle- and long-term goals”

4.3 Determining an appropriate sourcing strategy

In the previous paragraphs we identified the different sourcing strategies by which it should be possible to source the essential IT capabilities of the retained organisation. One crucial subject remains however; the question why a specific sourcing strategy should be chosen. Accordingly, by determining how to choose an appropriate sourcing strategy, insights are obtained concerning which sourcing strategy an organisation
should implement to obtain more competitive advantages. Accordingly, this section researches the third sub-research question; how can an appropriate sourcing strategy be determined?

In section 2.2 we described that the rationales for choosing a specific sourcing strategy can be explained on the basis of the theory of the firm. The theory of the firm relates to the added value (the boundaries) of an organisation in its respective market and how it can increase or sustain this value. The added value of an organisation is directly related with the competitive advantages it has over its competitors (see sections 2.3 and 4.2.1). Hence, through implementing a particular sourcing strategy an organisation intends to increase its competitive advantages and thus its added value on the market (see Mahnke et al., 2003; Dibbern et al., 2004; Delen 2005). The literature has identified different theoretical perspectives related to the theory of the firm that delineates why and how on organisation and service supplier should source (e.g. what their sourcing rationales are). In the following paragraph researches the perspectives by which to determine an appropriate sourcing strategy in more detail.

4.3.1 Contingency theory; an economic and strategic perspective on sourcing

In the previous chapters we described the idiosyncrasy of outsourcing and its affects on the sourcing strategy for the retained organisation. Hence, as described in section 2.3; no single theoretical perspective on ITO can holistically depict the most effective sourcing strategy (see Dibbern et al., 2004). This view is represented in contingency theory, which describes that there is no paramount by which to organize a successful firm. Hence, in the contingency perspective, “no universal set of strategic choices exists that is optimal for all business, irrespective of their resource position and environmental context” (Ginsberg and Venkatraman, 1985, p. 421). Therefore, contingency theory prescribes the use of multiple theoretical perspectives to better elucidate the strategic choices an organisation can make or has made.

The literature has identified diverse theoretical perspectives by which to explain the rationales for choosing an appropriate sourcing strategy. An overview of these theories and their respective literature can be found in Hui and Beath (2002, pp. 55), Kern et al. (2002, pp.174-175), Mahnke et al. (2003 pp. 14-18) and Chew and Gottschalk (2008, pp. 297-310). The overview show that the most prominently used theoretical perspective is transaction cost theory (TCT). TCT is described in the ITO literature as thé traditional economic perspective by which to determine a sourcing strategy. However, research found that the economic view of TCT was insufficient to explain all the sourcing decisions (see Lacity and Willcocks, 1995; Barthelemy and Quelin, 2001). Research on the strategic value of ITO found that organisations often make decision on the basis of strategic motivations, which where irrational according to economic theory (McLellan et al., 1995). As a consequence, the greater part of research on the rationales for ITO now uses perspectives form both economics and strategic management to research the
rationales for IT outsourcing (see Cheon et al., 1995; Duncan, 1998; Aubert and Weber, 2001; Kern et al., 2002; Mahnke et al., 2003; Watjatrakul, 2005; Barthélemy and Quelin, 2006; Espino-Rodríguez and Padrón, 2006).

By juxtaposing these findings with the findings from section 4.2.1 concerning the three approaches of competitive advantages, we indeed can confirm that a sourcing strategy has both economical and strategic perspectives. Hence, acquiring an explicit market position is achieved through cost leadership (an economic perspective) and through obtaining a unique market position (a strategic perspective). Developing valuable and imitable resources and capabilities is a strategic perspective. Embedding into strategic networks has both economical (less coordination cost) and strategic rationales (acquiring access to imitable resources and capabilities). We already stated that Transaction Cost Theory is the most frequently used economical theory to determine a sourcing strategy. In the strategic management perspective, the literature most often refers to Resource Based View (RBV) (see Hui and Beath, 2002, p. 55; Mahnke et al., 2003 p. 14-18; Kern et al., 2002, p.174-175). Consequently, by elaborating both these theories, we intend to obtain a more fundamental understanding of the contingent variables that explain the rationales for choosing a specific sourcing strategy. Therefore, both theories are analyzed in more detail next.

4.3.2 Transaction Cost Theory and sourcing

“TCT is widely regarded as a classic contribution to the study of organisations, economics, and law and, in particular, to sourcing decisions” (Aubert and Weber, 2001 p. 4). It uses “transaction costs” as the subject by which to analyse the cost between internalizing and externalizing business activities. Transactions are described as “the exchange of goods or service between economical actors across a technologically separate unit, inside and/or outside the organization” (see Cheon et al., 1995 based on Williamson, 1981). Thus, in TCT the cost (financial risks) for buying a service or good (using the market) is compared with the cost (financial risks) of producing it yourself. TCT acknowledges that the market is imperfect. As a consequence, using the market will always lead to a certain amount of conflict. TCT explicate this by two assumptions; (1) bounded rationality and (2) opportunism. Bounded rationality describes the inability of actors to find and comprehend all the information that is concerned with a transaction. Therefore, there will always be an amount of uncertainty in transacting goods or services. Opportunism is concerned with the self interest seeking of actors to guilefully maximize their profit in a transaction (see Williamson, 1981; Barthélemy and Quelin, 2001; Aubert et al., 2004). Both the assumptions combined result in a (deliberate) information asymmetry between the parties involved, which leads to information seeking and controlling activities by both parties to reduce risks. The more of these activities needed, the higher the cost of externalizing the transaction. According to TCT, decision makers
should choose a governance structure that result in the least amount of production and transaction costs. In table 4.2 these governance structures are related to the sourcing continuum as described in section 4.2.2.

**Table 4.2 - Comparing TCT governance structure with the sourcing continuum**

<table>
<thead>
<tr>
<th>Sourcing Continuum</th>
<th>Transactions</th>
<th>Governance structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insourcing</td>
<td>Mostly Internalized</td>
<td>Hierarchy (centralized)</td>
</tr>
<tr>
<td>Co-sourcing</td>
<td>Combination of both internal and external</td>
<td>Hybrid (federalized)</td>
</tr>
<tr>
<td>Outsourcing</td>
<td>Mostly Externalized</td>
<td>Market (decentralized)</td>
</tr>
</tbody>
</table>

Accordingly, the literature has identified that when transaction costs are low, outsourcing is viable - since the total cost of supplying a function should be lower due to economics of scale and scope of the supplier. If transaction costs are high, insourcing should be more cost efficient since organization are more effective in dealing with opportunistic behaviour and bounded rationality through internal relational contracts (see Cheon et al., 1995; Ang and Straub, 1998; Mahnke et al., 2003). Thus, deciding the most appropriate sourcing strategy according to TCT is concerned with determining which sourcing strategy will lead to the least amount of costs (financial risks).

TCT distinguishes three determinants that can be used to determine the appropriate sourcing strategy, being: *Asset Specificity, Uncertainty and Frequency*.

- **Asset specificity;**

In the context of this thesis, asset specificity is concerned with the idiosyncrasy and uniqueness of an IT function and the (human) resources concerned with it. It is the core determinant of transaction cost theory and empirical research has found a strong correlation between asset specificity and the choice for a sourcing strategy (Lacity and Willcocks, 1995; Ang and Straub, 1998; Mahnke et al., 2003). A high specific asset is an asset that is unique to the client organization and difficult to employ for other uses. Inherently, it is not a commodity of (and difficult to commoditize by) a service supplier and thus not openly available on the market. Transferring a highly specific asset to a service supplier will increase the ex ante and ex post transaction costs for both parties as intricate requirements alignments, contract development and monitoring processes are needed. As a result organisations internalize IT functions that are highly specific. Concurrently, service supplier are less willing to supply asset specific IT functions due to the increased cost to supply assets that are not part of their service portfolio. Note that no empirical research exists on the rationales of suppliers to ITO in the TCT literature. However, practical examples of service suppliers failing to supply specific IT functions in accordance with the contractual agreements are abundant (see Lacity and Hirschheim, 1995; Ross and Beath, 2006).
• **Uncertainty**

Uncertainty is concerned with the inability to foresee and measure the behaviours of the actors involved (behavioural uncertainty) and the affect of the environment surrounding the transaction (environmental uncertainty) (see Cheon et al., 1995; Aubert et al., 1996; Barthélemy and Quelin, 2001). Uncertainty is directly related with bounded rationality and opportunistic behaviour of the parties involved. Hence, highly uncertain transitions increase the information asymmetry between actors and moreover results in opportunistic behaviours. To counteract high uncertainty, intricate (relational) contracts and/or control structures are needed to; reduce potential opportunistic behaviour, increase the transactional relationships and anticipate better on environmental changes. Concurrently, high uncertainty will increase the ex ante and ex post transaction costs for both the client organisation and service supplier(s).

• **Frequency**

Frequency relates to the amount of transactions. Recurrent transactions increase the amount of transaction costs. Consequently, organisations should internalize frequent transactions as they are less costly to govern internally (Lacity and Willcocks, 1995; Aubert et al., 1996; Mahnke et al., 2003). Conversely, Cheon et al. (1995) described that infrequent transactions are more expensive due to the costs of building the relationship needed to come to the transaction. Aubert and Webert (2001) excluded frequency as a determinant for the sourcing decision due to the subjectivity involved in deciding what is to be considered a single transition. Watjatrakul (2005) argued that empirical research has failed to associate frequency with the types of governance structures. In coherence with these findings we have chosen not to address frequency as a determinant for a sourcing strategy.

Based on these findings, it is possible to visualize the ordinal relation between uncertainty and asset specificity with the sourcing continuum (see figure 4.2). Corresponding with the findings of Aubert et al. (2004), the figure illustrates a higher insourcing response for asset specificity than for uncertainty.

![Figure 4.2 – Model of the sourcing rationales according to TCT](image-url)
4.3.3 Resourced Based View and sourcing

As described earlier, the strategic management perspective for the rationales of a sourcing strategy is Resourced Based View (RBV). According to RBV, the imperfectness of the market allows an organisation to possess and develop capabilities and resources that are more effective and efficient than those of competitors (Duncan, 1998). Concurrently, Barney (1999) argues that competitive advantageous resources and capabilities only occur in the situation of resource heterogeneity (differentiation of resources across organisations) and resource immobility (the inability of organisation to obtain resources from competitors). For a capability or resource to provide a sustained competitive advantage, Barney (1999) argues that it should have the following four characteristics:

- **Valuable**: the capability or resource must be of strategic value to the organisation (it should exploit opportunities or neutralising threats);
- **Rare**: the capability or resource must be unique or rare, current and potential competitors should not have the same resources;
- **Imperfect immutability**: it should not be able for competitors to imitate the capability or resource without a significant cost disadvantage;
- **Non-substitutability**: competitors should not be able to achieve the same competitive advantage through the use of alternative (substitute) capabilities or resources.

A critical subject in RBV, which directly relates to the context of this paper, is concerned with how an organisation should attain and sustain valuable capabilities and resources. After all, an organisation should not invest more (financial) resources in acquiring a competitive advantage than the maximal rent it will generate (see Grant, 1991; Cheon et al., 1995). Concurrently, the literature identifies two determinants in RBV that depicts the rationales for a sourcing strategy:

- **The presence of appropriate resources**

Grant (1991) argues that for an organisation to attain and sustain a competitive advantage it should not only maximise the added value of existing resources and capabilities, it should also upgrade the pool of potential strategic capabilities and resources. Grant (1991, p. 133) argues that; “*in order to both fully exploit a firm’s existing stock of resources, and to develop competitive advantages for the future, the external acquisition of complementary resources may be necessary*. In other words, an organisation should when needed seek to obtain external capabilities and resources through an outsourcing strategy to leverage their competitive position. Accordingly, Cheon et al. (1995, p. 212) describes that “*outsourcing is a strategic decision which can be used to fill gaps (i.e., the difference between desired capabilities and actual capabilities) in the firms IS resources and capabilities*. Thus, when certain capabilities are not
appropriately resourced, an outsourcing strategy should be implemented to fill these capability gaps (see Cheon et al., 1995; Kern et al., 2002; Espino-Rodríguez and Padrón-Robaina, 2006).

- **The value of strategic resources**

An organisation should gain and defend competitive advantageous capabilities that increase the operational efficiency of the organisation. However, when a resource or capability is not valuable, rare, imperfect immutable and non-substitutable it is considered to have little or none strategic value. Consequently, in the perspective of RBV, these capabilities are considered as candidates for outsourcing or co-sourcing, which is seen as a sourcing strategy to avoid competitive dis-advantage (see Arnold, 2000; Roy and Aubert, 2000; 2002; Mahnke et al., 2003; Espino-Rodríguez and Padrón-Robaina, 2006). In other words, by determining the added value of a resource or capability and by determining its availability it is possible to assert a theoretical sourcing strategy for it.

Roy and Aubert (2000; 2002) combined the two determinants into a generic model that depict the appropriate sourcing strategy for the value of the sourcing determinants. The governance structure used by Roy and Aubert (2000; 2002) for their framework directly corresponds to the sourcing continuum as described in section 4.2.2. Consequently, based on these findings the following overview can be developed, see figure 4.3.

![Figure 4.3 – Model of the sourcing rationales according to RBV (based on Roy and Aubert, 2000; 2002)](image)

Figure 4.3 illustrates the rationales for choosing a certain sourcing strategy based on the strategic perspective of RBV. Note the use of the new term; slack resource. When the strategic value of a resource is low and its presence is high, the resource is considered as slack. Slack resources are supportive resources on top of the resource needed to fulfil a task or responsibility. As such, slack resources can be a source for future strategic value, for example; as a buffer in times of high volatility or as a source through
which new services and products can be developed (see Steensma and Corly, 2001; Mahnke et al., 2003). However, slack resources could also be seen as redundant and therefore subject to downsizing and subsequent outsourcing. Slack resources will not specifically be taken into consideration, as it is not in the scope of this thesis. Therefore the following sourcing strategies are used to divide the slack resources into possible sourcing strategies; see figure 4.5.

![Figure 4.5 – Translating slack resources into sourcing rationales](image)

Slack resources as depicted in figure 4.3 indicate a medium to high presence of resources. Consequently, the presented sourcing strategies of figure 4.5 are concerned with the disintegration of these resources. Accordingly, these resources need to be outsourced when the strategic value is low and insourced (used to develop additional valuable capabilities) when the strategic value is medium but the presence is high to very high.

### 4.3.4 TCT vs. RBV

TCT and RBV are similar in that they are used to research the uniqueness of a capability and the respective resources (Duncan, 1998; Weber and Aubert, 2001). Even though they are related, the two perspectives do have different scopes. Researches have determined that both theories do not use different words to explain the same concepts. Indeed, contradicting sourcing rationales have been found for the two perspectives (see Weber and Aubert, 2001; Waltrajakul, 2005; Espino-Rodríguez and Padrón-Robaina, 2006, McIvor, 2009). Hence, the literature acknowledges that both perspectives complement each other in determining an appropriate sourcing strategy. Both perspectives explain a unique and a shared part of the variance for the rationales of a sourcing strategy. An illustration hereof is given in figure 4.6. Conversely, both perspectives can have opposed outcomes concerning the appropriate sourcing decision. Waltrajakul (2005) analysed the areas where the sourcing rationales according TCT and RBV contradict and found that in such situation the rationales according to the TCT perspective were favoured. This research however has significant limitations as not all possible contradictions were researched and because it researched a specific outsourced IT service.

Note that the literature acknowledged the immaturity of the available research on TCT and RBV in the context of IT outsourcing (see Duncan, 1998; Waltrajakul, 2005; Espino-Rodríguez and Padrón-Robaina, 2006; McIvor, 2009). Accordingly, these researchers highlight the need for additional research aimed at
operationalizing the different concepts of both TCT and RBV. Hence, it is argued that due to the subjectivity and ambiguity of the determinants and the dynamic nature of the capabilities under research, it is difficult to come to the required measuring factors and scales to quantifiably operationalize the different determinants.

This research thesis does not intend to comprehend the differences or similarities of the two perspectives. Nor does it intend to determine the explained variance and correlation of TCT and RBV in determining a sourcing strategy. The focus of this research is to determine the appropriate sourcing rationales via these theoretical perspectives. Accordingly, the current literature perceives these two theoretical perspectives as the most relevant for doing so. However, we need to take into account the amount of subjectivity inherent in using these two perspectives and it will affect the validity of the findings in the case study (see chapter 5).

Note that it was not possible to relate the sub-sourcing strategies of the sourcing continuum (see paragraph 4.2.) with the different theoretical sourcing determinants. As identified above, the theoretical knowledge on TCT and RBV and their determinants are not mature enough to appropriate determine one of the sub-sourcing strategies. Accordingly, future research is needed that focuses on relating the sub-sourcing strategies of the sourcing continuum with the determinants of the sourcing rationales. As a consequence this research is constrained to the three main sourcing strategies; insourcing, co-sourcing and outsourcing as described above.

4.3.5 TCT, RBV and the capabilities of the retained organisation

As identified in the introduction, researchers have not yet used TCT and RBV to determine an appropriate sourcing strategy for the retained organisation. Nevertheless, it should be possible to implement both RBV and TCT in this context. Hence, RBV already focuses on the strategic value of resources and capabilities and their added value to the competitive position of an organisation. Accordingly, it should be possible to use the RBV determinants to depict a fitting sourcing strategy for the IT capabilities of the retained organisation. TCT focuses on assets, which are described as “any valuable aspect of a firm” (see Watjatrakul, 2005). This can thus be a certain resource or capability. Accordingly, we can state that it
should be possible to determine a sourcing strategy for the retained organisation based on the determinant of TCT. An example on how these two perspectives can be implemented is given below. In this example a sourcing strategy is determined for the IT capability: *contract monitoring*. This example illustrates how an outsourcing organisation should be able to determine a sourcing strategy for one of its essential IT capabilities based on the determinants of TCT and RBV. An example – Sourcing an IT Capability; Contract Monitoring

*If an organisation has only outsourced common IT functions, it is highly probable that the retained organisation requires less complex contract monitoring capabilities as these will likely to be also standardized. Consequently, the contract monitoring capability of the retained organisation should have medium to low uncertainty (depending on the environment and the ability to measure the performance of this capability). Furthermore, if this capability is more or less standardized, it will inherently have little added value for the competitive position of the outsourcing organisation (no strategic value, not rare and easily imitable). In other words, this less valuable capability is a candidate for outsourcing. However, to be able to outsource the contract monitoring capability a service supplier is needed that is able and willing to supply this capability.*

Concurrently, the service suppliers should agree on the level of uncertainty and asset specificity of the contract monitoring capability. Furthermore, the presence of this capability should be appropriately represented at the service supplier for it to be able to supply the IT capability effectively and efficiently. Hence, if the service supplier is willing to supply the capabilities in coherence with the requirements of the outsourcing organisation, we may presume that asset specificity and uncertainty of the capability are low. If the service supplier is able to supply the contract monitoring capability in coherence with the requirements of the outsourcing organisation, we may presume that they sufficiently possess the capability and that it is therefore not of strategic value for the outsourcing organisation. Consequently, according to the determinants of the TCT and RBV perspectives we can conclude that there is a strong theoretical support for outsourcing the contract monitoring capability for this particular common IT function.

### 4.4 Reflection

Based on the findings of a literature review, this chapter analyzed what a sourcing strategy encompasses, what distinct sourcing strategies can be distinguished and what the determinants are by which to choose the appropriate sourcing strategy. Accordingly, this chapter researched the third and fourth research questions. Hence, **what sourcing strategies can an organization employ? and how can an appropriate sourcing strategy be determined??**

**The research questions**

To answer the second research question we firstly elaborated what a sourcing strategy is. Hence, based on the findings from different scientific literature on *IT sourcing* and *IT strategy* the following definition was
determined for a “sourcing strategy”; the high-level plans and decisions that should guide the institution of an organisational arrangement towards attaining and sustaining competitive advantageousness IT functions in coherence with middle- and long-term goals. Consequently, in accordance with this definition it was possible to elucidate different sourcing strategies from the literature. Resulting in three main sourcing strategies insourcing, co-sourcing or outsourcing and seven sub-strategies (see table 4.1 for a more detailed description) by which is should be possible to source the IT capabilities of the retained organisation. Note that we do not incorporate the seven sub-strategies further in this research due to the inability of existing theory to depict when to choose them (see below).

The rationales for choosing the appropriate sourcing strategy (research question 3) are analyzed based on theory of the firm, which focuses on determining the appropriate boundaries for an organisation. Accordingly, determining an appropriate sourcing strategy is strongly related with demarcating the boundaries of an organisation by determining which activities need to be internalized or externalized. It is therefore not surprising that theoretical perspectives on the “theory of the firm” are frequently used in ITO research to elaborate on the sourcing rationales of outsourcing organisations. For this thesis, the rationales for choosing a specific sourcing strategy are explained by two of these theoretical perspectives; Transaction Cost Theory (TCT) and Resourced Based View (RBV). These two perspectives are perceived in the ITO literature as the most relevant to elicit the rationales for a specific sourcing strategy. TCT is a theoretical perspective used in economic management theory and perceived as the traditional contribution to why organisation outsource. RBV is the main theoretical perspective used in the strategic management literature on ITO. For both perspectives, two determinants have been depicted which can be used to determine a sourcing strategy. These are for TCT; asset specificity and uncertainty and for RBV; presence of appropriate resources and strategic value of resources/capability. By determining the value of these determinants and plotting these values in figures 4.2 and 4.3, it should be possible to determine a theoretically competitive advantageous sourcing strategy. The available literature on TCT and RBV concerning ITO is however still in its infancy. It is therefore not (yet) possible to relate the determinants of TCT and RBV with the more specific sub-sourcing strategies as presented by the sourcing continuum of table 4.1. Furthermore, these two perspectives have not been previously used to determine a sourcing strategy for a retained organisation.

The methodology
The literature review provided sufficient insights to answer the second and third research question. However, additional research is needed to further strengthen and increase the knowledge concerning the used theories in the context of ITO. Indeed, the literature has shown some considerable knowledge gaps in these theories. Hence, more research is required to link the determinants of TCT and RBV with the more specific sourcing strategies as presented by table 4.1. More research is required to analyze the
relation between RBV and TCT, and their correlation with the different sourcing strategies. Furthermore, this research only uses TCT and RBV, which does not include for example social or cultural perspectives on the sourcing rationales. Consequently, more research is needed to analyze the relations of other theoretical perspectives concerning the sourcing rationales and strategies. The literature on TCT and RBV in the context of ITO all focuses on the client side. Accordingly, to better understand the relation between outsourcing organisation and service supplier in the perspectives of TCT and RBV, research is needed that incorporates the viewpoint of the service suppliers.
5. Determining a sourcing strategy for a retained organisation

In the previous chapters we analyzed and elaborated the relevant subjects necessary to determine a theoretically appropriate sourcing strategy for a retained organisation. In this chapter these findings are combined into a theoretical sourcing framework and subsequently applied in practice to explore their applicability in the context of a retained organisation.

5.1 The research method; case study

In this chapter the fourth sub research question is analyzed;

- How are the essential IT capabilities of the retained organisation, the possible sourcing strategies and respective sourcing determinants related in contemporary practice?

In the introduction a knowledge gap was determined in the existing literature concerning how an outsourcing organisation should appropriately source the essential capabilities to govern and managed its sourced IT functions more successfully. In the previous chapters the relevant theories to fill this gap were elaborated. By combining these theories and exploring their usability it should become possible to answer the main research question. This chapter therefore applies these theories in practice through an in-depth case study, in which their relation and applicability in determining a sourcing strategy for a retained organisation is explored.

Therefore, the relations between the theoretical findings are elaborated by developing a sourcing framework for a retained organisation. Consequently, the relevant research variables of this framework are elucidated and operationalized after which they are applied in a case study. As described in section 1.3.2, a case study is the most appropriate research method in this context of this research. Accordingly, the obtained insights from applying the framework in the case study have presented relevant feedback concerning the relations of the different theories and their applicability in the context of the retained organisation.

The case study focuses on the retained organisation of a medium sized bank from the Netherlands. This bank has recently initiated an innovative program to improve the efficiency and quality of its business functions. The IT strategy of this program planned to selectively outsource the IT infrastructure and
applications landscape through a multisourcing strategy. Two major service suppliers were contracted to provide the respective IT infrastructure and IT applications. The bank also kept some smaller application developers under contract to maintain the support for existing legacy applications (see the dashed cube in figure 5.1). The main application service supplier is however made partial owner of the contracts with these application developers. The bank transferred around 200 of its IT employees equally to both service suppliers Figure 5.1 gives a simplified representation of the sourcing strategy of the bank.

This reasonably complex multisourcing strategy is intended to innovate and professionalize the bank’s IT portfolio. It should decrease the amount of IT related problems, increase the quality and time-to-market of the IT functions and reduce IT expenditures. The bank has developed a retained organisation to govern and manage the supply and demand of IT functions. In implementing its sourcing strategy, the bank has made use of external consultancies to support them in leveraging the maturity level of the retained organisation. During the case study, the sourcing strategy and internalized retained organisation were fully operational and gradually matured to the required professional level. At that moment, the retained organisation had approximately 30 employees.

In preliminary interviews with seven organisations in the financial sector, this bank was perceived as the most relevant organisation for this case study. This bank was chosen because it has developed and implemented a prototypical retained organisation. Their prototypical design makes it a representative case for other outsourcing organisations in the financial sector. It is therefore considered as a suitable and relevant candidate to be used for this explorative in-depth case study (see Yin, 2003). The choice for this bank was furthermore strengthened by the willingness of the bank to support this research. Especially in these times of financial downturn, finding willingness of organisations in the financial sector to participate in academic research has shown to be a challenging undertaking.
This research focuses on the financial sector due to the challenges this sector faces in successfully implementing an outsourcing strategy. Most financial organisations have complex and strategically valuable IT functions, which demand equally complex sourcing strategies. Accordingly, the need to govern and manage these complex sourcing strategies underlines the challenges for a retained organisation and signifies the relevance of this research for this sector. In the next paragraph the sourcing framework for a retained organisation is developed, after which it is implemented in the case study in section 5.3.

5.2 Developing the theoretical sourcing framework

Sections 3.3.2, 4.2.3 and 4.3.5 indicated the relevance of the theoretical findings to determine a sourcing strategy for the retained organisation. In this section these relations are elaborated further and combined in a theoretical sourcing framework.

5.2.1 Relating the theoretical findings

Chapter 2 purposely described three themes; what to outsource, why to outsource and how to outsource. These three topics can also be found in the first three research questions. Hence, chapter 3 presented the IT capabilities a retained organisation should posses (what to source). Chapter 4 described possible sourcing strategies (how to source) and elucidated why an outsourcing organisation chooses a particular sourcing strategy (why to source). As determined in chapter 2, these three themes (what, why and how) are closely related with one another. Accordingly, the relation between these themes concerning the sourcing strategy for the retained organisation is elucidated further in the following sections;

- IT capabilities and sourcing strategies (what and how)

In section 4.2.3 we identified that organisation have implemented divers sourcing strategies for their retained organisation and that these strategies can be positioned on the sourcing continuum of Wibbelsman and Maiero (1994). In these examples, the leadership of the IT department of the outsourcing organisation thus identified that its retained organisation was not capable in fulfilling its responsibilities for a certain capability by themselves. Accordingly, an appropriate co-sourcing or outsourcing strategy was elaborated by which to acquire the required capabilities. The examples of section 4.2.3 exemplified the relation between the need for certain IT capabilities (the what) and the manner in which these can be obtained (the how). Note however that, as described in chapter 2 and 4, this relation is determined on the basis of the rationales for a sourcing strategy (the why). These relations is explored next.
• **IT capabilities and sourcing rationales (what and why)**

The characteristics of the required IT capabilities (the what) influences the value of the four sourcing determinants depicting the sourcing rationales (the why). As described in section 4.3, research has determined that TCT and RBV are the most relevant perspective to determine an appropriate sourcing strategy. The value of these determinants depends on the unique characteristics of the capability under scrutiny. Hence, every IT capability has different characteristics that affect the value of the sourcing determinants (and consequently the theoretical sourcing strategy). These characteristics not only depend on the respective capability, they are also dependent on the implemented sourcing strategy of the IT functions the retained organisation is responsible for. Hence, as described in section 3.2.1, the kind and degree of outsourced IT functions affects the requirements for the retained organisation and thus the requirements, indeed the characteristics, of the IT capabilities.

• **Sourcing determinant and strategies (why and how)**

As determined in section 4.3, the value of the sourcing determinants can directly be related with the possible sourcing strategies. These relations are illustrated in figure 4.2 and 4.3 in the previous chapter. The choice for a sourcing strategy (the how) is dependent on the rationales of the outsourcing organisation and the potential service supplier (the why). As described in sections 3.2.2 and 4.3, both the perspectives of the outsourcing organisation and the service supplier(s) need to be taken into account to come to an accurate assessment of the determinants. Hence, incorporating these rationales is not only relevant when an organisation wants to co-source or outsource an IT capability. Theoretically speaking, an outsourcing organisation can be persuaded by a service supplier to co- or outsource a capability, which they wanted to insource. For example, a service supplier may prove that an IT capability is not *asset specific* even though the outsourcing organisation considered it as such. In practice, an outsourcing organisation will probably first determine their own sourcing strategy before consulting a possible service supplier or they will employ consultants to determine an appropriate sourcing strategy for them. Nevertheless, to come to a theoretically viable sourcing strategy both rationales are to be incorporated.

5.2.2 The theoretical sourcing framework

Based on the previous description, an overview can be developed that distinguishes the relations of the different subjects by which to determine a sourcing strategy for the retained organisation. Hence, based on theory, we determined that the question; how to source the retained organisation depends on (1) the essential IT capabilities and their characteristics (the what) and (2) on the rationales of outsourcing organisations and the respective service suppliers for choosing a sourcing strategy on the bases of these characteristic (the why). This research has distinguished four determinants of TCT and RBV, which can be used to determine a theoretically competitive advantageous sourcing strategy of each IT capability of
the retained organisation. Accordingly, by combining these results a sourcing strategy for the whole retained organisation under scrutiny will be obtained. The relations between these different subjects are presented in figure 5.2, which illustrates the theoretical sourcing framework.

![Diagram](image)

**Figure 5.2 - The theoretical sourcing framework for the retained organisation**

The framework shows the interdependencies of the different subjects by which to come to an appropriate sourcing strategy. Determining a sourcing strategy is thus an iterative process, where the required IT capabilities are evaluated on the basis of their characteristics by the outsourcing organisation and its potential service supplier(s). In the middle of the framework lie the theoretical determinants which depict a sourcing strategy based on the sourcing rationales of the outsourcing organisation and its service supplier. In effect these theoretical determinants link the essential IT capabilities of the retained organisation with possible sourcing strategies.

### 5.2.3. Operationalizing the research variables

To research the relation of the different theoretical findings and the applicability of the sourcing framework, it needs to be implemented in practice. Therefore the different variables of the sourcing framework are described, operationalized and consequently translated into an interview protocol to structure the interviews for the case study.
Figure 5.3 presents the relations of the different theories as elucidated by the theoretical sourcing framework. This figure illustrates that for each IT capability a sourcing strategy is determined based on the respective value of the sourcing determinants. These sourcing determinants can thus be described as the independent variables in determining a sourcing strategy for each IT capability. The dependent variables are the sourcing strategies. To research the sourcing strategy for each of the IT capabilities the different independent variables need to be operationalized.

**Operationalizing the TCT and RBV determinants**

The previous chapter introduced the four determinants of TCT and RBV and elaborated their relation to possible sourcing strategies. As aforementioned, by valuing each of the determinants of TCT and RBV, an appropriate sourcing strategy can be determined based on theory. The determinants are operationalized in a qualitative manner and translated into separate interview questions which are used during the interviews in the case study. The answers to these questions will provide an ordinal value for the determinants in a five point-scale (from very high to very low). Consequently, by plotting the obtained values in figures 4.2 and 4.3, a respective theoretically appropriate sourcing strategy is obtained.

However, as identified in section 4.3.4, operationalizing TCT and RBV for ITO is still a subject of debate and in need of further research. Consequently, operationalizing the determinants have been based on prior research of Watjatrakul (2005) and McIvor (2009), who used and operationalized the determinants in the context of ITO (note that they also identified the lack of scientific literature on this aspect). How the
determinants are operationalized and translated for this research is describe in more detail in the interview protocol (see appendix B). To ensure the appropriate value for the respective sourcing determinants are obtained for each IT capability, each IT capability is elucidated and demarcated in the case study on the basis of the description of the Governance and Management framework of Feeny and Willcocks (1998).

5.3 Applying the sourcing framework, the case study

With the sourcing framework presented, its inner working explicated and the interview protocol elaborated, the theoretical framework can be applied and explored in practice. Consequently, the following sections present the results of applying the sourcing framework.

5.3.1 Data collection and validity assessment

Before presenting the results of the case study, the quality of the information and collection methods are presented. To increase the factiousness of the obtained information, the data collection is based on different sources of information to triangulate the inquiries. The primary sources for information are the interviews. The interviews were face to face semi-structured interviews, which all followed the interview protocol (see appendix B). Where needed, additional explanatory questions were asked to better understand why some of the answers were given. Furthermore, to avoid reflexivity by the interviewee (see Yin, 2003), the interviewer tried to safeguard the relevancy and correctness of the answers without steering the interviewee toward a certain answer. This was particularly necessary to ensure the interviewees correctly described the sourcing determinants for each distinct IT capability.

Two semi-structured interviews have been carried out with the Chief Information Officer (CIO) of the bank (2.5 hours total). Three semi-structured interviews were carried out with an independent consultant, which had thoroughly examined the bank’s retained organisation for a risk assessment (4 hours total). One interview was executed with a (potential) service supplier for the retained organisation of the bank (1 hour). The secondary sources of information were documents on the design and architecture of the retained organisation, the sourcing strategy and outsourcing business case of the bank, and a risk assessment of the current retained organisation. Accordingly, these documents were used to obtain a better insight into the bank’s retained organisation and to check whether the obtained insights from the interviews corresponded with those described in the documentation.

To assess the quality and accuracy of the obtained information, the validity of the findings is elaborated. According to Yin (2003) the validity of a case study can be assessed based on the following four tests; construct validity, internal validity, external validity and reliability:
The *construct validity* has been leveraged by developing a theoretical framework, operationalizing the research variables, structuring an interview protocol, testing the protocol in a pilot interview and evaluating the interview protocol with supervisors of this research. The TCT and RBV determinants were operationalized by assessing the interview questions of prior research from Watjatrakul (2005) and McIvor (2009) (see appendix B).

The *internal validity* of the sourcing framework was difficult to assess prior to the case study. Hence, this research intends to explore the interrelations of the research variables. Nevertheless, as aforementioned we found evidence in the literature that the IT capabilities and the determinants of TCT and RBV can be related with possible sourcing strategies. Furthermore, as only the rationales of the outsourcing organisation have been incorporated in the case study, the internal validity of the findings is somewhat limited.

The *external validity* is limited due to the use of a single case study. However, as described earlier, this case study shown prototypical characteristics in its retained organisation. In that sense, it should be possible to generalize the findings on the sourcing framework to other outsourcing organisations.

The *reliability* has been leveraged by the use of an elaborate interview protocol, which increased the consistency and replicability of this research. The reliability of the obtained information was ensured by interviewing the CIO of the bank and an independent consultant, and by evaluating the findings with them. Furthermore, specific attention was given to decrease the response bias and reflexivity of the interviewees during the interviews.

With the case study design and quality of the design elaborated, we can now discuss the findings of applying the sourcing framework for the bank’s retained organisation.

### 5.3.2 The bank’s retained organisation

In this section the results of applying the sourcing framework in the case study is presented. It describes the different findings from the interview and documentations. The first part of the case study focuses on the organisational arrangements of the retained organisation and allocation of the different IT capabilities in it. The second part focuses on the TCT and RBV determinants and their value for each of these IT capabilities. In the third part, the theoretically appropriate sourcing strategy is presented and elaborated. Furthermore, the interview has shown interesting findings concerning the role of a service supplier, which are presented as well.

The bank’s retained organisation has been instituted at the same time as the IT infrastructure and applications management were outsourced. The retained organisation was a new business activity for
which the bank did not possess the appropriate resources. The bank therefore instigated the help of a consultancy, which supplied the resources for the retained organisation in the first few months and supported the bank in developing their own resources and IT capabilities. The retained organisation was thus initially sourced in a co-sourcing strategy, in a “Rehabilitation and Return” sub-strategy to be exact. As of April 2009 the retained organisation has taken shape and the role of the consultancy has gradually been minimized. The consultancy schooled newly appointed employees that gradually took over the roles and activities of the retained organisation. At this moment the retained organisation is gradually maturing towards an insourced and professional IT function. As the bank’s retained organisation is only 5 months in operation, the bank is still searching for ways to increase its success. Accordingly, the objective of this thesis became apparent as this is exactly what the developed sourcing framework intends to find out.

The bank has a moderately complex multisourcing strategy. The retained organisation is less complex and consequently has more prototypical characteristics. It has a federal structure similar to figure 3.1, with a centralised supply management and decentralised demand management (see figure 5.4). The supply side of the retained organisation has obtained most at the attention in the first few months of outsourcing, due to the primary focus of the bank on the newly outsourced applications and infrastructure management. Accordingly, the supply side of the retained organisation has matured faster then the demand side. At present the demand side of the retained organisation is under scrutiny to ensure it can optimally serve the business and key end-users.

Figure 5.4 illustrates the federal structure of the bank’s retained organisation and the location of the different IT capabilities in it. The centralised supply side of the retained organisation is called the IT
management department (ITM). The decentralised demand side of the retained organisation overlaps with the so called process and information management department (PIM) of which there are three. PIM is a specific business department which sole purpose is to improve existing and develop new business processes. An importance responsibility of this department is to determine requirements for the information systems supporting these business processes. Here lays some of the responsibilities of the retained organisation as depicted in this thesis: In short; the PIM department determines the IT requirements of the business. These are then elicited and communicated by the business system thinkers to the IT supply side of the retained organisation (the ITM department). The leadership (IT governance) and informed buyer of the retained organisation then determine the appropriately sourcing strategy for that specific IT demand/function. After employing the sourcing strategy and determining the appropriate service supplier, the supplier is governed by the contract monitors and facilitators. At the same time, vendor developers are active in strengthening the relationship with the suppliers, whereby resources active in the making technology work capability ensure that required IT functions not supplied by the existing service suppliers are developed and implemented.

5.3.3 The IT capabilities

In elucidating the essential IT capabilities from it became clear that all the nine IT capabilities were perceived as essential for the bank’s retained organisation. The documentations on the design of the retained organisation described many IT capabilities similar to those as depicted by the management and governance framework of Feeny and Willcocks (1998). However, the documentation used different terminology to describe some of these capabilities. Therefore specific attention was given in the interview to ensure the interviewees understood the nine IT capabilities as described by the management and governance framework and could describe their role and location in the retained organisation. Accordingly, all the IT capabilities have been inquired in depth during the interviews. In appendix C the different findings concerning these nine capabilities are described in detail. Hence, from the documentation and interviews it became clear that all the nine capabilities are perceived as essential for the success of the bank’s retained organisation. Even though some of the capabilities where perceived as more important then others.

During the inquiries concerning these IT capabilities, it became clear that there is a fine line between the functional IT management and the demand side of the retained organisation. Hence, the framework of Feeny and Willcocks seems to be more focussed on the supply side and technical side of ITO. This seems logical considering the period in which the framework has been developed. However, nowadays IT is more embedded in the business processes and value chain of an organisation (see Papazoglou and Ribbers, 2006). Consequently, the retained organisation also has to deal with the essential
demand/functional side of IT management, which the framework elucidates less. For example, *Business Systems Thinking* is a broadly defined capability which can be interpreted to be a part of or incorporate the whole requirements management and business process management of an outsourcing organisation. Another example is *Designing Technical Architecture* which is described in the framework to focus solely on the technical architectures. However, the architectures of the bank’s retained organisation have also developed information and process architectures which relate more to the demand side.

In the search for other essential IT capabilities project portfolio management and service management were described as additional IT capabilities for the retained organisation. They could however be demarcated as a specific part of one or more of the nine IT capabilities. Hence, *service management* as a collaboration of contract monitoring, contract facilitation, vendor development and informed buying - and *project portfolio management* as a collaboration between business system thinking, informed buying and IT governance. These examples illustrate that there are IT capabilities which encompass multiple responsibilities. The interviewees indeed acknowledged that especially Informed Buying, IT governance, Business Systems Thinking are IT capabilities that exist out of different activities, of which some are more relevant then others. The mix of responsibilities complicated the discussion in depicting the appropriate value for the different sourcing determinants as some of these activities can valued differently then others. Although this did complicate the discussions, we could concur that no other IT capabilities exist for the retained organisation, which was not represented in some way by the governance and management framework. Concurrently, we were able to value all four determinants for all of the nine IT capabilities.

Our findings concerning *project management* corresponded with those described in the literature (see section 3.3.3). Although project management was identified to be very relevant for the retained organisation, it was described as a more organisational wide capability. We have therefore concluded that corresponding with the findings of Willcocks et al. (2006) and Beulen (2007), the nine IT capabilities of the Governance and Management Framework of Feeny and Willcocks (1998) elucidated the essential IT capabilities for the retained organisation in this case study. However, it seems that nuances need to be made concerning the “Business and IT vision” side of the framework (see figure 3.6). Nowadays, IT functions are far more interrelated with business processes then 10 years ago (when the framework was developed). Accordingly, the interrelatedness of IT with the process and functional side of an organisation affects the retained organisation as it demands a more thorough understanding of the IT capabilities needed on the demand side of ITO.
5.3.4 The sourcing determinants

The TCT and RBV determinants are a crucial part in relating all the used theories of the previous chapters in the context of the retained organisation (see figure 5.3). This part of the case study is based on the findings from the interviews. During these interviews we depicted the value of the different determinants for each specific IT capability. In appendix C, the findings for each of the IT capabilities are elucidated in more detail.

The answers of both the interviewees on the value of the determinants have been compared, evaluated and discussed with the interviewees. Most of the time, the answers of the interviewees corresponded or complemented each other. The few inconsistencies between the answers of the interviewees where mostly associated with the strategic value of the capabilities. Consequently, this was also the most difficult determinant to accurately measure. In the following table the determinants are valued for each of the IT capabilities based on the answers on the interview question 1-11 (see appendix B for more detail).

<table>
<thead>
<tr>
<th>Capabilities</th>
<th>Transaction Cost Theory</th>
<th>Resource Based View</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Question 1</td>
<td>Question 2</td>
</tr>
<tr>
<td>IT Governance</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Business Systems Thinking</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Relationship Building</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Designing Technical Architecture</td>
<td>H</td>
<td>M</td>
</tr>
<tr>
<td>Making Technology Work</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Informed Buying</td>
<td>M/H</td>
<td>L</td>
</tr>
<tr>
<td>Contract Facilitation</td>
<td>H</td>
<td>L/M</td>
</tr>
<tr>
<td>Contract Monitoring</td>
<td>L</td>
<td>H</td>
</tr>
<tr>
<td>Vendor Development</td>
<td>M</td>
<td>L</td>
</tr>
</tbody>
</table>

Table 5.1 illustrates that it is possible to determine an ordinal value for each of the four theoretical determinants per capability. The table illustrates the value for the determinants in the following manner; 

*VL = Very low, L = Low, M = Medium, H = High, VH = Very High.* Questions 2, 4, 5, 9, 10 and 11 have a contrary affect (a negative correlation) on the value of the sourcing determinant. For example; if the extent in which a capability is described in standardized procedures is high (question 5), the sourcing determinant “uncertainty” will be valued lower.
Even though determining the value of the sourcing determinants has been identified (see section 4.3.3) to be subjective, the interviewees valued most of the sourcing determinants in the same way. The differences found were concerned with the strategic value of the IT capability. As the CIO of the bank is leading in this aspect, its answers obtained more significance. As no prior research has been dedicated to quantitatively operationalizing the sourcing determinant of TCT and RBV, no information exists on the correlation between the different subjects as described in appendix B and C. Consequently, the different questions used to operationalize the respective determinants have obtained the same weight in valuing the respective determinants. Thus question 1 and 2 have the same impact for the value of the asset specificity determinant.

As described earlier, these determinants are solely based on the viewpoint of the bank. During an interview with the potential service supplier for the bank’s retained organisation (the consultancy that aided them in developing and implementing the retained organisation) it became clear that although the service supplier had input to the sourcing strategy of the bank, their approach to increasing the success of the retained organisation was moreover concerned with problem solving. Their focus was more on the operational level of the retained organisation then on the strategic one. Determining a sourcing strategy was the responsibility of the bank, which the service supplier had little influence on. Unfortunately we did not succeeded in incorporating the sourcing rationales of a potential service supplier. As a consequence, we can only conclude that the relation between the outsourcing organisation and potential service supplier as portrayed in the sourcing framework has shown to have a less iterative nature. Additional research on this relation is needed, especially since the role of the service supplier in ITO is a subject that has obtained little attention in the literature (see Mahnke et al., 2003; Levina and Ross, 2003).

5.3.5 The sourcing strategies

On the basis of the value of the four sourcing rationales as presented in table 4.1, it became possible to determine a theoretical sourcing strategy for each of the IT capabilities of the retained organisation. These sourcing strategies are determined by plotting the values of table 4.1 in respectively figures 4.2 and 4.3. In appendix C this process is elaborated for each of the IT capabilities. On the basis of the findings as described in appendix C, a theoretical sourcing strategy for the retained organisation has been obtained for both the perspectives of TCT and RBV.

The sourcing strategy according to TCT:
As described above, the sourcing strategy of the retained organisation is to insource all its IT capabilities. Indeed, the interviewees described that the bank’s retained organisation has many responsibilities and activities, which are fulfilled by resources that require unique knowledge and skills about; the bank, its IT
functions and its service suppliers. Accordingly, table 5.2 shows that, according to the economical perspective of TCT, insourcing is perceived as the more competitive advantageous sourcing strategy for most of the IT capabilities.

Table 5.2 – Plots of the sourcing strategies according to TCT

<table>
<thead>
<tr>
<th>IT Capabilities</th>
<th>Asset Specificity</th>
<th>Uncertainty</th>
<th>Sourcing Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Insourcing</td>
</tr>
<tr>
<td>IT Governance</td>
<td>H</td>
<td>M/L</td>
<td></td>
</tr>
<tr>
<td>Business Systems Thinking</td>
<td>H</td>
<td>M/H</td>
<td></td>
</tr>
<tr>
<td>Relationship Building</td>
<td>H</td>
<td>M</td>
<td></td>
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<tr>
<td>Designing Technical Architecture</td>
<td>M/H</td>
<td>M</td>
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</tr>
<tr>
<td>Making Technology Work</td>
<td>H</td>
<td>M/H</td>
<td></td>
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<tr>
<td>Informed Buying</td>
<td>H</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>Contract Facilitation</td>
<td>M/H</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>Contract Monitoring</td>
<td>L</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>Vendor Development</td>
<td>M/H</td>
<td>M</td>
<td></td>
</tr>
</tbody>
</table>

For two of the nine IT capabilities (Contract Facilitation and Contract Monitoring) a different sourcing strategy was determined. The sourcing strategy for Contract Facilitation lays on the borderline of insourcing and co-sourcing. This is because Contract Facilitation requires resources that possess unique knowledge and skills concerning the outsourcing contract. However, the interviewees described that the activities of the IT capability has been standardized through detailed process descriptions and that its performance can easily be measured (for example by measuring the time it takes to solve a problem). Thus according to TCT, insourcing this IT capability has little economical disadvantages. However, as this capability is highly standardized, it could be possible to find a service supplier that is more cost effective in supplying this capability. Accordingly, the rationales of a service supplier need to be incorporated to better investigate the possibilities for the co-sourcing strategy.

Table 5.2 clearly shows that it should be advantageousness for the bank’s retained organisation to outsource the Contract Monitoring IT capability. Contract Monitoring is described as is highly standardized and common IT capability, which a service supplier should theoretically be able to supply at less cost and better quality (due to economies of scale and scope). Accordingly, the bank should investigate if a service supplier is able and willing to carry out this capability and quantify what the advantages are for outsourcing the contract monitoring capability.
The findings of the TCT perspective as illustrated by table 5.2 coinciding for the greater part with the actual sourcing strategy of the retained organisation. The CIO of the bank concurred with most of the findings, except for the sourcing strategy of the Contract Monitoring capability. Hence, the CIO indicated that outsourcing this capability could have a negative impact on the collaboration of resources in the service management area (the area where informed buying, vendor development, contract facilitation and contract monitoring collaborate in ITM). Hence, these resources interact in their work and outsourcing one of the capabilities could affect the other capabilities in their activities. Also, the CIO indicated that outsourcing this particularly IT capability still meant that it was necessary to retain some of the monitoring capabilities to monitor the service supplier delivering the Contract Monitoring capability. As such, the CIO indicated that potential operational problems would occur when implementing this sourcing strategy.

**The sourcing strategy according to RBV:**
Table 5.3 illustrates the sourcing strategy according to RBV. In this case more variation exists in the determined sourcing strategies. For five of the nine IT capabilities the RBV perspective depicted insourcing as the more competitive advantageous strategy. These five IT capabilities are thus sufficiently represented and of sufficient strategic value to be retained in-house.

**Table 5.3 – Plots of the sourcing strategies according to RBV**

<table>
<thead>
<tr>
<th>IT Capabilities</th>
<th>Presence</th>
<th>Strategic Value</th>
<th>Sourcing Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Insourcing</td>
</tr>
<tr>
<td>IT Governance</td>
<td>H</td>
<td>M/H</td>
<td></td>
</tr>
<tr>
<td>Business Systems Thinking</td>
<td>M</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>Relationship Building</td>
<td>M</td>
<td>M/H</td>
<td></td>
</tr>
<tr>
<td>Designing Technical Architecture</td>
<td>H</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>Making Technology Work</td>
<td>H</td>
<td>M/H</td>
<td></td>
</tr>
<tr>
<td>Informed Buying</td>
<td>L</td>
<td>M/H</td>
<td></td>
</tr>
<tr>
<td>Contract Facilitation</td>
<td>M/H</td>
<td>M/L</td>
<td></td>
</tr>
<tr>
<td>Contract Monitoring</td>
<td>H</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>Vendor Development</td>
<td>H</td>
<td>M</td>
<td></td>
</tr>
</tbody>
</table>

One of the noticeable differences with table 5.2 is concerned with the Business Systems Thinking and Relationship Building capability. As described earlier, the demand side of the retained organisation has obtained less attention then the supply side. Accordingly, the determinant “presence of appropriate resource” indicated that these two capabilities should obtain additional resources to increase their
competitive advantageousness. Accordingly, table 5.3 illustrates that a co-sourcing strategy can be employed to obtain the required IT resourced. The interviewees acknowledged these findings, and stated that as Business Systems Thinking and Relationship Building are of strategic value, they should be given more priority. The CIO stated that they had chosen for an insourcing strategy for doing so. Though employing new employees and by focussing more on the collaboration of ITM and PIM, these IT capabilities should obtain the needed resources to become more successful. Note that this sourcing strategy is more in line with the sourcing strategy as determined by the TCT perspective.

The perspective of RBV depicts that the Informed Buying capability needs to be co-sourced to ensure that its competitive advantageousness is leveraged. Hence, the Informed Buying capability focuses now more on the operational aspects of implementing and managing the instituted contracts, and less on evaluating the tendering processes and/or developing future sourcing possibilities in accordance to new demands. As a consequence, the greater part of the responsibilities of the Informed Buying capability (except the service management) has obtained fewer resources. The interviewees however did perceive these less resourced activities to be of strategic value, which resulted into a co-sourcing strategy according to the RBV perspective. According to TCT this capability is unique and surrounded by uncertainty. RBV determined that it is of strategic value, its only problem is the lack of resources. According to the CIO, this lack of resources relates with the current phase in the sourcing lifecycle of the bank. In the current phase of the sourcing lifecycle (the transition phase, see KPMG (2007 p.5) Informed Buying is perceived as a less relevant capability and has therefore obtained less attention. The CIO indicated that it will receive the required priority when the sourcing strategy is to be re-evaluated. The danger thereof is of course that the IT capability is not yet resourced and/or mature enough when needed. The CIO of the bank indicated that then, if needed, a co-sourcing strategy can be implemented (by employing an external consultancy) to aid them in analysing the outsourcing market, determine an appropriate sourcing strategy and aid them in developing the appropriate contracts and relationships.

These findings illustrate that the priority of an IT capabilities is related to the phase of the sourcing lifecycle in which the outsourcing organisation is positioned. This corresponds with the findings of Willcocks et al. (2006c) (see also section 3.3.2). The case study thus indicates that outsourcing organisations have changing priorities concerning the nine essential IT capabilities. To resource these IT capabilities in a more competitive advantageousness manner, it is important to understand when an IT capability should obtain the needed priority.

According to RBV, Contract Facilitation is of significant strategic value and accordingly it should be insourced. Conversely to TCT - which positioned Contract Facilitation on the borderline with co-sourcing - RBV clearly depicts an insourcing strategy. By combining both the perspectives it becomes clear that
insourcing the Contract Facilitation is at this moment the most competitive advantageous sourcing strategy for the retained organisation of the bank. Accordingly, combining the findings of TCT and RBV has given a richer picture of the most appropriate sourcing strategy.

Another sourcing strategy which coincides with the TCT perspective is that of the Contract Monitoring capability. Indeed, the theoretical determinants of RBV have depicted it as a capability sufficiently represented in the retained organisation, however with little to non strategic value. Consequently, to diminish the potential disadvantages this capability brings it should according to theory be outsourced, which corresponds with the sourcing strategy according to TCT. However, as already mentioned, the CIO described that outsourcing this capability may bring other more operational problems, which may be more costly to solve then to retain this capability. Indeed, future research is needed that focuses in depth on the potential operational risks and constraints for co- or outsourcing an IT capability.

5.4 Reflection

This chapter has explored the relations and usability of the findings form the previous chapters to research and analyze the fourth and last sub-research question; how are the essential IT capabilities of the retained organisation, the possible sourcing strategies and respective sourcing determinants related in contemporary practice? To find out how the findings of chapters 3 and 4 are related, a theoretical sourcing framework was developed and applied in a case study. The case study focussed on the retained organisation of a medium sized bank from the Netherlands which had just recently outsourced its application landscape and IT infrastructure. This particular bank was chosen because it has a prototypical design for its retained organisation and although it had insourced the whole retained organisation, it was looking for ways to increase its success. The financial sector was chosen for this research as this sector makes more often use of complex and interrelated IT functions, which demand complex sourcing strategies and as a consequence demands a mature retained organisation.

The research question

To answer the fourth research question, the developed theoretical sourcing framework (see figure 5.2) was applied in the case study. Consequently, feedback was obtained concerning its applicability and usability (and that of the used theories of chapter 3 and 4) in the context of the retained organisation. The framework is based on three areas of focus; what, why and how. The question what, is concerned with the essential IT capabilities for the retained organisation, which have been indentified in chapter three as the nine IT capabilities of the Governance and Management Framework of Feeny and Willcocks (1998). Essential for the success of the retained organisation, each of these IT capabilities need to be appropriately sourced in the retained organisation (see chapter 4). Accordingly, to determine an
The appropriate sourcing strategy, the rationales for an outsourcing organisation and also the potential service supplier (the why) need to be elicited. These rationales are depicted through valuing the four theoretical determinants of Transaction Cost Theory (TCT) and Resource Based View (RBV). The question how to source an IT capability can then be determined by plotting the value of each determinant in the respective figures (figures 4.2 and 4.3). Note that the value of each determinant needs to be determined by both the outsourcing organisation and its service supplier to obtain an accurate and balanced value. To be able to apply the framework in the case study, it has been operationalized and translated into an interview protocol. In appendix B the different interview question of this protocol can be found. Via this interview protocol the sourcing strategy for each of the nine IT capabilities can be determined. An illustration of the relations of these variables as depicted by the sourcing framework is presented in figure 5.3.

The second part of this chapter focussed on applying the newly developed framework in practice. It is therefore applied in a case study concerning a medium sized bank from the Netherlands that recently outsourced its IT infrastructure and application management. Consequently, it therefore developed a retained organisation and searched for ways to improve it. The first aspect investigated in the case study was the applicability of the nine IT capabilities as describe by the Governance and Management Framework in the bank’s retained organisation. The findings in the case study coincided with those described by Willcocks et al. (2006) and Beulen (2007). Indeed all nine capability where identified as crucial for the bank’s retained organisation. It was not possible to identify additional IT capabilities that were not covered in someway by one of these nine IT capabilities. Furthermore, no indications were found that Project Management can be distinguished as an essential IT capability for the retained organisation. Project Management is perceived as a relevant activity within the retained organisation. It was however identified as an organisational wide capability and as a consequence cannot be perceived as an essential IT capability of the retained organisation. Figure 5.4 illustrate how the nine IT capabilities are allocated in the banks’ retained organisation.

After analyzing the applicability of these nine IT capabilities, the sourcing rationales for each of the capabilities were determined on the basis of TCT and RBV. These values were based solely on the rationales of the outsourcing organisation as we did not succeeded in incorporating the sourcing rationales of a service supplier. Hence, future research is needed that focuses specifically on the sourcing rationales of a service supplier, which remains a subject that has obtained little attention in prior research (see Mahnke et al., 2003). Appendix C elaborates how the sourcing strategies for all the nine IT capabilities have been determined based on the sourcing rationales of the bank. In evaluating the obtained sourcing strategies with the CIO of the bank, it became clear that applying the sourcing framework gave a precise representation of the current sourcing strategy of the bank’s retained organisation. Tables 5.1, 5.2 and 5.3 illustrate the obtained results form the interviewees and respectively the obtained sourcing strategies. The
CIO of the bank concurred with most of the findings, which is evidence for the usability of the sourcing framework. Hence, this illustrates that the relations as depicted by the framework are viable, it indicates the applicability of TCT and RBV in determining an appropriate sourcing strategy in the context of the retained organisation, it demonstrated that the three used main sourcing strategies are relevant in practice and it shown the applicability of the Governance and Management framework for a retained organisation. These promising results made us conclude that the theoretical sourcing framework is a useful tool in determining and/or evaluating the sourcing strategy for the retained organisation.

However, there were some relations identified which the sourcing framework did not portrayed. One of these relations was identified when evaluating the sourcing strategy for “Contract Monitoring”. As can been seen in table 5.2 and 5.3, the determinants depicted an outsourcing strategy for this IT capability. However, according to the CIO this was not a sourcing strategy the bank would want to implement due to potential operational challenges and risks for doing so. According to the CIO, outsourcing this IT capability would frustrate the interrelatedness of contract monitoring with the other IT capabilities in the service management area (such as Contract Facilitation and Informed Buying). Consequently, although the impact of these risks is not clear, the sourcing rationales of the CIO were affected by the interrelatedness of the IT capabilities. Consequently, future research is needed which focuses on the affects of the interrelatedness of the IT capabilities on the success (and risks) of implementing a co- and outsourcing strategy for one or more of the IT capabilities.

Another aspect identified is the changing priority of the nine IT capabilities during the sourcing lifecycle of the bank. The CIO indicated that “Informed Buying” (for which a co-sourcing strategy was determined) did not received the required amount of IT resources because it was not seen as a priority at that moment. Accordingly, future research is needed to determine what priority should be given to the IT capabilities of the retained organisation during the different phases of the sourcing lifecycle.

Methodology
A case study was identified as the most appropriate research approach to explore the relations of the previous findings in practice. Indeed, the use of the theoretical sourcing framework and the corresponding interview protocol, made it possible to explore these relations in a practical and replicable manner in the case study. Accordingly, we were able to obtain the required insights to research and answer the fourth research question.

Furthermore, due to the prototypical characteristics of the bank’s retained organisation it should be possible to extrapolate the findings to other outsourcing organisations. Nevertheless, future research is needed to increase the validity of the findings of this research. Hence, to increase the internal validity of this research the sourcing rationales for a potential service supplier should be incorporated as well. To
increase the external validity of this research, the sourcing framework should be applied to other outsourcing organisations that have implemented different ITO configurations.
6 Conclusion, discussion and reflection

This final chapter presents and reflects on this research and its findings. It presents the conclusions for the main and sub-research questions, discusses the implication of these findings for practitioners and scholars and presents possibilities for future research.

6.1 Findings and conclusions

This research was motivated by the challenges of outsourcing organisation to successfully outsource their increasing complex and interrelated IT functions. As described in the introduction, these challenges can be related to the difficulties outsourcing organisations have to successfully source their retained organisation. Consequently, the objective of this research is to explore how an outsourcing organisation can source its retained organisation to increases its success. This objective has been translated into the following main research question;

➢ How can an outsourcing organisation source the IT capabilities of its retained organisation to manage and govern its (out)sourced IT functions more successfully?

To answer this main research question the following sub-research questions have been delineated;

1) What are the essential IT capabilities of a retained organisation?
   a) What is a retained organisation?
   b) What are its essential IT capabilities?
2) What sourcing strategies can an organization employ?
3) How can an appropriate sourcing strategy be determined?
4) How are the essential IT capabilities of the retained organisation, the possible sourcing strategies and respective sourcing determinants related in contemporary practice?

The first three sub-research questions focused on distinct subjects described by the main research question, which have been researched through a desk research. The fourth research question focussed on relating these findings and exploring their relations in contemporary practice, which have been researched in a case study. The used research methods (a desk research and case study) provided the adequate means to obtain the required insights to answer the main research question. The obtained findings and conclusions are described below. Note that in section 6.3 a critical discussions and reflection is presented concerning the findings and conclusion of this research.
6.1.1 The sub-research question

- **Question 1a: What is a retained organisation?**

The retained organisation is the part of the outsourcing organisation and responsible for the success of the outsourcing strategy. It is positioned on the cutting edge between the business and IT, as the link between the demand and supply of IT functions. The retained organisation acts as a service integrator, ensuring the demands from the business are appropriately requested and supplied by the proper (internal and/or external) service supplier(s). It controls the service delivery from the service supplier(s) and governs that the business (end-users) and service supplier(s) act according to the instituted contractual agreements. It furthermore ensures the relationships between the business and IT are exploited and cultivated, and it focuses on attaining and sustaining the most competitive advantages sourcing strategies for new and existing IT functions. In short the retained organisation can be defined as; the organisational arrangement instituted to manage and govern the supply and demand of IT functions in coherence with business goals.

- **Question 1b: What are its essential IT capabilities?**

The literature has presented many frameworks and overviews of IT capabilities relevant to increase the success of the IT function of an organisation. One of these frameworks specifically focused on the IT capabilities required to manage and govern outsourced IT functions. This so-called IT Governance and Management framework developed by Feeny and Willcocks (1998) presents nine IT capabilities essential for the retained organisation (see section 3.3.2 for a detail description of these capabilities). Researching this framework in the case study indicated that all these IT capabilities are depicted as crucial for the success of the retained organisation. Furthermore, no additional IT capabilities essential for the retained organisation could be determined. As such no support was found for project management as an essential IT capability for the retained organisation. Both interviewees perceived it to be an organisational wide capability, which was not perceived as an essential IT capability of the retained organisation. These findings concur with the findings of Feeny and Willcocks (1998), Willcocks et al. (2006c) and Beulen (2007). Even though no additional IT capabilities could be found, two of the nine IT capabilities required additional specifications. We come back to this issue in more detail in section 6.3.

- **Question 2: What sourcing strategies can an organization employ?**

For this research the possible sourcing strategies have been based on the sourcing continuum of Wibbelsman and Maiero (1994). This continuum is based on the idea that all IT functions need to be sourced, accordingly it presents three main sourcing strategies to do so. Hence, an organisation can choose to either fulfil the responsibilities for an activity or function themselves (insourcing), share these responsibilities with a service supplier (co-sourcing) or transfer the responsibility in its entirety to a service supplier (outsourcing) (see also table 4.1). The sourcing continuum divided these three sourcing strategies further into seven sub-sourcing strategies. However, this research focussed solely on these three
main sourcing strategies as it was not possible to determine one of the sub-sourcing strategies through the theoretical sourcing determinants as analyzed in research question 3.

➤ **Question 3: How can an appropriate sourcing strategy be determined?**
This thesis has elaborated two theoretical perspectives on how to determine an appropriate sourcing strategy. The first perspective is *Transaction Cost Theory* (TCT) and the second perspective is *Resource Based View* (RBV). These perspectives are the most frequently used perspectives in the ITO literature to determine a sourcing strategy for an organisation. For each of two perspectives two sourcing determinants were identified which when valued can be used to determine a theoretically competitive advantageous sourcing strategy. For TCT these sourcing determinants are *Asset Specificity* and *Uncertainty*. For RBV these are *Presence of the appropriate resources* and *Strategic value of the capability*. Based on available literature we were able to extrapolate how to determine one of the three main sourcing strategies. Hence, by valuing the sourcing determinants and plotting them in figures 4.2 and 4.3, a theoretically most competitive advantageous main sourcing strategy is obtained. The sourcing rationales models of 4.2 and 4.3 are an important link in relating the different sourcing determinant with the three sourcing strategies. Note that the literature acknowledges that although these two perspectives have had a significant affect in the practical and theoretical field of ITO, they do not comprehend all the complexities of outsourcing. Again this aspect is elaborate further in section 6.3.

➤ **Question 4: How are the essential IT capabilities of the retained organisation, the possible sourcing strategies and respective sourcing determinants related in contemporary practice?**
To answer this research question, the findings from the previous chapters have been combined into a theoretical sourcing framework (see figure 5.2). Consequently, this sourcing framework has been applied in a case study concerning the retained organisation of a medium sized bank from the Netherlands. Therefore the different research subjects and variables (as presented by the sourcing framework) have been operationalized in an interview protocol (see appendix B). With this interview protocol it was possible to apply the framework in practice and determine a sourcing strategy for the bank’s retained organisation. Consequently, by exploring and analyzing this fourth research question, the required insights were obtained concerning the used theories, their relations and the applicability and usability of the developed sourcing framework.

The results from the case study (see appendix C) indicated that the developed sourcing framework is a useful tool to determine a theoretically appropriate sourcing strategy for the retained organisation. Hence, the obtained sourcing strategies for each IT capability (see table 6.1) corresponded for the greater part with the current sourcing strategy of the banks’ retained organisation. Where they conflicted (for the IT capabilities; Contract Monitoring and Informed Buying) relevant feedback was obtained concerning the
applicability and usability of the framework. Hence, we determined that the priority of IT capabilities differ during the sourcing lifecycle of an outsourcing organisation. Feedback from the case study has shown that this aspect affects the appropriateness of the obtained sourcing strategy. Future research is thus needed that incorporates this aspect in the sourcing framework and researches its implications on determining an appropriate sourcing strategy. Furthermore, feedback from the case study indicated that the interrelatedness of the IT capabilities may lead to potential operational risks and constraints when implementing a sourcing strategy for a distinct IT capability. Future research is needed to focuses on this aspect. We will come back to this issue in section 6.3.

Table 6.1 – Plots of the sourcing strategies according to TCT and RBV for the bank’s retained organisation

<table>
<thead>
<tr>
<th>IT Capabilities</th>
<th>TCT</th>
<th>RBV</th>
<th>Sourcing Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Asset Specificity</td>
<td>Uncertainty</td>
<td>Presence</td>
</tr>
<tr>
<td>IT Governance</td>
<td>H</td>
<td>M/L</td>
<td>H</td>
</tr>
<tr>
<td>Business Systems Thinking</td>
<td>H</td>
<td>M/H</td>
<td>M</td>
</tr>
<tr>
<td>Relationship Building</td>
<td>H</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td>Designing Technical Architecture</td>
<td>M/H</td>
<td>M</td>
<td>H</td>
</tr>
<tr>
<td>Making Technology Work</td>
<td>H</td>
<td>M/H</td>
<td>H</td>
</tr>
<tr>
<td>Informed Buying</td>
<td>H</td>
<td>M</td>
<td>L</td>
</tr>
<tr>
<td>Contract Facilitation</td>
<td>M/H</td>
<td>L</td>
<td>M/H</td>
</tr>
<tr>
<td>Contract Monitoring</td>
<td>L</td>
<td>L</td>
<td>H</td>
</tr>
<tr>
<td>Vendor Development</td>
<td>M/H</td>
<td>M</td>
<td>H</td>
</tr>
</tbody>
</table>

Note that the blue triangle illustrates the sourcing strategy according to TCT. The green hexagon illustrates the sourcing strategy according to RBV.

6.1.2 The main research question

*How can an outsourcing organisation source the IT capabilities of its retained organisation to manage and govern its sourced IT functions more successfully?* The main research question of this thesis is elucidated by the four sub research questions elaborated above. Hence, we determined that to manage and govern the sourced IT functions more successfully, a retained organisation should acquire the IT capabilities as presented by the Governance and Management framework of Feeny and Willcocks (1998). Moreover, it should acquire these capabilities in the most competitive advantageousness manner. We determined that the sourcing strategies as elaborated by Wibbelsman and Maiero (1994) as cited by
Dibbern et al. (2004) are useful to understand how to do this. Concurrently, to determine an appropriate sourcing strategy we used the theoretical perspectives of TCT and RBV, which presents the relevant sourcing determinants by which to depict an appropriate sourcing strategy. Consequently, the developed theoretical sourcing framework in which all these findings are combined, present the means to answer the main research question. Indeed, the insights obtained from the case study indicated that the sourcing framework in combination with the models of the sourcing rationales (figures 4.2 and 4.3) are useful to fundamentally look at the retained organisation and its appropriate sourcing strategy.

Accordingly, each outsourcing organisation has an idiosyncratic approach to the development and implementation of their retained organisation. This idiosyncrasy is part of the sourcing framework as it allows the outsourcing organisation to value each sourcing determinant according to their sourcing rationales. The framework is thus a tool to guide the decision making process in determining how to appropriately source the IT capabilities of the retained organisation. As this research is the first step in determining an appropriate sourcing strategy for the retained organisation, additional research is required to leverage the external and internal validity of the sourcing framework.

6.2 Implications

In the introduction we described that this research is of relevance for both practitioners and scholars as it intended to fill a gap in the literature on how to appropriately source a retained organisation. Accordingly, this section describes what the practical and theoretical implications are of this research.

The **practical implications** of this research are concerned with the developed theoretical sourcing framework and its applicability in practice. As describe above the sourcing framework offer the means for practitioners to look in a more fundamental way to how they can source their retained organisation. Accordingly practitioners should take into account the different theories used in the framework as these could support them during the development and evaluation of their retained organisation. Furthermore, this research has identified that it can (according to theory) be beneficial for outsourcing organisation to look for service supplier(s) to supply a part of their retained organisation. However, as this the first scientific initiative on this specific subject, practitioners should implement the sourcing framework and the resulting sourcing strategy with caution as much additional research is required to increase its validity.

The **theoretical implications** of this research are concerned with the obtained insights concerning the applicability of the used theories in the context of the retained organisation. Although future research is needed, feedback from the case study offered useful insights concerning the relevance and usability of these theories. Furthermore it showed that the framework offered a viable representation of the relations
of these theories as is illustrated in figure 5.2 and 5.3. Furthermore, as no prior literature exists concerning how to appropriately source the retained organisation, these developed sourcing framework and subsequent findings are the first contributions to the scientific literature on how to develop a more successful retained organisation.

This modest research demonstrated the applicability of the used determinants of TCT and RBV in combination with the models for the sourcing rationales as presented by figures 4.2 and 4.3. This researched contributes to the scientific field of ITO, TCT and RBV by: 1) combining findings on TCT and RBV, 2) operationalizing the TCT and RBT sourcing determinants and researching their applicability in practice, and 3) by developing and evaluating a sourcing rationales model for TCT and evaluating an existing sourcing rationales model for RBV. As identified in section 4.3, there are debates concerning the usability of these perspectives in practice. The obtained insights suggest that both perspectives complement each other, resulting into a more exhaustive perspective on how and why to source. We found the sourcing rationales models (figure 4.2 and 4.3) to be applicable in the case study.

Accordingly, we indicated the applicability and accuracy of the sourcing determinants as described in figure 4.3, which is a model developed by Roy and Aubert (2000; 2002). Furthermore, we demonstrated that figure 4.2 (based on the findings of Barthélemy and Quelin, 2001; Aubert and Weber, 2001; Aubert et al., 2004) was applicable in the case study. The obtained results from the case study concerning the IT capabilities essential for the retained organisation concurred with the findings of Willcocks et al. (2006) and Beulen (2007). As little research exists on this aspect, this research contributed additional insights by confirming the applicability of the Governance and Management Framework in this case study.

6.3 Discussion and Reflection

Each chapter of this research concluded with a paragraph reflecting on the findings. Accordingly, in this final paragraph an overall discussion and reflection is presented concerning the research of this thesis.

Research scope

This research has been focussed on the decision-making process concerning the sourcing strategy of the retained organisation and not on the success of the outcome of this decision. The success of a sourcing strategy is an area of great debate in the literature. There is no agreement on what variables appropriately depict this success. We therefore demarcated success into the two aspects as described above. Furthermore, as identified by contingency theory, additional theoretical perspectives may alter the outcome of this research. The developed sourcing framework should thus solely be perceived as a tool to aid practitioners (both service suppliers as outsourcing organisations) in the decision-making process for determining a theoretically appropriate sourcing strategy for their retained organisation.
An aspect we isolated from this research was the influence of the sourcing strategy for the retained organisation on the internal and/or external service supplier(s) (see figure 1.4). Each alteration in the organisational arrangement for the retained organisation may influence the relationship with these service suppliers, which ultimately can affect the success of the sourcing strategy. Accordingly, future research is required that focuses on the affects of the sourcing strategy of a retained organisation on the relationship with the IT functions service suppliers.

The research methodology
The desk research provided sufficient insights concerning the retained organisation, its IT capabilities and possible sourcing strategies and theoretical sourcing perspectives. However, the available literature and research regarding the retained organisation is still in its infancy. As identified in chapter 2, the relevance of network organisations, value chain integration and business/IT alignment will surely increase the coming years. Hence, so will the relevance of service integrators and thus the retained organisation. During interviews with professionals of both outsourcing organisations and service suppliers, it became clear that still much has to be learned concerning how to develop and implement a successful retained organisation and outsourcing strategy. Consequently, we can state that still much is to be learned concerning the retained organisation and ITO, which indicates possibilities for future research.

The case study supplied the means to explore the developed theoretical sourcing framework and the desk research supplied the required insights to develop the framework. However, to increase the internal and external validity of the findings additional research is required. Hence, due to the current financial crisis it was very difficult to acquire the needed support to explore the framework in multiple case studies. Although many different interviews where held, only one bank wanted to explore the sourcing strategy for their retained organisation in more detail. Two other banks were interested but could not free up the required time to participate in the research (Note that participating to this research means answering 109 interview questions per interviewee).

The retained organisation
An important aspect identified in the case study is the relation of the business with the retained organisation. We identified that the supply side of the retained organisation was developed accordingly. However, the demand side seems to need more attention. The same was found for the IT governance and Management framework. The supply side of the framework demarcates multiple IT capabilities, however the demand side only two. The reason for this can be related to the fact that traditionally IT functions were less intertwined with business processes. Accordingly, more research is required concerning business/IT alignment in ITO and on how the leadership and IT governance can improve the collaboration between the business and the retained organisation.
Another aspect which is indirectly related with this research is the lack of insights on how to manage and govern multisourced IT functions. Hence, Beulen (2007) found in a modest research that multisourcing organisation resulted in no additional IT capabilities. Nevertheless, a more comprehensive research is needed to confirm that this is indeed the case.

The IT capabilities
As identified the nine IT capabilities of the Management and Governance Framework has depicted the essential IT capabilities of the retained organisation. However, it seems that two of these IT capabilities need additional specifications. We found that the Design Technical Architecture capability needed to include process and information architecture and not only focus on the technical architecture. Furthermore, we identified that Business Systems Thinking is a very generic capability which can encompass many of the activities of the functional management of the business. This makes it difficult to differentiate between the responsibilities of the business and those of the retained organisation. Accordingly, the Business Systems Thinking capability needs to be differentiated further into less generic capabilities, for example by differentiating between; Requirement Management, Information Management and Business/ IT Alignment. This corresponds with the conclusions of Willcocks et al. (2006), which argued that both these capabilities should be more focussed on the functional and demand side of the retained organisation.

Another aspect is concerned with the priority of the IT capabilities. The case study indicated that the appropriateness of an IT capability is related to the priority it should receive. Hence, during the sourcing lifecycle of an outsourcing organisation the priorities for an IT capability will alter. For example, in the case study we found that Informed Buying did not receive the appropriate resources, however it was not perceived as problematic as the priority of informed buying was low. Consequently, although the sourcing determinants of RBV depicted a co-sourcing rationale, the CIO of the bank indicated that was unnecessary, which was supported (although due to other reasons) by the rationales of TCT. Additional research is thus needed to research the relation between the sourcing life-cycle of an organisation and the priority given to the essential IT capabilities of the retained organisation, as this can affect the theoretical sourcing framework.

Furthermore, in the case study both perspective of TCT and RBV determined an outsourcing strategy for the IT capability Contract Monitoring (see figure 6.1). Nevertheless, the CIO of the bank indicated that this was a sourcing strategy the bank would not want to implement. The CIO declared that by outsourcing Contract Monitoring, the interrelatedness of Contract Monitoring with the other IT capabilities in the service management area (Contract Facilitation, Vendor Development and part of Informed Buying) would be frustrated, which could translate into operational risks that are more costly than insourcing it.
Accordingly, additional research is required to determine how the IT capabilities of the retained organisation are related and how this affects the possible sourcing strategies for the retained organisation.

**The sourcing strategies**

Although the sourcing continuum of Wibbelsman and Maeiro (1994) is not often used in the literature, it was perceived by the interviewed professionals as a logical and tangible overview of the possible sourcing strategies. Accordingly, it is the opinion of this author that this simple but useful overview should obtain more significance in the literature, to combat the jungle of different terminologies used to depict sourcing strategies. Hence, future research should aim at uniting the different classifications on the possible sourcing strategies as to reduce the possible misuse of concepts.

The CIO of the bank indicated an important aspect concerning the co-sourcing and outsourcing of IT capabilities. For example, if the Contract Monitoring capability is outsourced, the retained organisation will still need to retain contract monitors to monitor the service supplier which will supply the Contract Monitoring capability. Indeed, as depicted above, additional research is required that focuses on the consequent benefits, risks and constraints of implementing a sourcing strategy for the retained organisation. In other words, future research is needed that focuses on the outcome of implementing a sourcing strategy for the retained organisation.

**TCT and RBV**

Valuing the determinants of TCT and RBV has been identified to be subjective (see section 4.3.4). In the case study however we encountered that this was only the case when determining the value for the “strategic value of resources/capability”. It was difficult to appropriately determine the strategic value of an IT capability because both interviewees valued it differently. These differences can only be related to the difficulties of operationalizing the strategic value of a capability. The literature has disputed the applicability of the four characteristic of Barney (1999). Hence, the paradigm of Barney (1999) has been criticised to be (amongst others) tautological (see Priem and Butler, 2001a;b). Accordingly, future research concerning the sourcing framework should assert if the use of the characteristics of Barney (1999) are the most relevant and accurate variables to determine the strategic value of an IT capability.

Applying the determinants of TCT and RBT in the case study did not result into totally different sourcing strategy. Most of the findings for TCT and RBV corresponded. Where the determinants conflicted is was fairly simple to explain why. Hence, these conflicting sourcing strategies even aided the bank to better understand what the most appropriate sourcing strategy should be, by prioritizing which perspective is more relevant. Accordingly, opposite to the findings of Watjatrakul (2005), we did not find evidence that TCT is a more appropriate perspective for determining a sourcing strategy than RBV. However, it seems
that some of IT capabilities may have a higher correlation with one of the two theoretical perspectives. For example, the appropriate sourcing strategy for Contract Facilitation and Contract Monitoring should be more correlated with TCT as they are more based on transactions, whereas IT Governance and Informed Buying should be more correlated with RBV as it presence and strategic value is far more relevant than the amount of transactions. Although, it is a highly subjective subject and not specifically researched in the case study, this finding became apparent as it was far less difficult to value the determinants of TCT for Contract Monitoring and Facilitation than for example IT Governance, Business Systems Thinking, Informed Buying and Designing the Technical Architecture. Consequently, although little differences are found between the determined sourcing strategies, future research could focus on the correlation of these theories with the different IT capabilities. Thereby contributing to the debate about which perspective is more appropriate in determining a sourcing strategy for an IT capability.

As identified in section 4.5, future research is required that focuses on how to operationalize TCT and RBV in the context of ITO. There have been some attempts (see Aubert et al., 2004), however more research is needed to determine quantitative variables by which to significantly operationalize the sourcing determinants. Furthermore, additional research is needed to focus on how the more precise sub-sourcing strategies of the sourcing continuum (see table 4.1) can be integrated in the sourcing rationales models. More research is needed to further validate the applicability and usability of the sourcing rationales models as illustrated in figure 4.2 and 4.3.

Finally, this research focuses solely on TCT and RBT. Although they are moreover portrayed as the most relevant and accurate theoretical perspective to determine a sourcing strategy, there is little research dedicated on other theoretical perspectives on sourcing. Accordingly, future research is needed that focuses on the usability and applicability of other theoretical perspective in determining a sourcing strategy. (See Kern et al. (2002) and Chew and Gottschalk (2008) for examples such as; Contractual theory, Partnership and Alliance theory, Relational Exchange Theory, Agency Theory, etcetera).

The Theoretical Sourcing Framework
Results from the case study have shown that the sourcing framework is a useful tool for practitioners to aid them in developing a sourcing strategy for a more successful retained organisation. However, we identified that additional research on the framework is required. It should be applied for other outsourcing organisation, with different ITO configurations and rationales to increase its external validity and the findings as described above need to be incorporated to leverage its internal validity.

In reflecting on the consequence of applying the sourcing framework in practice, a relation has been identified which the framework did not illustrate. Hence, the retained organisation is responsible for the
sourcing strategy of the organisation’s IT functions (through the IT governance and Informed Buying IT capabilities). However, the characteristics of an IT capability are affected by altering the sourcing strategy of the IT functions, which can alter the sourcing rationales for the IT capabilities of the retained organisation. Accordingly, how this feedback loop between the sourcing strategy of the retained organisation and the sourcing strategy for the IT functions (see figure 6.2) affects the decision-making process on the sourcing strategy of the retained organisation is unclear. Accordingly, future research on the sourcing framework should explore if this feedback loop affects the priority for certain IT capabilities and/or affects the sourcing strategy and consequently the success of the retained organisation.

Figure 6.1 – The altered theoretical sourcing framework for the retained organisation
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Websites


Appendix

In this appendix the scientific article of this research, the interview protocol for the case study can be found and the results of the case study can be found.

Appendix A: Scientific article

See the next pages:
Sourcing the retained IT organisation; a conceptual framework

An explorative research on how to determine an appropriate sourcing strategy for the retained organisation

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Abstract

The challenges of IT outsourcing (ITO) have leveraged the importance of a successful retained organisation. As service integrator and coordinator responsible for aligning the demand and supply of outsourced IT functions, the retained organisation is a vital part of an outsourcing organisation. However, the retained organisation is often unsuccessful in fulfilling its responsibilities due to the lack of the appropriate IT capabilities. Accordingly, this study explores how an outsourcing organisation can determine an appropriate sourcing strategy for these IT capabilities to increase the success of its retained organisation. A theoretical sourcing framework is therefore developed that presents the different theoretical perspectives on how to source these IT capabilities in a competitive advantageous manner. It presents and relates the essential IT capabilities, the possible sourcing strategies by which to source them and the theoretical perspective by which a competitive advantages sourcing strategy can be determined. Applying the sourcing framework in a case study has indicated the applicability and usability of the used theories in determining a sourcing strategy for the retained organisation. Furthermore, insights from applying the framework showed that according to theory it can be viable to co- or outsource IT capabilities. In the conclusion of this paper, the practical and scientific implications of this study are elaborated. Furthermore, as this is the first study dedicated to the decision-making process concerning the sourcing strategy of a retained organisation, a discussion can be found concerning possible directions for future research.

Keywords: IT outsourcing (ITO), Retained Organisation, IT Capabilities, Sourcing Strategies, Transaction Cost Theory, Resourced Based View, Theoretical Sourcing Framework

1 Introduction

IT outsourcing (ITO) has obtained a significant amount of attention from the professional and scientific world in the last 20 years (see Dibbern, Goles, Hirscheim, and Jayatilaka, 2004; Willcocks, Lacity and Cullen, 2006). The effects of globalisation, the emergence of e-Business and the growing importance of value chain unbundling and integration have made IT outsourcing a cornerstone in the search for IT quality and efficiency (Hirscheim, Heinzl and Dibbern, 2006; Papazoglou and Ribbers, 2006). Its overall
global revenues have risen from $40 billion in 1995 to exceeding $200 billion in 2005 and expected to
grow 7% annually for the coming years (Willcocks et al., 2006). Organisations increasingly depend on IT
service suppliers to provide complex and business crucial IT services for which an organisation often
does not have the means to appropriately develop and/or implement themselves (see Kern and Willcocks,
2001; Lacity and Willcocks, 2006).

ITO is however not without risks, many organisations struggle with the organisational and
technological complexities of implementing a successful (out)sourcing strategy (see Lacity and
Willcocks, 2006). The “very mixed successes and all too much conflicting advices” in recent years
confirm this struggle and illustrate the need to fundamentally understand how to confront these challenges
(Willcocks and Cullen, 2007 p.2). Researches identified that one of the crucial challenges of ITO is
concerned with the organisational difficulties to align the business with often multiple IT service suppliers
(see Delen, 2005; Gottschalk and Solli-Saether, 2006; Willcocks, Feeny, and Olson, 2006b). Responsible
for aligning the business with the (multiple) service supplier(s) is the so-called retained organisation. The
retained organisation is most often a newly developed business function for an outsourcing organisation,
which more often exists out of employees reassigned from the outsourced IT functions. In general these
employees have little experience in managing and governing the relations between the business and the
service supplier(s). In other words, the retained organisation moreover lacks the essential IT capabilities
and respective IT resources to cope with the organisation challenges of ITO (see Willcocks et al., 2006c;
Willcocks and Craig, 2007; Cohen, 2008; Oosterhaven, 2008; van der Haar, 2008).

This study addresses the inabilities of the retained organisation by researching how to appropriately
source the IT capabilities essential for the retained organisation. To do so, this research has developed a
theoretical sourcing framework which elucidates how to determine an appropriate sourcing strategy for
the essential IT capabilities of a retained organisation. To develop this sourcing framework the relevant
literature on this subject has been analyzed. Hence, based on the findings of a desk research, we
determined what a retained organisation is and what its essential IT capabilities are. Consequently, we
identified possible sourcing strategies and elucidated the most relevant theoretical perspective to
determine an appropriate souring strategy. Finally, we combined these findings in the theoretical sourcing
framework and explored its applicability in a case study concerning a retained organisation of a medium-
sized bank from the Netherlands. The results of this study indicated that the developed sourcing
framework can aid practitioners in understanding how to appropriately source their retained organisation.
Furthermore, as this is the first study that focuses on how to appropriately source a retained organisation,
a rich overview for future research is presented.
2 Theoretical Findings

2.1 The retained organisation

The retained organisation is considered as the mediator in IT outsourcing between the business (the client organisation) and the internal and external service supplier(s). As such, it fulfils a distinct IT function; that of aligning the expectations of both the business and the service suppliers concerning the supplied IT functions (Gewald and Helbig, 2006). Hence, the retained organisation elicits and synthesises the IT requirements (the “need to haves” and “nice to haves”) of the business and on these bases manages and governs the services suppliers and the business to ensure the intended added value of outsourcing is obtained (Kern and Willcocks, 2001; Joha, 2003; van der Haar, 2008). Ultimately, the retained organisation intends to ensure the business is able to use and exploit the demanded and/or required IT functions. The retained organisation can therefore be defined as; the organisational arrangement instituted to manage and govern the supply and demand of IT functions in coherence with business goals.

The retained organisation can thus be seen as the part of an outsourcing organisation responsible for the link between the demanding side and supplying side.

![Diagram of retained organisation](image)

**Figure 2.1 - A generic model of the retained organisation (Wijers and Joha, 2005 p.8)**

Figure 2.1 illustrates the position of the retained organisation as the link between the internal and external supplier(s). The retained organisation has a federal structure in which a localised part is concerned with the demand management and a centralised part which is concerned with the supply management. According to Wijers and Joha (2005) this federal structure is most appropriate for the retained organisation. This structure allows the retained organization to elicit and manage business demands on the local level through line managers and supportive staff - and to align, direct and control the service suppliers and end-users on a centralized level through the business annalists and leadership of the retained organisation. Accordingly, this allows the retained organization to benefit from both economies of scale and scope (see Wijers and Joha, 2005).
2.2 The IT capabilities essential for the retained organisation

As identified in the introduction, the retained organisation more often lacks the IT capabilities essential to manage and govern the demand and supply of IT function. Grant (1991 p.133) argues that capabilities and respective resources are “the constants upon which a firm can establish its identity and frame its strategy, and they are the primary sources of the firm’s profitability”. Resources and capabilities are not the same however. According to the resource-based theory of the firm; “capabilities reflect the ability of firms to combine resources in ways that promote superior performance” (Bharadwaj et al., 1999 p.378). Capabilities are thus positioned on a higher level than resources, which is confirmed by Araya et al., (2007 p.630) whom state that “although an organization needs resources to execute its functions, they are not actually valuable if those capabilities that enable their adequate exploitation are not available”. Accordingly, this is why this research focuses on how to source the essential capabilities of the retained organisation.

Corresponding to the tangible and intangible classification of resources as described by Grant, (1991), Bharadwaj (2000 p.171) delineated IT resources into; “(1) the tangible resource comprising the physical IT infrastructure components, (2) the human IT resources comprising the technical and managerial IT skills, and (3) the intangible IT-enabled resources such as knowledge assets, customer orientation, and synergy”. Consequently, Bharadwaj (2000 p.171) defined an IT capability as “the ability to mobilize and deploy IT-based resources in combination or copresent with other resources and capabilities” This definition indeed corresponds with the IT capabilities required by the retained organisation as these should be able to interact with the capabilities of the business and the service suppliers. Figure 2.2 gives a representation of the relations of the IT capabilities and IT resources between the retained organisation, the business and its service supplier(s)

Prior research has analyzed the relation between IT capabilities and business performance (see Teece et al., 1997; Bharadwaj; 2000; Peppard and Ward; 2004; Araya et al., 2007). Hence, scholars have developed many different frameworks that describe the IT capabilities required to obtain a successful IT function (see Hirscheim et al. (2006 p. 347- 378) for an overview). Of these frameworks, the “IT
governance and management” framework of Feeny and Willcocks (1998) specifically looked at the IT capabilities needed to successfully manage and govern ITO. This framework thus elucidates in essence the IT capabilities essential for the retained organisation. Table 2.1 presents the nine IT capabilities as elaborated by Feeny and Willcocks (1998 pp. 12-15) and Willcocks et al. (2006c, p3), which are depicted in this study to be essential for the success of the retained organisation. The framework of Feeny and Willcocks (1998) has recurrently been tested in the last decade (see Van der Heijden, 2001; Joha, 2003; Shi et al., 2005; Gewald and Helbig, 2006; Willcocks et al., 2006b,c; Beulen, 2007). The authors themselves have also recently evaluated it and found their framework yields “significant better results in terms of control of IT destiny, effective working with business units, supplier management and better control of financial aspects of IT” (Willcocks et al., 2006b p.14). They nevertheless found that due to the high requirements of the employees needed for the retained organisation, outsourcing organisation have difficulties in employing the right people. They furthermore identified that if “a particular capability was missing or under-staffed problems arose” (Willcocks et al., 2006b p.4). These findings indeed correspond with the problem definition of this research.

Table 2.1 - The essential IT capabilities of the retained organisation (Willcocks et al., 2006c)

<table>
<thead>
<tr>
<th>IT Capabilities</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS/IT Governance</td>
<td>Integrating IT effort with business purpose and activity’. The central task is to devise organizational arrangements – structures, processes and staffing – to successfully manage the interdependencies, and ensure that the IT function delivers value for money.</td>
</tr>
<tr>
<td>Business Systems Thinking</td>
<td>Ensuring that IT/e-business technologies capabilities are envisioned in every business process’. In best practice organizations, business systems thinkers from the IT function are important contributors to teams charged with business problem solving, process reengineering, strategic development and delivering e-business.</td>
</tr>
<tr>
<td>Relationship Building</td>
<td>Facilitates the wider dialogue, establishing understanding, trust and cooperation amongst business users and IT specialists. The task here is ‘getting the business constructively engaged in IT issues</td>
</tr>
<tr>
<td>Designing Technical Architecture</td>
<td>Creating the coherent blueprint for a technical platform which responds to present and future business needs’. The principal challenge to the architect is to anticipate technology trends so that the organization is consistently able to operate from an effective and efficient platform.</td>
</tr>
<tr>
<td>Making Technology Work</td>
<td>Rapidly trouble-shoot problems which are being disowned by others across the technical supply chain; and to identify how to address business needs which cannot be properly satisfied by standard technical approaches’.</td>
</tr>
<tr>
<td>Informed Buying</td>
<td>Analysis of the external market for IT/e-business services; selection of a sourcing strategy to meet business needs and technology issues; leadership of the tendering, contracting, and service management processes. In an organization which has decided to outsource most IT service, the informed buyer is the most prominent role behind that of the CIO.</td>
</tr>
</tbody>
</table>
Contract Facilitation

Ensuring the success of existing contracts for IT services. The contract facilitator tries to ensure that problems and conflicts are seen to be resolved fairly within what are usually long term relationships.

Contract Monitoring

Located in the exclusive space of the supply face, the role involves holding suppliers to account against both existing service contracts and the developing performance standards of the services market.

Vendor Development

Identifying the potential added value of IT/e-business service suppliers. Anchored in the supply face of our model, the vendor developer is concerned with the long term potential for suppliers to add value, creating the ‘win-win’ situations in which the supplier increases its revenues by providing services which increase business benefits.

Empirical research on this framework from Van der Heijden (2001) and Shi et al. (2005) assessed all but the Designing Technical Architecture and Making Technology Work capabilities. These researchers confirmed the applicability of all the seven capabilities in IT management and governance theory through comparative factor analyses. Joha (2003) in evaluating the framework by comparing it to other IT management and governance frameworks found support to include an IT specific project management capability. Beulen (2007) successfully tested the framework in a modest research for organisations implementing a global sourcing strategy. This research did not find additional capabilities, even for two companies that implemented a multisourcing strategy. Although, Beulen (2007) too argued that an IT specific project management capability may be distinct to the retained IT function. Accordingly, a discussion exists on the applicability of project management as a distinct IT capability in the framework (see Willcocks et al., 2006b). Specific attention will be given in the case study to determine if project management capabilities are distinct to the retained organisation when exploring these findings in the case study.

2.3 The sourcing strategies

The literature presents many different views by which to elucidate different sourcing strategies, based on the location of the suppliers, type of IT functions, type of contractual agreements instituted, etcetera (see Hirschheim and Lacity, 2000; Dibbern et al., 2004; Delen, 2005; Cullen et al., 2005). A comprehensible approach to the different sourcing strategies has been described by Wibbelsman and Maiero, (1994) as cited by Dibbern et al. (2004). They recognized that all IT functions are sourced, either internally or externally and on that basis typified a holistic sourcing continuum wherein different distinct sourcing strategies are positioned (see table 2.2). This sourcing continuum, although little used in the literature, is based on the fact that an organisation always has to determine an appropriate sourcing strategy for each of its IT functions. Hence, an organisation needs to determine if the organisational arrangement responsible for an IT functions should be internalized, externalized or a combination hereof. In other words, an organisation will have to choose to either; (1) fulfil the responsibility for an IT function themselves (insourcing) (2) share the responsibility with a service supplier (co-sourcing) or (3) transfer the
Arnold (2000) developed a similar sourcing continuum based on different governance structures, although this framework did not focus on IT, it has strengthened our belief that the sourcing continuum of Wibbelsman and Maiero is an accurate representation of the possible sourcing strategies an organisation can implement.

Wibbelsman and Maiero (1994) found that these three main strategies can be divided into seven sub-strategies that characterize distinct approaches to the three main sourcing strategies (see table 4.1). Due to the inability to link the sourcing determinants - which are described in the following section - with these sub-strategies, they have not been taken into account in this study.

<table>
<thead>
<tr>
<th>Main Strategy</th>
<th>Sub-strategy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insourcing</td>
<td>OK as is</td>
<td>This strategy is perceived as being content with the status quo, the IT functions are supplied internally as it is perceived as the best alternative</td>
</tr>
<tr>
<td></td>
<td>Fix and Keep in-house</td>
<td>This is a strategy where the IT functions are kept in-house, but where the organisation acknowledges the need to obtain better practices and become more efficient and effective.</td>
</tr>
<tr>
<td>Co-sourcing</td>
<td>Rehabilitation and Return</td>
<td>This is a strategy where an IT function is reformed through cooperation with a third party, but the IT function is kept in-house.</td>
</tr>
<tr>
<td></td>
<td>Transition Assistance</td>
<td>This is a strategy where certain IT functions are overtaken by a third party and whereby the internal IT department has the opportunity to develop the required skills.</td>
</tr>
<tr>
<td></td>
<td>Capability Development</td>
<td>This is a strategy where a third party has a long-term responsibility for a part of the IT functions. This enables the internal IT department to develop new core capabilities.</td>
</tr>
<tr>
<td>Outsourcing</td>
<td>Option to Reverse</td>
<td>This is a strategy whereby a supplier will be solely responsible for the outsourced IT functions. However, there is a specific plan that enables the IT functions to be back-sourced if necessary.</td>
</tr>
<tr>
<td></td>
<td>Divest Completely</td>
<td>Portrays the strategy whereby an IT function is permanently outsourced. It is seen as non-core business function of the outsourcing organisation.</td>
</tr>
</tbody>
</table>

2.4 The sourcing determinants

Now the different sourcing strategies are presented by which to source the essential IT capabilities of the retained organisation, this section focuses on how to determine an appropriate sourcing strategy to increase the success of the retained organisation. Duncan (1998) describes that the sourcing rationales and strategy of an organisation to source an IT function can be explicated by theoretical perspectives on the theory of the firm. The “theory of the firm” relates to the fundamental question why an organisation exists and what its functional boundaries (its scale and scope) should be (see Porter 1980; Williamson, 1981; Steensma and Corley, 2001). In other words, what the added value of the organisation is in its respective market and how can it ensure or increase this value? IT outsourcing can be considered as a sourcing strategy that enables organisations to obtain the intended business value for their IT functions (Cheon et al., 1995; Barthélémy and Quelin, 2001). However, when should an organisation choose to outsource a specific IT function or when should it choose to insource, or co-source for that matter? In the literature
diverse theoretical perspectives are described that can be used to explain the rationales for choosing an competitive advantegous sourcing strategy. An overview of these theories can be found in Hui and Beath (2002, pp. 55), Kern et al. (2002, pp.174-175), Manhke et al. (2003 pp. 14-18) and Chew and Gottschalk (2008, pp. 297-310). These overviews indicate that the most prominently used theoretical perspectives to determine an appropriate sourcing strategy are Transaction Cost Theory (TCT) and Resource Based View (RBV).

**Transaction Cost Theory**

“TCT is widely regarded as a classic contribution to the study of organisations, economics, and law and, in particular, to sourcing decisions” (Aubert and Weber, 2001 p. 4). It uses “transaction costs” as the subject to analyse the economical consequences of internalizing or externalizing business activities (Ang and Straub, 1998; Watjatrakul, 2005). TCT acknowledges that the market is imperfect (Williamson, 1981). As a consequence, externalizing business activities through the market will always lead to a certain amount of conflict. TCT explicate this by two assumptions; (1) bounded rationality and (2) opportunism. Bounded rationality describes the inability of actors to find and comprehend all the information that is concerned with a transaction. Therefore, their will always be an amount of uncertainty in transacting goods or services. This uncertainty bring us to opportunism, which is concerned with the self interest seeking of actors to guilefully maximize their profit in a transaction (see Williamson, 1981; Barthélemy and Quelin, 2001; Aubert et al., 2004). Both assumptions combined results in a (deliberate) information asymmetry between the parties involved, which leads to information seeking and controlling activities by both parties to reduce risks. The more of such activities needed, the higher the cost of externalizing the transactions. According to TCT, decision-makers should choose a sourcing strategy that result in the least amount of production and transaction costs.

The literature identified that when transaction costs are low, outsourcing is viable – since the total cost of supplying a function should be lower due to economics of scale and scope of the supplier. If transaction costs are high, insourcing should be preferred - since organization are more effective in dealing with opportunistic behaviour and bounded rationality internally via the internal relational contracts (see Williamson, 1981; Lacity and Willcocks, 1995; Cheon et al., 1995; Ang and Straub, 1998; Mahnke et al., 2003). TCT distinguishes three determinants that can be used to determine an appropriate sourcing strategy; Asset Specificity, Uncertainty and Frequency.

**Asset specificity** is concerned with the uniqueness of an IT function and the (human) resources concerned with it. It is the core determinant of TCT and empirical research has found it to have a strong correlation with the sourcing rationales and a sourcing strategy of an organisation (see Lacity and Willcocks, 1995; Ang and Straub, 1998; Mahnke et al., 2003). A high specific asset is an asset that is unique to the client organization and difficult to employ for other uses. Inherently, it is not a commodity of (and difficult to commoditize by) a service supplier and thus not openly available on the market.
Transferring a highly specific asset to a service supplier will increase the ex ante and ex post transaction costs for both parties as intricate requirements alignments, contract development and monitoring processes are needed. As a result organisations should internalize IT functions that are highly specific. Concurrently, service supplier are less willing to supply asset specific IT functions due to the increased cost to supply assets that are not part of their service portfolio.

**Uncertainty** is concerned with the inability to foresee and measure the behaviours of the actors involved (behavioural uncertainty) and the affect of the environment surrounding the transaction (environmental uncertainty) (see Cheon et al., 1995; Aubert et al., 1996; Barthélemy and Quelin, 2001). Uncertainty is directly related with bounded rationality and opportunistic behaviour of the parties involved. Hence, highly uncertain transitions increase the information asymmetry between actors and moreover results in opportunistic behaviours. To counteract high uncertainty, intricate (relational) contracts and/or control structures are needed to; reduce potential opportunistic behaviour, increase the transactional relationships and anticipate better on environmental changes. Concurrently, high uncertainty will increase the ex ante and ex post transaction costs for both the client organisation and service supplier(s).

**Frequency** relates to the amount of transactions. Recurrent transactions increase the amount of transaction costs. Consequently, organisations should internalize frequent transactions as they are less costly to govern internally (Lacity and Willcocks, 1995; Aubert et al., 1996; Mahnke et al., 2003). Conversely, Cheon et al. (1995) described that infrequent transactions are more expensive due to the costs of building the relationship needed to come to the transaction. Aubert and Webert (2001) excluded frequency as a determinant for the sourcing decision due to the subjectivity involved in deciding what is to be considered a single transition. Watjatrakul (2005) argued that empirical research has failed to associate frequency with the types of governance structures. In coherence with these findings we have chosen not to address frequency as a determinant for a sourcing strategy.

Based on these findings, it is possible to visualize the ordinal relation between uncertainty and asset specificity with the three main sourcing strategies (see figure 2.2). Corresponding with the findings of Aubert et al. (2004), the figure illustrates a higher insourcing response for high asset specificity than for high uncertainty.
Resource Based View
According to RBV, the imperfectness of the market allows an organisation to possess and develop capabilities and resources that are more effective and efficient than those of competitors (Duncan, 1998). Concurrently, Barney (1999) argues that competitive advantageous resources and capabilities only occur in the situation of resource heterogeneity (differentiation of resources across organisations) and resource immobility (the inability of organisation to obtain resources from competitors). For a capability or resource to provide a sustained competitive advantageous Barney (1999) argues that it should have the following four characteristics

- **Valuable**: the capability or resource must be of strategic value to the organisation (it should exploit opportunities or neutralising threats);
- **Rare**: the capability or resource must be unique or rare, current and potential competitors should not have the same resources
- **Imperfect immutability**: it should not be able for competitors to imitate the capability or resource without a significant cost disadvantage
- **Non-substitutability**: competitors should not be able to achieve the same competitive advantage through the use of alternative (substitute) capabilities or resources.

A critical subject in RBV, which directly relates to the context of this paper, is concerned with how an organisation should attain and sustain valuable capabilities and resources. After all, an organisation should not invest more (financial) resources in acquiring a competitive advantage than the maximal rent it will generate (see Grant, 1991; Cheon et al., 1995). Concurrently, the literature identifies two determinants in RBV that depicts the rationales for a sourcing strategy (see Roy and Aubert 2000; 2002, Watjatrakul, 2005; Ivor, 2009;
The presence of appropriate resources: Grant (1991, p. 133) argues that; “in order to both fully exploit a firm’s existing stock of resources, and to develop competitive advantages for the future, the external acquisition of complementary resources may be necessary”. In other words, an organisation should when needed seek to obtain external capabilities and resources through an outsourcing strategy to leverage their competitive position. Accordingly, Cheon et al. (1995, p. 212) describes that “outsourcing is a strategic decision which can be used to fill gaps (i.e., the difference between desired capabilities and actual capabilities) in the firms IS resources and capabilities”. Thus, when certain capabilities are not appropriately resourced, an outsourcing strategy should be implemented to fill these capability gaps (see Cheon et al., 1995; Kern et al., 2002; Espino-Rodríguez and Padrón-Robaina, 2006).

The value of strategic capabilities: An organisation should gain and defend competitive advantageous capabilities that increase the operational efficiency of the organisation. However, when a resource or capability is not valuable, rare, imperfect immutable and non-substitutable it is considered to have little or none strategic value. Such capabilities (and resources) do not increase the competitive advantage of the organisation. Consequently, in the perspective of RBV, these capabilities are considered as candidates for outsourcing or co-sourcing, which is seen as a sourcing strategy to avoid competitive dis-advantage (see Arnold, 2000; Roy and Aubert, 2000; 2002; Mahnke et al., 2003; Espino-Rodríguez and Padrón-Robaina, 2006).

In other words, by determining the added value of a resource or capability and by determining its availability it is possible to assert a theoretical sourcing strategy for it. Roy and Aubert (2000; 2002) combined these two determinants into a generic model that depict the appropriate sourcing strategy according to RBV. The governance structure used by Roy and Aubert (2000; 2002) for their framework directly corresponds to the sourcing continuum as aforementioned. Consequently, based on these findings the following sourcing rationale model can be developed.

![Figure 2.3 – Model of the sourcing rationales according to RBV (based on Roy and Aubert, 2000;2002)]
Figure 2.3 illustrates the rationales for choosing a certain sourcing strategy based on the strategic perspective of RBV. Note the use of the new term; slack resource. When the strategic value of a resource is low and its presence is high, the resource is considered as slack. Slack resources are supportive resources on top of the resource needed to fulfil a task or responsibility. As such, slack resources can be a source for future strategic value, for example; as a buffer in times of high volatility or as a source through which new services and products can be developed (see Steensma and Corly, 2001; Mahnke et al., 2003). However, slack resources could also be seen as redundant and therefore subject to downsizing and subsequent outsourcing. Slack resources will not specifically be taken into consideration, as it is not in the scope of this thesis. Therefore the following sourcing strategies are used to divide the slack resources into possible sourcing strategies; see figure 2.4.

![Figure 2.4 – Translating slack resources into sourcing rationales](image)

3 Methodology

3.1 Developing the Theoretical Sourcing Framework

To determine an appropriate sourcing strategy for the IT capabilities of the retained organisation, a theoretical sourcing framework is developed. By relating the previous findings from the literature the theoretical sourcing framework is developed. This framework presents the interrelations of the aforementioned theories. As such, it illustrates how a sourcing strategy for the IT capabilities of a retained organisation can be determined which in theory should increase its success. To develop the theoretical sourcing framework the relations of the different theoretical findings are elaborated.

- *IT capabilities and sourcing strategies (what and how)*

  The previous chapter described that if the IT capabilities of the management and governance framework of Feeny and Willcocks (1998) are not appropriately sourced a retained organisation will have difficulties fulfilling its responsibilities (see Willcocks et al., 2006c). Accordingly, these IT capabilities and related IT resources need to be sourced in a manner which ensures the IT capabilities are effectively and efficiently represented. Therefore, for each IT capability a sourcing strategy needs to be determined that ensures its competitive advantageousness.

- *IT capabilities and sourcing determinants(what and why)*
Prior researches have identified that TCT and RBV are the most relevant perspective to determine an competitive advantageousness sourcing strategy. The value of the identified sourcing determinants of TCT and RBV are based on the unique characteristics of a respective capability. Hence, every IT capability has different characteristics that affect the value of the respective sourcing determinants (and consequently the appropriate sourcing strategy), which depend on the implemented sourcing strategy for the IT functions the retained organisation is responsible for.

- **Sourcing determinant and strategies (why and how)**

Figures 2.2, 2.3 and 2.4 illustrate how the value of the sourcing determinants can be related with a sourcing strategy. The choice for a sourcing strategy (the how) thus depend on the rationales of the outsourcing organisation and the potential service supplier (the why). Indeed, both the perspectives of the outsourcing organisation and the service supplier(s) need to be taken into account to determining a sourcing strategy that is viable (see Delen, 2005; Gottschalk and Solli-Saether, 2005)

Based on the previous description, an overview can be developed that distinguishes the relations of the different subjects. Hence, based on theory, it was possible to determine that the question; how to source the retained organisation depends on the essential IT capabilities and their characteristics - and on the sourcing rationales of an outsourcing organisations and its respective service supplier(s). This research uses the determinants of TCT and RBV to value what these rationales are. Hence, by valuing these determinants for each of the IT capabilities, a theoretically competitive advantageous sourcing strategy should be obtained for the retained organisation under scrutiny. The relations between these different subjects are presented in the theoretical sourcing framework as illustrated in figure 3.1
Figure 3.1 - The theoretical sourcing framework for the retained organisation

The framework illustrates the interdependencies of the different subjects by which to come to an appropriate sourcing strategy. Determining a sourcing strategy is thus an iterative process, where the required IT capabilities are evaluated on the basis of their characteristics by the outsourcing organisation and its potential service supplier(s). In the middle of the framework lie the theoretical determinants which can determine a sourcing strategy based on the sourcing rationales of the outsourcing organisation and its service supplier. In effect these theoretical determinants link the essential IT capabilities of the retained organisation with possible sourcing strategies.

The relations of the different theoretical findings as illustrated by the sourcing framework are presented in figure 3.2 (see below). This figure shows that for each IT capability a sourcing strategy is determined based on the respective value of the sourcing determinants. These sourcing determinants can thus be described as the independent variables in determining a sourcing strategy for each IT capability. The dependent variables are the sourcing strategies. To research the sourcing strategy for each of the IT capabilities the different independent variables need to be operationalized. In the appendix of this paper, an interview protocol can be found which illustrates how the sourcing determinants have been operationalized.

3.2 Exploring the framework in practice

No prior research exists that has applied the elaborated theories in the context of the retained organisation. Consequently, to explore the applicability and validity of these findings and their relations in the context
of the retained organisation, the developed sourcing framework needs to be applied in contemporary practice. According to Yin (2003) a case study is next to a survey the most appropriate research method to study real life contemporary events where a researcher has no control over the research variables. Furthermore, a case study is a more appropriate research method then a survey when the relevant research variables are difficult to operationalize and labour intensive to research (de Looff, 1995). Sourcing the retained organisation is such an activity; a researcher has no control over the sourcing rationales of an outsourcing organisation, which excludes the possibility of an experiment - and operationalizing the TCT and RBV determinants is indentified in the literature to be difficult to operationalize due to their subjectivity, which excludes the possibility of a survey (see Watjatrakul, 2005; McIvor, 2009). Accordingly, a case study is used to explore the applicability of the developed sourcing framework in practice.

3.3 The case study; a medium sized bank from the Netherlands

The case study in which the framework is applied was concerned with the retained organisation of a medium sized bank from the Netherlands. In preliminary interviews with seven organisations in the financial sector, this bank was perceived as the most relevant organisation for this case study. This bank was chosen because it has developed and implemented a prototypical retained organisation. Their prototypical design makes it a representative case for other outsourcing organisations in the financial sector. It is therefore considered as a suitable and relevant candidate to be used for this explorative in-depth case study (Yin, 2003).

This bank has recently initiated an innovative program to improve the efficiency and quality of its business functions. The IT strategy of this program planned to selectively outsource the IT infrastructure and applications landscape through a multisourcing strategy. Two mayor service suppliers were contracted to provide the respective IT infrastructure and IT applications. The bank also kept some smaller application developers under contract to maintain the support for existing legacy applications (see the dashed cube in figure 3.3). The main application service supplier is however made partial owner of the contracts with these application developers. The bank transferred around 200 of its IT employees equally to both service suppliers Figure 3.3 gives a simplified representation of the sourcing strategy of the bank. During the case study, the internalized retained organisation was fully operational and intended to gradually mature in the coming months. At the moment of this enquiry, the retained organisation had approximately 30 employees.
3.4 Data Collection and Validity Assessment

Before presenting the results of the case study, the quality of the information and collection methods are presented. To increase the factiousness of the obtained information, the data collection is based on different sources of information to triangulate the inquiries. The primary sources for information are the interviews. The interviews were face to face semi-structured interviews, which all followed the interview protocol (see appendix B). Where needed, additional explanatory questions were asked to better understand why some of the answers were given. Furthermore, to avoid reflexivity by the interviewee (see Yin, 2003), the interviewer tried to safeguard the relevancy and correctness of the answers without steering the interviewee toward a certain answer. This was particularly necessary to ensure the interviewees correctly described the sourcing determinants for each distinct IT capability.

Two semi-structured interviews have been carried out with the Chief Information Officer (CIO) of the bank (2.5 hours total). Three semi-structured interviews were carried out with an independent consultant, which had thoroughly examined the bank’s retained organisation for a risk assessment (4 hours total). One interview was executed with a (potential) service supplier for the retained organisation of the bank (1 hour). The secondary sources of information were documents on the design and architecture of the retained organisation, the sourcing strategy and outsourcing business case of the bank, and a risk assessment of the current retained organisation. Accordingly, these documents were used to obtain a better insight into the bank’s retained organisation and to check whether the obtained insights from the interviews corresponded with those described in the documentation.

To assess the quality and accuracy of the obtained information, the validity of the findings is elaborated based on the following four tests; construct validity, internal validity, external validity and reliability (see Ying, 2003):

- The construct validity has been leveraged by developing a theoretical framework, operationalizing the research variables, structuring an interview protocol, testing the protocol in a pilot interview and evaluating the interview protocol with supervisors of this research. The TCT and RBV determinants
were operationalized by assessing the interview questions of prior research from Watjatrakul (2005) and McIvor (2009) (see appendix B).

- The internal validity of the sourcing framework was difficult to assess prior to the case study. Hence, this research intends to explore the interrelations of the research variables. Nevertheless, as aforementioned we found evidence in the literature that the IT capabilities and the determinants of TCT and RBV can be related with possible sourcing strategies. Furthermore, as only the rationales of the outsourcing organisation have been incorporated in the case study, the internal validity of the findings is limited.

- The external validity is limited due to the use of a single case study. However, the banks’ retained organisation showed prototypical characteristics in its retained organisation. In that sense, it should be possible to generalize the findings on the sourcing framework to other outsourcing organisations.

- The reliability has been leveraged by the use of an elaborate interview protocol, which increased the consistency and replicability of this research. The reliability of the obtained information was ensured by interviewing the CIO of the bank and an independent consultant, and by evaluating the findings with them. Furthermore, specific attention was given to decrease the response bias and reflexivity of the interviewees during the interviews.

4 The results and discussion

4.1 The bank’s retained organisation

The first part of the case study focuses on the organisational arrangements of the retained organisation and allocation of the different IT capabilities in it. The bank has a moderately complex multisourcing strategy. The retained organisation is less complex and has as a consequence more prototypical characteristics. It has a federal structure similar to figure 2.1, with a centralised supply management and decentralised demand management (see figure 4.1). The supply side of the retained organisation has obtained most at the attention in the first few months of outsourcing, due to the primary focus of the bank on the newly outsourced applications and infrastructure management. Accordingly, the supply side of the retained organisation has matured faster then the demand side. At present the demand side of the retained organisation is under scrutiny to ensure it can optimally serve the business and key end-users in the future.
Figure 4.1 illustrates the federal structure of the bank’s retained organisation and the allocation of the different IT capabilities. The centralised supply side of the retained organisation is called the IT management department (ITM). The decentralised demand side of the retained organisation overlaps with the so called process and information management department (PIM) of which there are three. PIM is a specific business department which sole purpose is to improve existing and develop new business processes. An importance responsibility of this department is to determine requirements for the IT functions supporting these business processes. Accordingly, here lays a responsibility of the retained organisation. In short; the PIM department determines the IT requirements of the business. These are then elicited and communicated by the business system thinkers to the IT supply side of the retained organisation (the ITM department). The leadership (IT governance) and informed buyer of the retained organisation then determine the appropriately sourcing strategy for that specific IT function. After employing the sourcing strategy and determining the appropriate service supplier, the supplier is governed by the contract monitors and facilitators. At the same time, vendor developers are active in strengthening the relationship with the suppliers, whereby resources active in the making technology work capability ensure that required IT functions not supplied by the existing service suppliers are developed and implemented.

4.2 The IT capabilities

In elucidating the essential IT capabilities from it became clear that all the nine IT capabilities were perceived by the interviewers as essential for the bank’s retained organisation. The documentations on the design of the retained organisation described many IT capabilities similar to those as depicted by the management and governance framework of Feeny and Willcocks (1998). However, the documentation
used different terminology to describe some of these capabilities. Therefore specific attention was given in the interview to ensure the interviewees understood the nine IT capabilities as described by the framework and could describe their role and location in the retained organisation.

During the inquiries concerning these IT capabilities, it became clear that the framework of Feeny and Willcocks (1998) does not offer sufficient detail concerning the demand side of the retained organisation. This is logical considering the timeframe in which the framework has been developed. IT then was not as interrelated with business processes as IT is now. Another aspect is that the demand side of the retained organisation is very much dependent on the sourcing strategy of the organisation. For the following two IT capabilities feedback was obtained concerning their relation with the demand side. 1) *Business Systems Thinking* is too broadly defined. It is very difficult to differentiate between the functional management side of the organisation and the part the retained organisation is responsible for. Hence, it can be described as both the whole and a part of requirements management and business process management of an outsourcing organisation. Accordingly, Business Systems Thinking should be elucidated further into distinct IT capabilities specifically orientated to the demand side. 2) *Designing Technical Architecture* capability needs to incorporate more then the technical architectures only. Hence, the architectures of the bank’s retained organisation also developed information and process architectures, which are activities related to the demand side and crucial to understand how business processes and IT solutions are related.

In the search for other essential IT capabilities project portfolio management and service management were mentioned as possible additional IT capabilities for the retained organisation. They could however be demarcated as a specific part of one or more of the nine IT capabilities. Hence, *service management* as a collaboration of contract monitoring, contract facilitation, vendor development and informed buying - and *project portfolio management* as a collaboration between business system thinking, informed buying and IT governance. These examples illustrate that there are IT capabilities which encompass multiple responsibilities. The interviewees indeed acknowledged that especially Informed Buying, IT governance, Business Systems Thinking exist out of different activities of which some are more relevant then others. The mix of responsibilities and activities fulfilled by an IT capability and its resources complicated the discussion in depicting the appropriate value for the different sourcing determinants. Our findings concerning *project management* corresponded with those described in the literature. Although project management was identified to be a very relevant for the retained organisation, it was described as a more organisational wide capability. Corresponding with the findings of Willcocks et al. (2006b;c) and Beulen (2007), no additional IT capabilities were found next to the nine IT capabilities as described by the governance and management framework. However, it seems that nuances need to be made concerning the Business and IT vision side of the framework. Nowadays, IT is far more interrelated with business processes and requirements then 10 years ago when the framework was developed. Accordingly, the interrelatedness of IT with the process and functional side of an organisation.
affects the retained organisation as it demands a more thorough understanding of the IT capabilities needed on the demand side of ITO.

4.3 Valuing the sourcing determinants

The TCT and RBV determinants are a crucial part in relating the theoretical findings as aforementioned. During the interviews the value of the different determinants for each IT capability was depicted on the basis of the interview protocol. The answers of both the interviewees have been compared and re-evaluated with the interviewees.

Table 4.1 Value of the sourcing determinant for all IT capabilities

<table>
<thead>
<tr>
<th>Capabilities</th>
<th>Transaction Cost Theory</th>
<th>Resource Based View</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Question 1</td>
<td>Question 2</td>
</tr>
<tr>
<td>IT Governance</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Business Systems</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Thinking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship Building</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Designing Technical Architecture</td>
<td>H</td>
<td>M</td>
</tr>
<tr>
<td>Making Technology Work</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Informed Buying</td>
<td>M/H</td>
<td>L</td>
</tr>
<tr>
<td>Contract Facilitation</td>
<td>H</td>
<td>L/M</td>
</tr>
<tr>
<td>Contract Monitoring</td>
<td>L</td>
<td>H</td>
</tr>
<tr>
<td>Vendor Development</td>
<td>M</td>
<td>L</td>
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</table>

In the table 4.1 the value of the four determinants are presented for each of the IT capabilities based on the answers on the interview question 1-11 (see appendix). Table 4.1 illustrates that it is possible to determine an ordinal value for each of the four theoretical determinants per capability. The value of the determinants are described in the following manner; $VL = Very low$, $L = Low$, $M = Medium$, $H = High$, $VH = Very High$. Note that questions 2, 4, 5, 9, 10 and 11 have a contrary affect (a negative correlation) on the value of the sourcing determinant. Even though determining the value of the sourcing determinants has identified in the literature to be subjective (see Watjatrakul, 2005; Espino-Rodríguez and Padrón-Robaina, 2006; McIvor, 2009), the interviewees valued most of the sourcing determinants similarly. Differences were found for the strategic value of the IT capability. As the CIO of the bank is leading in this aspect, its answers obtained more significance. As no prior research has been dedicated to quantitatively operationalizing the sourcing determinant of TCT and RBV, no information exists on the correlation between the different subjects as describe in the appendix. Consequently, the different
questions used to operationalize the respective determinants have obtained the same weight in valuing the respective sourcing determinants.

4.4 The sourcing strategies

On the basis of the value of the four sourcing rationales as presented in table 4.1, it became possible to determine a theoretical sourcing strategy for each of the IT capabilities of the retained organisation. These sourcing strategies are determined by plotting the values of table 4.1 in respectively figures 2.2 and 2.3. Accordingly the resulting sourcing strategies can be found in figure 4.2 for TCT and figure 4.3 for RBV.

The sourcing strategy according to TCT:

As described above, the sourcing strategy of the retained organisation is to insource all its IT capabilities. Indeed, the interviewees described that the bank’s retained organisation has many responsibilities and activities, which are fulfilled by resources that require unique knowledge and skills about; the bank, its IT functions and its service suppliers. Accordingly, table 4.2 shows that, according to the economical perspective of TCT, insourcing is perceived as the more competitive advantageous sourcing strategy for most of the IT capabilities. However, for Contract Facilitation and Contract Monitoring a different sourcing strategy was determined. The sourcing strategy for Contract Facilitation lays on the borderline of insourcing and co-sourcing. This is because Contract Facilitation requires resources that possess unique knowledge and skills concerning the outsourcing contract. However, the interviewees described that the activities of the IT capability has been standardized through detailed process descriptions and that its performance can easily be measured (for example by measuring the time it takes to solve a problem). Thus according to TCT, insourcing this IT capability has little economical disadvantages. However, as this capability is highly standardized, it could be possible to find a service supplier that is more cost effective in supplying this capability. Accordingly, the rationales of a service supplier need to be incorporated to better investigate the possibilities for the co-sourcing strategy.

Table 4.2 clearly shows that it should be advantageousness for the bank’s retained organisation to outsource the Contract Monitoring IT capability. Contract Monitoring is described as is highly standardized and common IT capability, which a service supplier should theoretically be able to supply at less cost and better quality (due to economies of scale and scope). Accordingly, the bank should investigate if a service supplier is able and willing to carry out this capability and quantify what the benefits and risks are for outsourcing the contract monitoring capability.

The findings of the TCT perspective as illustrated by table 4.2 coinciding for the greater part with the actual sourcing strategy of the retained organisation. The CIO of the bank concurred with most of the findings, except for the sourcing strategy of the Contract Monitoring capability. Hence, the CIO indicated that outsourcing this capability could have a negative impact on the collaboration of resources in the service management area (the area where informed buying, vendor development, contract facilitation and
contract monitoring collaborate in ITM). Hence, these resources interact in their work and outsourcing one of the capabilities could affect the other capabilities in their activities. Also, the CIO indicated that outsourcing this particularly IT capability still meant that it was necessary to retain some of the monitoring capabilities to monitor the service supplier delivering the Contract Monitoring capability. As such, the CIO indicated that potential operational problems would occur when implementing this sourcing strategy.

Table 4.2 - Plots of the sourcing strategies according to TCT

<table>
<thead>
<tr>
<th>IT Capabilities</th>
<th>Asset Specificity</th>
<th>Uncertainty</th>
<th>Sourcing Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Insourcing</td>
</tr>
<tr>
<td>IT Governance</td>
<td>H</td>
<td>M/L</td>
<td></td>
</tr>
<tr>
<td>Business Systems Thinking</td>
<td>H</td>
<td>M/H</td>
<td></td>
</tr>
<tr>
<td>Relationship Building</td>
<td>H</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>Designing Technical</td>
<td>M/H</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>Architecture</td>
<td></td>
<td></td>
<td>Insourcing</td>
</tr>
<tr>
<td>Making Technology Work</td>
<td>H</td>
<td>M/H</td>
<td></td>
</tr>
<tr>
<td>Informed Buying</td>
<td>H</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>Contract Facilitation</td>
<td>M/H</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>Contract Monitoring</td>
<td>L</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>Vendor Development</td>
<td>M/H</td>
<td>M</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.3 – Plots of the sourcing strategies according to RBV

<table>
<thead>
<tr>
<th>IT Capabilities</th>
<th>Presence</th>
<th>Strategic Value</th>
<th>Sourcing Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Insourcing</td>
</tr>
<tr>
<td>IT Governance</td>
<td>H</td>
<td>M/H</td>
<td></td>
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<tr>
<td>Business Systems Thinking</td>
<td>M</td>
<td>H</td>
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<tr>
<td>Relationship Building</td>
<td>M</td>
<td>M/H</td>
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<td>Designing Technical</td>
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<td>Making Technology Work</td>
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<td>Informed Buying</td>
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<td>Contract Facilitation</td>
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<td>Contract Monitoring</td>
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<td>Vendor Development</td>
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</table>

The sourcing strategy according to RBV:
Table 4.3 illustrates the sourcing strategy according to RBV. In this case more variation exists in the determined sourcing strategies. For five of the nine IT capabilities the RBV perspective depicted insourcing as the more competitive advantageous strategy. These five IT capabilities are thus sufficiently represented and of sufficient strategic value to be retained in-house.

One of the noticeable differences with table 4.2 is concerned with the Business Systems Thinking and Relationship Building capability. As described earlier, the demand side of the retained organisation has obtained less attention then the supply side. Accordingly, the determinant “presence of appropriate resource” indicated that these two capabilities should obtain additional resources to increase their competitive advantageousness. Accordingly, table 4.3 illustrates that a co-sourcing strategy can be employed to obtain the required IT resourced. The interviewees acknowledged these findings, and stated that as Business Systems Thinking and Relationship Building are of strategic value, they should be given more priority. The CIO stated that they had chosen for an insourcing strategy for doing so. Though employing new employees and by focussing more on the collaboration of ITM and PIM, these IT capabilities should obtain the needed resources to become more successful. Note that this sourcing strategy is more in line with the sourcing strategy as determined by the TCT perspective.

The perspective of RBV depicts that the Informed Buying capability needs to be co-sourced to ensure that its competitive advantageousness is leveraged. Hence, the Informed Buying capability focuses now more on the operational aspects of implementing and managing the instituted contracts, and less on evaluating the tendering processes and/or developing future sourcing possibilities it accordance to new demands. As a consequence, the greater part of the responsibilities of the Informed Buying capability (except the service management) has obtained fewer resources. The interviewees however did perceive these less resourced activities to be of strategic value, which resulted into a co-sourcing strategy according to the RBV perspective. According to TCT this capability is unique and surrounded by uncertainty. RBV determined that it is of strategic value, its only problem is the lack of resources. According to the CIO, this lack of resources relates with the current phase in the sourcing lifecycle of the bank. In the current phase of the sourcing lifecycle (the transition phase, see KPMG (2007 p.5) Informed Buying is perceived as a less relevant capability and has therefore obtained less attention. The CIO indicated that it will receive the required priority when the sourcing strategy is to be re-evaluated. The danger thereof is of course that the IT capability is not yet resourced and/or mature enough when needed. The CIO of the bank indicated that then, if needed, a co-sourcing strategy can be implemented (by employing an external consultancy) to aid them in analysing the outsourcing market, determine an appropriate sourcing strategy and aid them in developing the appropriate contracts and relationships.

These findings illustrate that the priority of an IT capabilities is related to the phase of the sourcing lifecycle in which the outsourcing organisation is positioned. This corresponds with the findings of Willcocks et al. (2006c) (see also section 3.3.2). The case study thus indicates that outsourcing organisations have changing priorities concerning the nine essential IT capabilities. To resource these IT
capabilities in a more competitive advantageousness manner, it is important to understand when an IT capability should obtain the needed priority.

According to RBV, Contract Facilitation is of significant strategic value and accordingly it should be insourced. Conversely to TCT - which positioned Contract Facilitation on the borderline with co-sourcing - RBV clearly depicts an insourcing strategy. By combining both the perspectives it becomes clear that insourcing the Contract Facilitation is at this moment the most competitive advantageous sourcing strategy for the retained organisation of the bank. Accordingly, combining the findings of TCT and RBV has given a richer picture of the most appropriate sourcing strategy.

Another sourcing strategy which coincides with the TCT perspective is that of the Contract Monitoring capability. Indeed, the theoretical determinants of RBV have depicted it as a capability sufficiently represented in the retained organisation, however with little to non strategic value. Consequently, to diminish the potential disadvantages this capability brings it should according to theory be outsourced, which corresponds with the sourcing strategy according to TCT. However, as already mentioned, the CIO described that outsourcing this capability may bring other more operational problems, which may be more costly to solve then to retain this capability. Indeed, future research is needed that focuses in depth on the potential operational risks and constraints for co- or outsourcing an IT capability.

6 Conclusions, implications and future research

In the introduction we described that a retained organisation moreover lacks the IT capabilities to cope with the organisational challenges of ITO. The objective of this study was therefore to explore how an outsourcing organisation can determine a competitive advantageous sourcing strategy for the IT capabilities of its retained organisation. We therefore developed a theoretical sourcing framework, which presents the means to determine such a sourcing strategy. Based on the findings of a desk research this theoretical sourcing framework was developed (see figure 3.1). Accordingly, the different IT capabilities essential for the retained organisation were derived from the management and governance framework of Feeny and Willcocks (1998). The possible sourcing strategies for obtaining these IT capabilities are based on the sourcing continuum of Wibbelsman and Maiero (1994) as cited by Dibbern et al. (2004). And, determining the most competitive advantageous sourcing strategy is based on the sourcing determinants of Transaction Cost Theory and Resources Based View and the respective “sourcing rationales models” (see figure 2.2 and 2.3). Accordingly, these theoretical findings were combined and related in the theoretical sourcing framework and explored in practise through an in-depth case study concerning the retained organisation of a medium side bank from the Netherlands.

The obtained insights from the case study indicated that the sourcing framework is a useful tool to look at the retained organisation and its sourcing strategy in a more fundamental way. Hence, the Management and Governance framework of Feeny and Willcocks (1998) has shown to elucidate all the
essential IT capabilities for the banks’ retained organisation. No additional IT capabilities were found, even for project management, which was not identified to be an essential IT capability. We identified that Business Systems Thinking is too broadly defined, which makes it very difficult to determine what its exact responsibilities are. It should therefore be delineated into multiple IT capabilities such as for example; Requirements Management, Business/IT alignment and Information Management. Furthermore, we identified that the IT capability Designing Technical Architecture focussed solely on the technical architecture. It however needs to focus also on additional aspects such as process and information architectures, which are crucial for the demand side of the retained organisation.

The sourcing strategies as defined in the sourcing continuum have shown to be a viable representation of the possibilities by which an organisation can obtain the required IT capabilities. The obtained sourcing strategies (see figure 4.2 and 4.3) indicated that the sourcing determinants of TCT and RBV can be used to determine a sourcing strategy for the retained organisation. In combining the sourcing strategies according to TCT and RBV we found that both perspectives complimented each other. Hence, where the obtained sourcing strategy for an IT capability did not correspond with the actual sourcing strategy of the bank, relevant feedback was obtained concerning the applicability of the framework and areas of attention for the retained organisation of the bank. Opposite to the findings of Watjatrakul (2005), we did not find evidence that TCT is a more appropriate perspective for determining a sourcing strategy than RBV.

Implications

This study has relevant implications for both practitioners and scholar. The practical implications of this research are concerned with the developed theoretical sourcing framework and its applicability in practice. As describe above the sourcing framework offer the means for practitioners to look in a more fundamental way to how they can source their retained organisation. Accordingly practitioners should take into account the different theories used in the framework as these could support them during the development and evaluation of their retained organisation. Furthermore, this research has identified that it can (according to theory) be beneficial for outsourcing organisation to look for service supplier(s) to supply a part of their retained organisation. However, as this the first scientific initiative on this specific subject, practitioners should implement the sourcing framework and the resulting sourcing strategy with caution as much additional research is required to increase its validity.

The theoretical implications of this research are concerned with the obtained insights concerning the applicability of the used theories in the context of the retained organisation. Although future research is needed, feedback from the case study offered useful insights concerning the relevance and usability of these theories. Furthermore it showed that the framework offered a viable representation of the relations of these theories as is illustrated in figure 3.1 and 3.2. Furthermore, as no prior research focused on how to appropriately source the retained organisation, the developed sourcing framework and subsequent findings are the first contributions to the scientific literature on how to develop a more successful retained
organisation. This modest research demonstrated the applicability of the used determinants of TCT and RBV in combination with the models for the sourcing rationales as presented by figures 2.2 and 2.3. This researched contributes to the scientific field of ITO, TCT and RBV by; 1) combining findings on TCT and RBV, 2) operationalizing the TCT and RBT sourcing determinants and researching their applicability in practice, and 3) by developing and evaluating a sourcing rationales model for TCT and evaluating an existing sourcing rationales model for RBV. The obtained insights suggest that the theoretical perspectives of TCT and RBT complement each other, resulting into a more exhaustive perspective on how and why to source. We found the sourcing rationales models (figure 2.2 and 2.3) to be applicable in the case study and useful in determining a sourcing strategy. Accordingly, we indicated the applicability and accuracy of the sourcing determinants as described in figure 2.3, which is a model developed by Roy and Aubert (2000; 2002). Furthermore, we demonstrated that figure 2.2, which is based on the findings of Barthélemy and Quelin, (2001), Aubert and Weber, (2001) and Aubert et al. (2004), was applicable in this case study. The obtained results from the case study concerning the IT capabilities essential for the retained organisation concurred with the findings of Willcocks et al. (2006) and Beulen (2007). As little research exists on this aspect, this research contributed additional insights by confirming the applicability of the Governance and Management Framework in this case study.

Future Research

This study did not incorporate the rationales of a potential service supplier. To increase the internal validity of the theoretical sourcing framework, additional research is required which combines both the rationales of the outsourcing organisation and the potential service supplier when applying the sourcing framework. To increase the external validity of the developed sourcing framework, the framework should be applied with other outsourcing organisation in other ITO configurations. Furthermore, the interrelatedness of the IT capabilities has shown to have an influence on the determined sourcing strategy. Accordingly, future research is needed that determines if the interrelatedness of the different IT capabilities has an affect on the success of the determined sourcing strategy and if so, what this affect is. Furthermore, in accordance with Willcocks et al. (2006) we found that the priority of an IT capability changes during the sourcing lifecycle of an outsourcing organisation. Accordingly, this could have an affect on the appropriateness of a determined sourcing strategy. Accordingly, future research is needed that focuses on the changing priority of the IT capabilities and its affect on the theoretical sourcing framework. Although, TCT and RBV are described as the most relevant perspective to determine a sourcing strategy, future research should also focus on the applicability of other theoretical perspective in the context of the retained organisation. Furthermore, as this research focuses on the decision-making process, future research is needed that focussed on the outcome of the determined strategies. Hence, what are the benefits, risks or constraints of implementing the developed sourcing strategy? And can these outcomes be measured? The sourcing framework should therefore be researched longitudinally, during
the different phases of developing and implementing a sourcing strategy for the retained organisation, so as to more fundamentally determine its applicability and usability in practice.
Appendix: Interview protocol

General Part

• Question a: What is the sourcing strategy of the organisation? Which IT functions are outsourced and how and why are they outsourced?
• Question b: What are the responsibilities of the retained organisations?
• Question c: Can the IT capabilities of the retained organisation be compared with those as presented by the IT management and governance framework of Feeny and Willcocks
• Question d: Is it possible to identify additional IT capabilities? Is project management a distinct IT capability of the retained organisation?
• Question e: To what extent are you satisfied with the functioning of the retained organisation?

Specific Part

After identifying each IT capability and defining them in accordance to the management and governance framework, the following question need to be addressed for each of the nine capabilities.

• Choose one of the nine IT capabilities and assess its applicability for the retained organisation of the outsourcing organisation.

TCT - Asset Specificity

• Question 1: To what extent does this IT capability need resources, skills and/or knowledge unique to the organisation? Why?
• Question 2: To what extent is it possible to educate resources in this particular IT capability? Why? Are these internal or external sources of training? Why?

TCT - Uncertainty

• Question 3: To what extent is this IT capability subject to change? Why?
• Question 4: To what extent are their standardized processes and routines for fulfilling this IT capability? Why?
• Question 5: To what extent is the performance of the IT capability measurable? Why?

RBV – Presence of the appropriate resources

• Question 6: To what extent does the organisation possess enough means and resources to fulfil the IT capability? Why?
• Question 7: To what extent is the IT capability successfully executed? Why?
RBV – Strategic Value

- Question 8 – Value: To what extent does this IT capability enable the organization to neutralize risks and exploit opportunities? Why?
- Question 9 – Rarity: To what extent do competitors possess and control this IT capability? Why?
- Question 10 – Immutability: To what extent can competitors lacking this capability copy it without a significant cost disadvantage in obtaining or developing it? Why?
- Question 11 – Non-substitutability: To what extent can competitors obtain the same kind of IT capability with their own means and resources? Why?

Note that questions 1 to 11 need to be addressed for each of the nine IT capabilities so as to determine the appropriate and theoretically competitive advantageous sourcing strategy for the retained organization.
References


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Appendix B: Interview protocol

In this appendix we present the interview protocol which is used in the interviews of the case study. Firstly, the different subjects of the interview protocol are presented. Secondly, the determinants of TCT and RBV are elaborated to come to the appropriate interview questions (see also section 5.2.3). Thirdly, the interview protocol is presented.

The subjects of the interview

The interview protocol intends to translate the sourcing framework into questions which should assess the sourcing strategy for each of the retained organisations’ IT capabilities. It should present a list of logical successive interview question which, when answered, should give the required insights to determine the appropriate sourcing strategy for the retained organisation (see figure B.1). Furthermore, this interview protocol allows the research to be repeated in different contexts.

![Figure B.1 Logical structure of the interview protocol](image)

The general aspects that need to be addressed are the outsourcing organisation and its sourcing strategy. This is necessary to understand more of the ITO configuration implemented by the outsourcing organisation. Furthermore, the retained organisation needs to be elaborated. As such, it necessary to understand how the outsourcing organisation has allocated the IT capabilities and if they perceive it to be successful in managing and governing the demand and supply of IT functions.

Consequently, the specific aspect of the interview needs to respectively assess all the nine IT capabilities and determine if they are perceived in the same manner as described by the framework of Feeny and Willcocks. Subsequently, for each of the IT capabilities a sourcing strategy needs to be determined based on the determinants of TCT and RBV. Finally, after determining if the framework of Feeny and Willcocks represents all the essential IT capabilities of the retained organisation and exploring a sourcing strategy for each of them, the sourcing strategy needs to be evaluated. To do so we need to compare the IT capabilities of the retained organisation with that of the management and governance framework and value the determinants of TCT and RBV for these IT capabilities. The IT capabilities cannot be
operationalized in an ordinal ratio. They need to be compared with the IT capabilities of the outsourcing organisation (see section 5.2.3). The determinants however can be operationalized into different qualitative questions and respective ratios. How this is done is discussed next:

**Operationalizing the TCT and RBV determinants**

- **TCT – Asset Specificity**
  Asset specificity is, in the context of this research, concerned with the intangible knowledge and skill asset the human resource should have to fulfil a capability. In that sense, it is concerned with the question if the knowledge and skills assets needed for a specific IT capability are unique to the outsourcing organisation. Thus, we need to determine the extent of which the capability requires unique knowledge and skills to determine the asset specificity of an IT capability.

  Note that, according to Aubert and Weber (2001) and Watjatrakul (2005), specific skills and knowledge differ from specialist skills or knowledge. Specialist assets are not unique to a specific organisation. Hence, they are per definition things that can be learned and therefore more easily acquire through a (specialist) service supplier. In other words, highly specialist asset can be outsourced, highly unique assets per definition not. In determining the uniqueness of an IT capability, a distinction should thus be made between unique and specialist assets. We therefore need to determine the possibilities to educate employees in the IT capability.

- **TCT – Uncertainty**
  As aforementioned, uncertainty is concerned with the inability to foresee and measure both the behaviour of resources (behavioural uncertainty) and the affect of the environment surrounding the capability and its resources (environmental uncertainty). Consequently, to value the degree of uncertainty we need to determine the extent in which the capability is subject to change. Hence when the IT capability is subject to change, the uncertainty surrounding the capability will increase. Furthermore, insights are needed concerning the extent in which standardized processes and routines exist (behavioural uncertainty). And, as described by both Watjatrakul (2005) and McIvor (2009); an important aspect is the extent in which the performance of the capability and its resource can be measured. Hence, if this is measurable, the capability is more controllable, which diminishes the amount of bounded rationality and therefore the uncertainty surrounding the capability.

- **RBV – Presence of appropriate resources**
  This determinant is self-explanatory. The questions asked should thus focus on the extent of which the appropriate resources for the IT capability are available. However, as described by McIvor (2009),
possessing the appropriate resources also indicate that the resources should be successful in their fulfilment of the IT capability. Accordingly, the research questions should thus focus on the extent in which the required resources are present and on the extent in which the IT capability and its resources are successful.

- **RBV – Strategic value**
  
  As described in section 4.3.3, Barney (1999) identified the four characteristics to determine the strategic value for a resource or capability, being; *value, rare, imperfect immutability and non-substitutability*. The extent of the value, rareness, imperfect immutability and non substitutability of an IT capability depicts the strategic value of the IT capability. However, the characteristics are interdependent. Hence, when an IT capability is not valuable the other characterises do not matter in determining its strategic value. When an IT capability is valuable but not rare, the latter two characteristic do not matter anymore, etcetera (see Barney (2002) as cited by Amberg (2005)). Thus, an IT capability is only of high strategic value when it is valuable, rare, imperfect immutable and non-substitutable. The question for determining the value are based on the questions as elaborated by Amberg (2005) and McIvor (2009)

**The interview protocol**

With the different subjects described and variables operationalized, the following logical sequence of questions can be defined:

**General Part**

- Question a: What is the sourcing strategy of the organisation? Which IT functions are outsourced and how and why are they outsourced?
- Question b: What are the responsibilities of the retained organisations?
- Question c: Can the IT capabilities of the retained organisation be compared with those as presented by the IT management and governance framework of Feeny and Willcocks
  
  (put figure 3.6 here)
- Question d: Is it possible to identify additional IT capabilities? Is project management a distinct IT capability of the retained organisation?
- Question e: To what extent are you satisfied with the functioning of the retained organisation?

  
  Very High O O O O O O Very Low

**Specific Part**

After identifying each IT capability and defining them in accordance to the management and governance framework, the following question need to be addressed for each of the nine capabilities.
• Choose one of the nine IT capabilities and assess its applicability for the retained organisation of the outsourcing organisation.

**TCT - Asset Specificity**

• Question 1: To what extent does this IT capability need resources, skills and/or knowledge unique to the organisation? Why?
  
  Very High  O  O  O  O  O  O  Very Low

• Question 2: To what extent is it possible to educate resources in this particular IT capability? Why? Are these internal or external sources of training? Why?
  
  Very High  O  O  O  O  O  O  Very Low

**TCT - Uncertainty**

• Question 3: To what extent is this IT capability subject to change? Why?
  
  Very High  O  O  O  O  O  O  Very Low

• Question 4: To what extent are their standardized processes and routines for fulfilling this IT capability? Why?
  
  Very High  O  O  O  O  O  O  Very Low

• Question 5: To what extent is the performance of the IT capability measurable? Why?
  
  Very High  O  O  O  O  O  O  Very Low

**RBV – Presence of the appropriate resources**

• Question 6: To what extent does the organisation possess enough means and resources to fulfil the IT capability? Why?
  
  Very High  O  O  O  O  O  O  Very Low

• Question 7: To what extent is the IT capability successfully executed? Why?
  
  Very High  O  O  O  O  O  O  Very Low

**RBV – Strategic Value**

• Question 8 – Value: To what extent does this IT capability enable the organization to neutralize risks and exploit opportunities? Why?
  
  Very High  O  O  O  O  O  O  Very Low
• Question 9 – Rarity: To what extent do competitors possess and control this IT capability? Why?
  
  Very High  O  O  O  O  O  Very Low

• Question 10 – Immutability: To what extent can competitors lacking this capability copy it without a significant cost disadvantage in obtaining or developing it? Why?
  
  Very High  O  O  O  O  O  Very Low

• Question 11 – Non-substitutability: To what extent can competitors obtain the same kind of IT capability with their own means and resources? Why?
  
  Very High  O  O  O  O  O  Very Low

Note that questions 1 to 11 need to be addressed for each of the nine IT capabilities so as to determine the appropriate and theoretically competitive advantageous sourcing strategy for the retained organization.
Appendix C: Case study results

In this appendix the results of the case study are elaborated in more detail. Accordingly, for each IT capability a description is given of; a) the allocation of the capabilities in the banks’ retained organisation (see figure 5.4), b) the current sourcing strategy for the capability and c) the theoretical sourcing strategy based on the determinants of TCT and RBT (see table 5.1).

Capability 1; IT Governance
The IT governance capability is position in the supply side of the retained organisation. It is identified by the CIO as the part of the business fulfilled by the senior management and himself. The IT governance is clearly described as an essential part of the retained organisation by the interviewees, concerned with prioritizing the diverse IT capabilities and IT projects, and allocating the appropriately resources to the diverse IT functions and IT capabilities. Consequently, IT governance is highly related with the informed buying and business systems thinking capability. In the interview an interesting discussion was held concerning the role of project management in the retained organisation. Although project management was identified as a responsibility of the CIO and senior management within the bank’s retained organisation, it was perceived as an organisation wide capability. These findings thus correspond with the motives of Feeny and Willecocks (1998) and Willecocks et al. (2006c) to omit project management from the management and governance framework as a specific IT capability for the retained organisation. However, project portfolio management on the other hand was perceived as a distinct part of the retained organisation. It was described as a responsibility fulfilled by the IT governance together with resources from the business system thinking and informed buying IT capabilities.

The determinants;

- The Asset specificity of IT Governance is valued as high. The interviewees acknowledged the need for unique knowledge and skills about the bank, the retained organisation and its resources, strategy and history to develop, implement and maintain the appropriate decisions framework.
- The Uncertainty of IT Governance is valued as medium to low. The interviewees acknowledged that IT governance is not a capability that will change dramatically in times of change. This capability can reasonably be described in processes, criteria and guidelines.
- The presence of the resources for this IT capability is high. According to the documentation the IT governance of the bank’s retained organisation is in par with the benchmarks. The interviewees acknowledge that the success of this IT capability is medium to high the retained organisation.
- The strategic value of IT governance is medium to high. Although it is of strategic importance for the retained organisation, it is an IT capability that most competitors have (although some more successful then other)
Sourcing strategy

The following plots of the sourcing strategy can be made on the basis of analysis of the answers of the interviewees on the 11 interview questions:

![Figure C.1 - IT Governance TCT determinant](image)

**Asset Specificity**

![Figure C.2 – IT Governance RBV determinant](image)

**Presence of strategic resources**

Capability 2; Business Systems Thinking

The business systems thinking capability is a responsibility of the process and information (PIM) department of the bank. In accordance with the literature, the business systems thinking capability lies indeed in the demand side of the retained organisation. Again an interesting debate was held concerning the scope of this capability. Business system thinking is directly linked with the functional IT management. Hence, “business systems thinkers are important contributor to teams charged with; business problem solving, process reengineering, strategic development and delivering e-business” (Willcocks et al., 2006c). The bank has three distinct PIM departments in which the business systems thinkers are active. This IT capability thus support the development of IT requirements in direct relation
with the others IT requirements of the business (the other two PIM departments and vice versa). Accordingly, a fine line exists concerning this capability and the functional IT management as insourced by the bank. As such, it seems appropriate to be elucidated business systems thinking in more detail to better understand its precise responsibilities. Its current description allows it to be responsible for the greater part of the PIM, but it could also be seen as only the link of the PIM with the supply side of the retained organisation. We come back to this issue in the conclusion of this thesis. In the interviews we concurred that this IT capability also encompasses IT requirements management.

The determinants

- The Asset specificity of Business Systems Thinking is **high**. The interviewees acknowledged the need for unique knowledge and skills about the bank, the retained organisation and its processes and products, which can only be learned on the jog.

- The Uncertainty of Business Systems Thinking is valued as **medium to high**. The interviewees acknowledged that this capability is not subject to change but that its performance is very difficult to measure and that there exist no routines or process by which guide this IT capability.

- The presence of the resources for this IT capability is **medium**. According to the interviewees, this IT capability is in the middle of taking shape, as such it is still maturing toward a more successful implementation thereof.

- The strategic value of Business Systems Thinking is **high**. It is of high strategic value as it an IT capability directly related with the business. Hence, the capability is also rare as it interacts with the business in its own manner, which makes it difficult to for competitors to copy it.

Sourcing strategy

The following plots of the sourcing strategy can be made on the basis of analysis of the answers of the interviewees on the 11 interview questions:

![Figure C.3 – Business Systems Thinking TCT determinant](image-url)
Capability 3; Relationship Building

Although not clearly defined as a distinct IT capability in the documentation, the interviewees acknowledges “relationship building” as an IT capability fulfilled by resources in the demand side of the retained organisation. It is thus a responsibility of PIM to ensure the business is engaged in the use of IT and participates in its development, implementation and evaluation.

The determinants

- The Asset specificity of Relationship Building is high. The interviewees acknowledged the need for unique knowledge and skills about the bank, the used IT systems and more important its human resources to understand and engage end-users to embrace new IT functions. It is a capability that needs to be learned on the job.

- The Uncertainty of Relationship Building is medium. Although the activities of the capability change, the capability itself is stable, its performance is not directly measurable as it takes a while before for example; time to market increases. There are processes described for this capability.

- The presence of the resources for this IT capability medium. According to the interviewees, this IT capability is in the middle of taking shape, as such is it not yet fully successful.

- The strategic value of Business Systems Thinking is medium to high. It is of strategic value as this IT capability allows the organisation to better cooperate with the IT service suppliers and retained organisation, thereby increase the time to market. It is difficult to copy for competitors as this capability has a unique character only applicable within the bank. The IT capability can however easily be substituted by competitors.

Sourcing strategy

The following plots of the sourcing strategy can be made on the basis of analysis of the answers of the interviewees on the 11 interview questions:
Capability 4: Designing Technical Architecture

Figure 5.4 positioned designing the technical architecture is a capability which has been allocated between the retained organisation and its service suppliers. However, designing the technical architecture is perceived as more than only the architecture of the IT infrastructure. Following the Archimate framework, the bank has developed five different levels of architectural designs; information, application, technical, product and process architectures. The bank has made the two service suppliers responsible for developing the technical and application architectures. The retained organisation has retained architects in the supply side, capable of using, co-developing and evaluating these architectures (especially the application architecture) to aid the informed buyer and leadership in making their strategic decisions. The process and information architectures are developed by PIM and although the retained organisation is not responsible for them, it is responsible for the interrelations of the different levels of architecture concerning the IT functions. As this capability has been divided amongst the bank and its service suppliers, we focussed in the interview on the IT capabilities required by the retained organisation to use and evaluate the technical and application architectures. However, it can already be stated that the description of Feeny and Willcocks (1998) concerning the IT architecture is out-dated. Nowadays, it
seems that enterprise architectures, which is crucial for the success of ITO as identified by Rijsenbrij and Delen (2004) and Ross and Beath (2006), is a more appropriate description of the capability. Consequently, the retained organisation should possess architects active on more levels then only the technical levels of architectural designs, especially on the demand side such as process and information architectures.

The determinants

- The Asset specificity of Designing Technical Architecture is medium to high. The part executed by the retained organisation demands unique knowledge and skills about the bank, the used IT systems and the service suppliers. Although this demands unique knowledge, the capability on itself; developing architecture, can be learned through education.

- The Uncertainty of Designing Technical Architecture is medium. Some of the requirements for this capability will change when new applications are implemented, which demands unique knowledge about the organisation. The skills however to develop the architecture remains constant. This capability is not described in process or routines. The CIO indicated that the quality of the designs can be assessed, however the correctness and usefulness of the design cannot.

- The presence of the resources for this IT capability high. According to the interviewees, this IT capability is sufficiently represented in the retained organisation.

- The strategic value of Designing Technical Architecture is medium. It is of high strategic value for the retained organisation as it allows the organisation to guide and determine the impact of strategic decisions. It is however a capability well represented by competitors. As such it will not have a direct influence on the competitive advantageous for the bank.

Sourcing strategy

The following plots of the sourcing strategy can be made on the basis of analysis of the answers of the interviewees on the 11 interview questions:

![Figure C.7 – Designing Technical Architecture TCT determinant](image)
Capability 5; Making Technology Work

Although not described in the documentation, the interviewees acknowledged that some of the resources in the retained organisation have shown the knowledge and skills to troubleshoot problems which the service suppliers could not, or was not contracted, to tackle. Consequently, via this IT capability some of the contingencies, especially in the first phases of outsourcing, have been tackled by these resources. Accordingly, making technology work is identified as an IT capability positioned in the ITM. Nevertheless, the CIO did also mention that because they have outsourced all their IT except for the functional IT management, this capability can only be successful if it cooperates with the respective service suppliers. Hence, when developing a unique solution for a business demand or troubleshoot a contingency, these activities should not interfere with the responsibilities of the service supplier. Hence, when implementing a new application for example, the application service supplier should be made aware of this and should were possible aid in implementing it. This is necessary to ensure the relationship and contractual agreements between outsourcing organisation and the service supplier is not frustrated.

The determinants

- The Asset specificity of Making Technology Work is **high**. Trouble shooting problems demands knowledge and skills unique to the IT functions of the bank and it is an IT capability that can only be learned on the job.
- The Uncertainty of Making Technology Work is **medium to high**. The activities of this capability are highly volatile for which no standardized routines exist. The interviewees depict however that the performance of this capability can be measured.
- The presence of the resources for this IT capability **high**. According to the interviewees, this IT capability is sufficiently represented in the retained organisation.
• The strategic value of Making Technology Work is **medium to high**. This capability is of strategic value as it enables to cope with accurate problems, which can save the bank time and cost. However, other competitors should be able to obtain this capability without any trouble.

**Sourcing strategy**

The following plots of the sourcing strategy can be made on the basis of analysis of the answers of the interviewees on the 11 interview questions:
Capability 6; Informed Buying

This capability is described as the responsibility of both the CIO and the tactical sourcing manager. It is positioned in the ITM department links the business systems thinkers with the service suppliers. This capability is concerned with service management, management of the sourcing strategy, and project portfolio management, of which the latter two are directly related to the IT governance of the bank’s retained organisation. As we will see in the next paragraph, these different aspects made it somewhat more difficult to determine an appropriate sourcing strategy for it.

The determinants

• The Asset specificity of Informed Buying is high. It requires crucial knowledge and skill of the business and the used IT functions of the bank, which can only be learned on the job.

• The Uncertainty of Informed Buying is medium. The capability is stable. Although the environment changes the capability remain the same. There are standardized toolset aiding the informed buying, and the CIO indicated that the performance of this capability can be measured.

• The presence of the resources for this IT capability low. According to the interviewees, at this moment there are no informed buyers active.

• The strategic value of Informed Buying is medium to high. This capability is of high strategic value as it combined the business with the suppliers. It is however a capability which some competitors have more experience in. Nevertheless, the kind of sourcing strategy the bank has is unique, which have shows this capability to have some strategic value.

Sourcing strategy

The following plots of the sourcing strategy can be made on the basis of analysis of the answers of the interviewees on the 11 interview questions:

[Diagram showing sourcing strategy]

Figure C.11 – Informed Buying TCT determinant
Capability 7; Contract Facilitation

Contract facilitation is a capability of the contract and service management part of the supply side of the retained organisation (ITM). It is a capability that is clearly elaborated in the documentation and described by the interviewees as an essential and more traditional part of the retained organisation.

The determinants

- The Asset specificity of Contract Facilitation is medium to high. This capability demands knowledge and skills concerning the contract and escalation processes, which is unique to the bank. It furthermore requires crucial knowledge and skill of the business and the used IT functions of the bank, which can only be learned on the job. It is however not very difficult to learn this knowledge.
- The Uncertainty of Contract Facilitation is low. The capability is stable, described in processes and routines, and the performance of contract facilitation can easily be measured.
- The presence of the resources for this IT capability medium to high. According to the interviewees, there are sufficient resources active with the contract facilitation capability and these resources are successful in their responsibilities, however improvements are still needed.
- The strategic value of Contract Facilitation is medium to low. This capability is service oriented and a consequence does not add to the strategic value of the retained organisation. It can however aid the organisation to cope with problems effectively, which can eventually aid to increase the strategic value of the retained organisation for the bank.

Sourcing strategy

The following plots of the sourcing strategy can be made on the basis of analysis of the answers of the interviewees on the 11 interview questions:
Capability 8; Contract Monitoring
As with the contract facilitation, the contract monitoring capability has been clearly elaborated in the documentation and identified by the interviewees as an essential IT capability of the retained organisation. This capability is located on the operational level of the supply side (ITM).

The determinants
- The Asset specificity of Contract Monitoring is low. This capability demands no unique knowledge and skills of the organisation. It is even possible to train the human resources to fulfil this capability.
- The Uncertainty of Contract Monitoring is low. The capability is stable, highly described in processes and routines, and the performance of contract monitoring can easily be measured.
- The presence of the resources for this IT capability high. According to the interviewees, there are sufficient resources active with the contract monitoring capability and these resources are successful
in their responsibilities. Hence, it was one of the primary capabilities instigated by the consultancy aiding the

- The strategic value of Contract Monitoring is low. This capability is service oriented and as a consequence does not add to the strategic value of the retained organisation. It can aid the organisation to effectively cope with problems, which may have an indirect affect on the strategic value of the bank as problems should appropriately be managed.

**Sourcing strategy**

The following plots of the sourcing strategy can be made on the basis of analysis of the answers of the interviewees on the 11 interview questions:

![Figure C.15 – Contract Monitoring TCT determinant](Image)

![Figure C.16 – Contract Monitoring RBV determinant](Image)
Capability 9; Vendor Development

Vendor Development has also been identified by the interviewees as an essential IT capability of the bank’s retained organisation. Closely linked with the informed buying capability, vendor development is a capability the bank’s retained organisation is strongly developing to ensure the success of their outsourcing strategy.

The determinants

- The Asset specificity of Vendor Development is medium to high. This capability demands unique knowledge and skills of the organisation and the employed service suppliers. It however also demands not unique organisational and personal skills, to be able to interact with these service suppliers. Although, the skills needed in not highly unique, the required knowledge can only be learned on the job.
- The Uncertainty of Vendor Development is medium. The capability is stable as the interactions with service suppliers do not change much over time. There are however little process institutionalised as it requires creativity. Its performance is difficult to measure as it is depended on so much other variables, but it should be possible to determine its affect.
- The presence of the resources for this IT capability high. According to the interviewees, this capability is appropriately represented according to the used benchmark.
- The strategic value of Vendor Development is medium. This capability is of strategic value as it if strategic importance that the relation between outsourcing organisation and the service suppliers prosper. It is however not a very rare capability and it is easily copied or substituted by competitors.

Sourcing strategy

The following plots of the sourcing strategy can be made on the basis of analysis of the answers of the interviewees on the 11 interview questions:

Figure C.17 – Vendor Development TCT determinant
Figure C.18 – Vendor Development RBV determinant

Strategic value of resources

Presence of strategic resources

Co-sourcing
Outsourcing

Insourcing
Outsourcing