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IT MULTISOURCING MANAGEMENT

A Qualitative Study from the Vendor's Perspective

Master's Thesis
in Information Systems

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1 INTRODUCTION

1.1 Relevance of the Topic

Multisourcing is an outsourcing method that combines services of various different vendors in a single undertaking (Cohen & Young, 2006). The goal of this thesis is to examine whether multisourcing IT projects and undertakings is a viable strategy for companies. The goal is also to research in which situations it can be used and what kinds of benefits and challenges it poses. The original description of IT multisourcing does not necessarily require the use of multiple external vendors in addition to internal providers, but in the majority of the literature regarding the topic, IT multisourcing refers to the use of multiple external service providers (Levina & Su, 2008).

Management of IT and IS outsourcing relationships is receiving increasingly more attention both in research as in business practice. Understanding large scale co-operations of vendors in outsourcing and multisourcing situations provides decision makers more tools to increase business activities and tap into more technological fields. Studying the interactions between the client and vendors as well as between the vendors provides value insight on strategical business decisions when it comes to buying IT services and supplies from a third party (Kaiser & Buxmann, 2017).

This study investigates the benefits and disadvantages that an IT multisourcing setting presents to the vendor from a management perspective. As vendors are responding to client needs, studying their experiences can present valuable information for managing IT multisourcing projects for client companies and their decision makers. The study aims to gather as much information of multisourcing from the vendors' perspective, but due to the main focus in research articles being on the client's side, there is a gap in research to be filled (Aubert et al. 2016; Herz & Hamel, 2012; Bhattacharya, Gupta & Hasija 2012; Wiener & Saunders, 2014). As multisourcing describes a situation where one client contracts two or more independent vendors on a single IT project or undertaking, it is also a situation where the different tasks assigned to vendors have some impact on each other. This is true in most cases, even though the vendors may operate independently from each other. It has been shown that multisourcing is only efficient when vendors are communicating with each other (Bapna, Barua, Mani, & Mehra, 2010; Wiener and Saunders 2014). This study also focuses on examining the communication and cooperation activities of the various operators in a multisourcing setting.

Based on previous literature, in the majority of cases IT multisourcing has been presented as a lucrative outsourcing method (Aubert, Saunders, Denk & Wolfermann 2016, Wiener and Saunders, 2014). The results of these projects are in most studies presented

as successful or partly successful from the client's perspective. As there is a gap in research from the vendor's view on the success rates on these kinds of projects and undertakings, this study aims to focus on the benefit and disadvantage elements in multisourcing from the vendors side in a collection of individual interviews. In order to discuss IT multisourcing from the most relevant perspective, the interview participants as asked to describe their view on the commonness of multisourcing projects out of all IT projects in their experience. Previous findings demonstrate, that multisourcing could already be described as more of a self-evident practice than an exception in today's often complex IT outsourcing deals (Goldberg, Satzger & Kieninger, 2015).

Könning, Westner and Strahringer (2018) discovered in their study of IT outsourcing contract in over 1,000 German, Swiss and Austrian companies in the timeline from 2006 to 2018 that the peak of IT outsourcing contracts was in 2012, from which it has gradually decreased. The reason for the spike six years ago was connected to the recovery measures from the financial crisis. From these outsourcing deals, the percentage of multisourced deals has risen constantly from 2006 to 2017 to a point where it can be referred to as a norm in the outsourcing industry. This emphasizes the importance of understanding the phenomena better also through research.

The term IT multisourcing has only reached a common status only in the last fifteen years. This makes IT multisourcing a relatively new strategic model in IT governance. Earliest literature refers to IT multisourcing mainly as outsourcing done through using multiple vendors and thus does not acknowledge the difference between the two especially as a competitive advantage (eg. Brown, 1992; Earl, 1996; Gupta & Gupta, 1992; Huber, 1993; Loh & Venkatraman, 1992). In today's fast evolving IT business environment, the outsourcing arena has also been rapidly changing and companies are looking to adopt new strategies to respond to the transition (Levina & Su, 2008). This has made multisourcing a standard model in the area of IT outsourcing (Goldberg, Satzger, & Kieninger, 2015).

There are multiple reasons companies use IT multisourcing as a strategy. The initial motives have been to achieve better efficiency and to cut down on costs. As technology advances and constantly creates more opportunities, it must be considered as a competitive advantage that should be deployed in the strategy as such. Nowadays companies are not externalizing only transaction-intensive functions, but outsource also complicated, end-to-end services and also want to assign multiple vendors to take care of the projects (Bapna et al., 2010). There are multiple successful IT multisourcing projects that have been studied and some are presented in this thesis in order to see which benefits can be reaped from the strategy as well as what challenges occur (e.g. Aubert, Saunders, Denk, & Wolfermann, 2016; Barboza, Myers, & Gardner, 2011; Cane, 2008).

A significant challenge in IT multisourcing is IT governance and management of the change. Outsourcing in itself requires active management and cooperation, but when the amount of companies is multiplied, it adds to the challenge of executing a successful project as well as maintaining a lucrative relationship for all parties involved (Dibbern, Goles, Hirschheim, & Jayatilaka, 2004). The increasing complexity of technological solutions requires organizations to revise their management policies and time plans on an increasingly frequent level (Jiang, Klein & Fernandez, 2018). Multiple frameworks have been developed to study and evaluate multisourcing projects (Bapna et al. 2010, Goldberg, Satzger and Kieninger 2015, Levina & Su, 2008, Tan & Sia, 2006), but these models lack view on the interrelations between the various vendors working on a project. The vendors perspective is able to provide more insight on how IT multisourcing projects are managed through a different angle as well as discuss the benefits and disadvantages of such undertakings in more depth.

A significant difference in managing multisourced projects lies in the interdependence of the various activities and thus, between the operators. Bapna, Barua, Mani and Mehra (2010) have proposed that the challenges of an interdependent multisourcing project vary from a siloed one. Both methods are discussed in this study and the various models that describe multisourcing settings are provided.

This study examines how IT multisourcing is being used in various companies and what kinds of benefits the firms can reap from using the strategy. It also studies what kinds of challenges and disadvantages a multisourcing strategy can present to both the client and vendor company. As in most studies, multisourcing as a term describes the process of IT multisourcing, also in this study multisourcing is used in an IT context.

Measuring performance is important, because it identifies which elements of a company are functioning as planned and noticing the gaps between the desired result and the actual situation at hand (Weber & Thomas, 2005). In IT projects, it is sometimes challenging to pinpoint which actions have resulted in the success or failure of different functions (Dibbern et al., 2004). In this study, the aim is to find out how this affects the cooperation of the various operators in a multisourcing setting and explain some methods to find solutions in situations where problems occur.

As the IT projects of companies become larger, it becomes more likely that they opt for a multisourcing strategy instead of single-sourcing. This is due to the fact that vendors are rarely specialised in all of the elements that the client may need (Bapna, Gupta, Ray, & Singh, 2013). There is more research to be done on the fact what the differences between small and large vendors is. Figure 1 depicts a single-sourcing setting and a multisourcing setting in the simplest form. There are numerous modifications of the multisourcing model that are designed to respond to various needs of different projects and

undertakings. These models will be described in the next chapter and comparison between the various models will be done throughout the thesis.

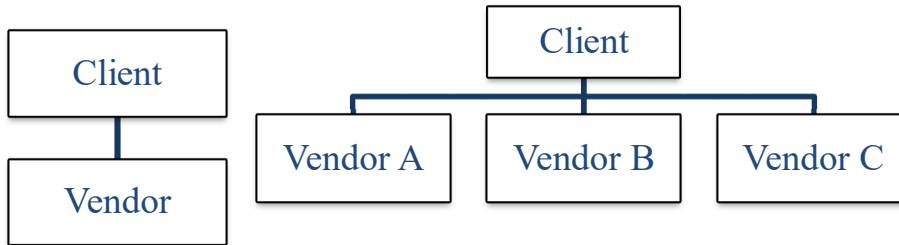


Figure 1 Single-Sourcing and Multisourcing models

The aim of this thesis is to find out the main objects that should be considered in IT multisourcing projects. This is done through a qualitative study, where multiple business professionals are interviewed in terms of experience of multisourcing projects. Their experience and recommendations are collected together and analyzed in order to fill the research gap that exists within IT multisourcing.

This research presents answers to the questions

- What are the benefits and disadvantages of IT multisourcing?
- What are the management challenges of IT multisourcing?

These questions will be discussed in the literature review based on previous findings and further researched in the form of a qualitative study in this thesis. The study is done by interviewing eight IT industry experts that have extensive experience from working in multisourced projects. The responses are analyzed in contrast to existing research and conclusions are drawn based on the results.

1.2 Previous Research

First outsourcing projects were initialized in the 1980s, but the first significant outsourcing undertaken was conducted by the imaging product technology company Eastman Kodak in 1989 (Loh & Venkatraman, 1992), soon followed by many other companies such as Xerox with an outsourcing project worth of \$3.2 billion in 1994, Lufthansa with \$833 million in 1994, Rolls-Royce Aerospace with \$1 billion in 1995 and J. P. Morgan with \$2 billion in 1996 (Verity, 1997). IT outsourcing was developing from a trend of a specific business sector to a relevant strategy of increasingly many firms from various industries.

Herz, Hamel, Uebernickel, & Brenner (2011) have researched the managing and monitoring multisourcing projects. They created a framework to approach supplier maintenance in IT multisourcing projects in which they list six dimensions as the cornerstones for efficient multisourcing supplier management. These elements are also considered throughout this study and provide a clear and important viewpoint – if one aspect is lacking monitoring, it can have detrimental effects on the project. As it is important to have key performance indicators to monitor the suppliers, this collection presents a solid frame to create a suitable monitoring entity. These elements are time, quality, efficiency, monetary, people and the customer and can be seen as a basis for all IT multisourcing project vendor management decisions. These factors should be considered when making strategic IT multisourcing decisions. The dimensions are presented in more depth in Table 1.

Table 1 The cornerstones of IT multisourcing supplier management

Time	There need to be time frames and deadlines for project elements and if they aren't met, some sort of penalizing should be agreed upon.
Quality	Quality monitoring is crucial when hiring multiple vendors. There are many moving parts and it's important to make sure all of the vendors are providing expected results and come up to expectations.
Efficiency	It's usually impossible to have direct control of all suppliers at the same time and thus this dimension focuses on appraising the vendor's work constantly by utilising other dimensions, such as budget and time.
Monetary	The budget needs to be closely monitored since projects often run out of money.
People	Following the attrition of the people working within the project. Loss of knowledge due to changing employees is a big risk.
Customer	Making sure the end-customer of the firm that is multisourcing is content with the vendors used in the deal.

Both practice-centered literature and scholarly literature have agreed on the fact that IT multisourcing is a fast-emerging outsourcing method for a long time. (Bapna et al., 2010; Cohen & Young, 2006) In today's business environment, it's becoming impossible to avoid multisourcing situations in some field of their IT architecture (Krancher & Stürmer, 2018). Dibbern et al. (2004) emphasize the importance for companies to explore this method and science to expand research on it. Research literature has mainly been focused on dyadic relationships between the client and the vendor and thus only presents a quite limited view into the outsourcing practices used by companies at the moment.

There is less research on how companies manage the relationships with vendors in single-sourcing or multisourcing contexts, even though scholars are expressing more interest on it (Herz et al., 2011; Könning, Westner & Strahringer, 2018).

IT multisourcing has become a significant both in the business environment as well as in research in the recent 20 years. Multiple researches are already to be found from the general nature of multisourcing as well as a collection of case studies. As multisourcing has become more popular in business, the academic world has grown interest in it as well. Many articles still argue that more research is needed in order to comprehend the complexity of multisourcing and one must consider if a topic that is this many-sided will ever be possible to fully explain in all scenarios. Even though some models are possible to create from previous research, all cases of multisourcing seem to have varying elements depending on the company in question. (e.g. Aubert et al., 2016, Kaiser & Buxmann, 2017, Bapna et al., 2010). In order to reach a better understanding on the differences between different industries' multisourcing decisions, six case studies collected from previous research and are presented at the end of the theory section.

1.3 Structure of the Thesis

This thesis explores the potential benefits, risks and costs of IT multisourcing. The organizations that seek to outsource or multisource their IT functions are referred to as *clients* and the external service providers are *vendors* or *suppliers*. Chapter 1 introduces the topic and describes the motive for this research as well as discusses the previous research done on IT multisourcing.

Chapter 2 provides a broad description of multisourcing – its background and explanation of its various elements. In the section, the general transition from single-sourcing to multisourcing and the advantages and disadvantages of it are discussed based on theoretical research. Some new trends affecting IT multisourcing are also covered, cloud computing as a main topic due to its commonness in current outsourcing deals. After this, five relevant multisourcing models and strategies to organize outsourcing undertakings. Some models have already found steady ground in outsourcing activities and have been in usage since the beginning of 1990 and have thus gained a large research basis. Other models are more modern and only appear in a limited number of case studies: they thus present a novel element to IT multisourcing. At the end of section 2 is a collection of case studies, that open the theoretical framework of the subject and provide real-life examples of multisourcing cases. This supports connecting the benefits and disadvantages of multisourcing as well as the multisourcing models to business practices in the commercial world.

Chapter 3 and 4 present a study and analysis about IT multisourcing investigating it from the vendor's angle, mainly focusing on consulting companies with an IT emphasis. The study is conducted as a qualitative study with eight individual interviews. The interview subjects are all professionals in IT outsourcing industry and have operated in multiple IT multisourcing contracts along with other vendors. The interview discussions will focus on shedding light on the positive and negative elements in IT multisourcing as the vendors perceive them. They also help unravelling how IT consultants and industry experts view the multisourcing trend and which situations they find most fitting for it. The results are being discussed in chapter 5 and the benefits and disadvantages are presented based on theoretical research and the study results. Conclusions and incentives for future research are presented in chapter 6.

2 IT MULTISOURCING

2.1 The Definition of IT Multisourcing

Multisourcing is a modification of outsourcing that has been developed to answer to the rapidly developing needs to the modern business world. It is a continuously growing phenomenon with increasingly more companies involve multiple vendors in their IT projects (Bapna et al., 2010). IT outsourcing contracts in general are becoming more temporal, smaller in monetary value and are split between a multitude of vendors. This shows that clients are increasingly opting for multisourced contracts (Könning et al. 2018; Kaiser & Buxmann, 2017). The delegation of various aspects in IT undertakings to different vendors requires the vendors to be in cooperation with each other in their operations. This requires a new level of communication of the vendors and has posed new kinds of advantages as well as challenges to both the client and the vendor (Levina & Su, 2008).

Oshri, Kotlarsky, & Willcocks, (2009) describe three models of outsourcing, which describe the general variations between the in-house and out-house division.

- *Total outsourcing*, where the client moves 80% or more of a function to an outside supplier.
- *Total in-housing*, where the client keeps 80% or more of a function management and provision inside the company
- *Selective outsourcing*, where some functions are outsourced to external suppliers, while the client manages the project 20-80% internally.

IT multisourcing is a method to outsource IT services from vendors in order to answer to the requirements of rapidly evolving business markets. Traditionally, IT outsourcing has been a procedure where a third-party vendor provides single basic functions to a customer. Since the 1960s, IT outsourcing has started to evolve rapidly since it's become the method of also large, multinational companies (Dibbern et al., 2004). Since then, IT outsourcing as well as Business Process Outsourcing (BPO) have become a permanent and crucial part of different companies' strategies all over the world (Levina & Su, 2008). Due to the complexity and internationality of today's business operations, companies have started to seek out the best deals and service providers for each outsourcing task. They combine the efforts of various companies, obligating the different service providers to operate together in order to carry out a project (Aubert et al., 2016).

Bapna, Barua, Mani and Mehra, (2010) describe IT multisourcing as "the leading edge of modern organizational forms". It challenges the conventional thinking of outsourcing as a process between the client and the vendor and obliges multiple vendors to work together. This creates a setting, where companies that usually compete with each other have

to work together in order to get the customer's project to succeed (Bapna et al., 2010). Cohen and Young (2006) state, that multisourcing governance is an even more important success factor than the strategy of the company. This is because strategy needs to be implemented correctly and with close attention to market changes and adaptations.

Dibbern et al. (2004) present a five-stage decision-making model that can be modified to both single-sourcing as well as multisourcing projects. It describes the stages from the planning phase of an outsourcing project to the initialization and implementation of it. The five-stage model presented in its most simple form in Figure 2, consists of five questions the organization should be asking when planning on outsourcing its information systems.

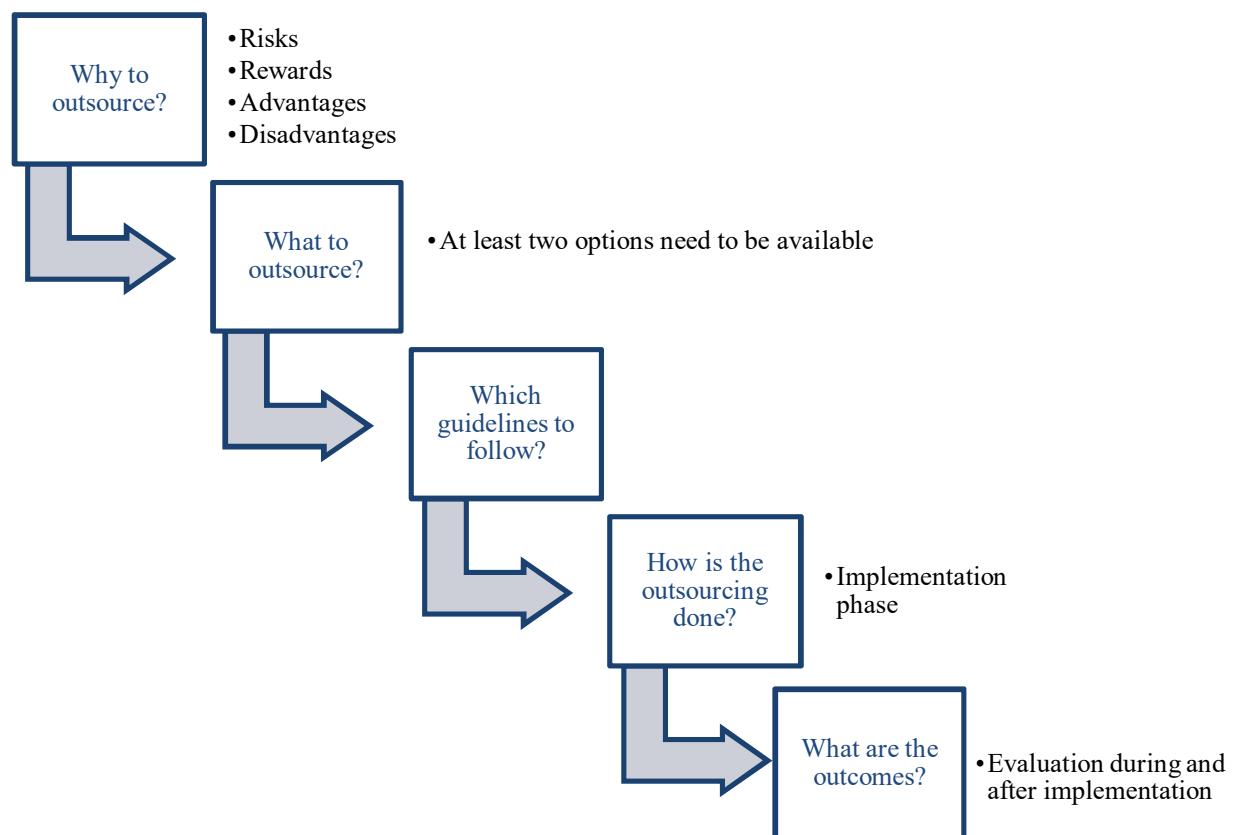


Figure 2 Outsourcing Decision-Making Model (based on Dibbern et al. (2004))

Integration costs are always a significant factor when planning multisourcing projects. If the integration costs of multisourcing a project dominate the benefits received from it, the client may decide to go with only one vendor. However, if the benefits received from using multiple vendors are estimated to be higher than the coordination costs, the client usually chooses multisourcing. There is one significant element in the nature of the multisourcing contract that companies should consider, and that is the multisourcing project is completely managed by the client or if they are using a mediating vendor. The mediator takes the role as the communicator between the client and the sub-vendors and thus takes

on the organizer's role in the project. This model is described in the next chapter as the mediated model (Bapna et al., 2013).

In multisourcing deals the size of the client company and the deal bears significant importance. It is more common for firms with a large amount of equity and broad operations to engage in multisourcing scenarios than SME's (small or medium sized companies) to engage in multisourcing deals (Aubert, Patry, & Rivard, 2005). This opinion has however been challenged by the latest research findings. Technological advancements, such as cloud computing, enable companies to grow fast and operate on large scale with various specific needs. Small and medium size firms are utilizing the benefits of multisourcing in an increasing manner. Agile approaches are becoming increasingly popular and including multisourcing in the company strategy is a growing trend in different sized companies at the moment (Abbasi et al., 2014).

2.2 Background of IT Multisourcing

"What's important is access to information, not owning the technology." – (Huber, 1993)

Outsourcing individual IT functions began in the 1980s for example in the form of buying system development from an outside vendor. Nevertheless, the outsourcing contracts remained relatively narrow and consisted predominantly of projects rather than entire IT units (Earl, 1996). The first large multinational company that signed an outsourcing contract for an IS function was Eastman Kodak in 1989. It outsourced its IT functions to IBM, DEC and Businessland. This marked a significant shift in the manner companies began to view IT – a function that was a strategic asset yet possible to outsource lucratively. As the first firm with a *Fortune* 500 status to do this, started the outsourcing trend, also known as the Kodak-effect in the 1990s (Applegate & Montealegre, 1991; Dibbern et al., 2004).

Outsourcing became a trend for both large and small companies soon after the Kodak case and by the year 1995, IT outsourcing had become a \$40 billion business (Lacity & Willcocks, 1995). No significant difference between single-sourcing and multisourcing has been identified between the various deals at this time and only after a decade the academic literature started to examine the differences between single-vendor and multi-vendor outsourcing.

In the beginning of 1990s, outsourcing was rather seen as an action to bring a company out of distress, than a strategic decision that in order to improve competitiveness. The recession had had its impact on the economy and companies in need to discharge some of its employees due to the high employment costs started to turn to third-party vendors

in certain business functions. Outsourcing was not regarded as a strategy to be taken seriously nor was it thought to have long term impact on the business functions of the majority of large organizations worldwide. As the economy started to revive towards the end of the 1990s, outsourcing had proven itself to be a profitable strategy – especially regarding the organization of information systems and technology. These new, multi-million outsourcing contracts were called “megadeals”. Companies such as Continental Bank, DuPont Co., J. P. Morgan & Co., Ryder System Inc. signed outsourcing deals which value varied from \$1 billion to \$4 billion (Verity, 1997).

The company that had the next large impact on the outsourcing industry after Kodak, was Xerox Corp. in 1994. While Kodak outsourced its mainframe operations, data networks and desktop computing to three different vendors, Xerox Corp. outsourced its entire mainframe-related IT operations to Electronic Data Systems Corp. for ten years. In 1997, this was regarded as the organization of the future (Verity, 1997). Looking back now, Kodak pioneered a strategy that would be used by thousands of companies after it and also a way to outsource that would become popular thirty years later that is nowadays known as multisourcing.

In the middle of the 1990s, outsourcing started to become more than only the function of buying the services to run data centers or manage telecommunications from vendors. It was soon noted that outsourcing could be more – a creative alliance that meets more needs than those only linked to basic IT functions (Schmerken & Golden, 1996).

While outsourcing in the 1990s was mainly about achieving savings, 30 years later today, a new element has created a need for multisourcing – the need for innovation. The fast-evolving market has pushed companies to more actively seek innovations and evolve their operations. As traditional outsourcing has mainly meant buying generic IT functions from vendors and keeping the contracts short and highly modularized, it has shown to be a highly demanding and time-consuming method from the management angle. New research and methods suggest, that by creating longer contracts with vendors and creating relationships with them it is easier to get new innovations into the company from outside. Agile approaches are actively referred to in recent research as a tool to successfully multisource IT operations (Abbasi, Noor, & Noor, 2014; Su, Levina, & Ross, 2015).

2.3 Elements of IT Multisourcing

2.3.1 *Single-Sourcing Versus Multisourcing*

Based on their study of large outsourcing projects, Bapna et al., (2013) were able to conclude that projects of high value are usually multisourced with a mediator vendor than single-sourced or multisourced directly. If a project can be modularized, in other words broken into smaller parts that can be worked on independently, it is most likely to be multisourced directly than single-sourced. In the first case, the client usually makes the mediating vendor the chief integrator, whereas in the latter one the client is operating as one.

One of the main differences between single-sourcing and multisourcing is the often-overlapping nature of multisourced projects. Even though the vendors operate separately, the client still needs to find out a way to interconnect their work into one seamless structure. This oftentimes poses big challenges from the governing side. The situation could be called as an end-to-end service, where management is one of the major issues especially for companies that are unexperienced in the field of multisourcing (Goldberg et al., 2015).

When IT projects become bigger in size, they often include so many aspects that it may be difficult to find a vendor that can offer expertise in all of the fields. This is why large IT projects often create multiple contracts with different service providers. If the client has little or no experience about coordinating various suppliers and integrating them, they benefit most about a mediating model or a single-sourced approach. As the IT industry evolves and more experts enter the IT vendor market, multisourcing becomes more common than more classis, dyadic vendor outsourcing (Bapna et al., 2013).

Lacity and Willcocks (1995) conducted a study on the sourcing decisions of 145 participants in forty different companies. The aim of the study was to find out which high-level strategy to outsource IT activities is the most lucrative. Based on the data that was gathered and analyzed, suggestion is that companies should not consider the entire IT department as a single strategic asset that should be kept in-house or outsourced entirely. In their study, Lacity and Willcocks (1995) found out that the best way to source IT functions is to treat them as “a portfolio of activities”. The data in the research concludes that selective outsourcing generated better outcomes than outsourcing an entire function. The participants said that the threat of outsourcing or competition with third-party vendors caused the employees in the IT departments to aim for improvements. Although this study was conducted only focusing on the success or failure factors of in-house IT sourcing versus outsourcing over than twenty years ago, on a basic level it can be compared to

multisourcing situations. When the customer company is constantly tendering out vendors, the pressure to constantly produce high quality work is higher than if the contract is secured for a specific company.

Outsourcing in general has multiple benefits that are being highlighted in research, but as sourcing services from external vendors gains popularity the disadvantages are being taken increasingly into consideration. While multisourcing IT projects provides the client possible cost savings and finding the best-of-breed practices, it is also beneficial to the vendor, since these kinds of contracts usually lead to a long-term collaboration and, as a result, a long-term revenue stream (Bapna et al., 2010).

In multisourcing contracts vendors are usually able to focus more on their “sweet spots”, areas where they are experts. This provides financial security to them due to the fact that they are most likely able to deliver the project on schedule as well as answer to the needs of the vendor precisely if compared to a dyadic outsourcing setting (Bhattacharya et al., 2012).

A challenge in both single-sourcing and multisourcing is the fact that it is not always possible to write contracts regarding project outcomes. In these cases, the client and vendor must resort to incentive deals such as Service Level Agreements (SLAs). What makes these contracts more challenging in multisourcing is the number of vendors, which is more than in single-sourcing contracts, and the ability to measure the success on both a project level as well as on every single vendor’s level. This is the reason why multisourcing contracts require active governance and management as well as active back-and-forth discussion regarding the expectations of the project (Bhattacharya et al., 2012).

2.3.2 *The Benefits of IT Multisourcing*

Cohen & Young (2006) describe that the main benefits of a successful multisourcing undertaking are reduction of the risk of failure of the outsourcing, since multiple vendors are assigned to the project and everything is not reliant on one service provider. Multisourcing also brings out the best-of-breed activities regarding agile business functions. Bapna et al. (2010) add to the benefits the possibility to use a wide range of expertise, lowering expenses due to the price competition between vendors as well as the better adaptability to the transforming industry situations. Flexibility is a big advantage in multisourcing and it has been praised to make it easier for clients to adjust their IT resources in regard to desired business results. By multisourcing IT functions, clients are able to adjust the duration of individual contracts according to what the need is at the time. Having a group of vendors at one’s service mitigates the risk that having only one vendor poses, since it lowers the over-reliance on one specific vendor (Aydin, 2013).

Aydin (2013) presents a case of a telecommunication service provider company that needed specific skills on various information technology systems and wanted to multi-source these elements to find the best professionals for each area. A significant factor in this project was time – the firm wanted to get multiple different project done at the same time, which according to the client would not have been possible with a single vendor. The firm had experienced one vendor to operate slower than multiple vendors at once and as stated before, this is a big bonus in multisourcing. However, it also requires effective management from the client's side and the ability to hold all the strings at the same time. The pressure that a multisourcing setting caused on the vendors had a positive effect on the efficiency on the time spent on a project. The client stated that pressure was beneficial for them in this setting.

Levina & Su (2008) encapsulate the benefits of multisourcing to four main points: competition, risk reduction, best-of-breed services and improved selection. Competition refers to a situation where the vendors have to compete more actively and thus create situation where it could be easier to find the best deal when factors such as price, quality and time span are considered. Risk reduction is connected to the decreased strategic risk as vendor lock-in and dependency are mitigated. Best-of-breed services refers to the ability of the client to find the best methods and services for different aspects in a project from a broader vendor selection than if it was only operating with one supplier. This is closely connected to finding the vendor that's abilities best fit the client's needs. Compared to traditional single-source outsourcing, which has so far been viewed as quite dogmatic due to its bilateral nature, these can be viewed as significant benefits (Tan & Sia, 2006).

Another outcome companies look for in outsourcing and multisourcing is the improvement of performance. Companies that are not technology-focused rarely have the newest technology skills and knowledge in their own IT departments. When service providers' main objective is to stay on track of IT trends and software, increasingly many firms opt for external help (Barthélemy, 2001).

2.3.3 The Challenges in Multisourcing

Actively cited challenges in IT multisourcing are managerial challenges and the ones especially in IT governance and expense management strategies (Bapna et al., 2010). IT multisourcing projects require effective IT governance and management on multiple layers. It requires some business processes to be redesigned in order to succeed. An important way to reach the goals set to a multisourcing project is to create 'operating level

agreements', which are not binding contracts but rather descriptions of the expectations between the various parties of the project (Barboza et al., 2011).

The most common challenges in multisourcing are its complexity, costs and contractual intricacy. This is compared to single-sourcing, where often these factors are lower due to its simplicity (Abbasi et al., 2014). What has caused negative outcomes in outsourcing and multisourcing deals are also the treatment of the employees of the firm who may be laid off or transferred due to the new arrangement. The short-term gains can have a negative effect on the long term gains due to discontent amongst the client firm's employees (Brown, 1992).

Vendor lock-in is a risk that often rises to discussion in IT outsourcing and is regarded as one of the most notable disadvantages about outsourcing contracts in general. It is a case where the client is unable to discontinue a contract without losses (Aubert et al., 2005). In multisourcing it's possible to lower the risk of being driven into a lock-in situation due to the fact that the responsibilities about IT elements are shared (Aron, Clemens and Reddi, 2005). This however does not rule out the chance of the client being driven into a lock-in situation with a single vendor for a specific task. Also because of this issue, extreme caution in governance and contracting should be practiced in multisourcing deals. In the 1990s when research on outsourcing began, the general tone towards outsourcing and multisourcing was positive and lacked studies about the negative impacts about outsourcing decisions (Palvia, 1995). In the last twenty years there have been multiple studies about the risks in outsourcing and multisourcing, which have brought more criticism to the discussion about outsourcing (Aubert et al., 2005; Aydin, 2013; Barthélemy, 2001; Earl, 1996; Kliem, 2000; Palvia, 1995).

A Levina and Su (2008) discuss the benefits regarding IT multisourcing, they also address negative aspects that can occur in the same areas. As risks they mention lowered interest for vendors to make investments in client-specific acquisitions as well as the client's decreased interest to do the same for the vendor. Generally multisourcing also always elevates management costs through creating multiple different contracts and operating between the vendors efficiently. Contract discussions may take a significantly longer time in multisourcing situations compared to single-sourcing scenarios due to the multidimensionality of the delivery line-up. Martens and Teuteberg (2012) found out in their study that right when firms begun negotiations with multiple vendors, there was a rise in transaction costs.

As the number of vendors increases, controlling the project or business function delivery becomes more challenging. When in single-sourcing vendor control and communication is fairly straight forward, in multisourcing new methods are needed in order to keep on track of all things that are happening with each vendor. Usually this means that more people are needed in the client firm to keep contact with various suppliers, which in itself

creates extra costs, too. As controlling the vendors becomes harder, the level of quality may suffer as well. If it is difficult to point which supplier is responsible for which outcomes, especially if they are operating on same projects and in an overlapping manner, the delivered quality may not meet the expected one (Aydin, 2013).

Choosing the wrong vendor is regarded as one of the main risks in outsourcing. This can be mitigated to an extent by choosing a multisourcing strategy, but the initial liability still exists in situations where there are multiple suppliers (Aydin, 2013). The issue with poor vendor selection in IT multisourcing is that as the managers need to choose and coordinate numerous vendors, the costs rise simultaneously (Levina & Su, 2008). If a selected vendor is not delivering the required results, the task of reassigning the function to another supplier may be difficult and expensive.

2.3.4 Modularity in Multisourcing

Modularity is a design structure or a method that can be used to handle complexity in a company. It is used to break up a complicated system into small, more easily manageable parts. These parts can then interact with each other only through standardised interfaces and thus make it easier to manage a large set of systemic interconnections in an effective manner. Modularity has been used for example by coders for a long time to break programs or software into smaller, more easily manageable parts. It has been a key concept in outsourcing IT projects, because it enables different parts of a project to be worked on independently as modules. The main goal of a modular model is to limit the interdependency of various parts of the system – whether it's a program or an outsourcing layout. These smaller segments are easier to operate on and they not in a direct causation relationship with each other (Langlois, 2002).

Modularity is also known as the “black box” method, where each module can be treated as a separate unit and modified without affecting the other ones (Tiwana, 2004). It can present challenges to the firm, if the modules are treated as black boxes and if the vendor has full ownership of the operations of a certain box. A firm can create a monopoly-like situation for a vendor by using a completely modular approach, since it can gain an even irreplaceable stand in a function. This can drive the client to a lock-in situation in multisourcing. In recent years the traditional direct model has been developed further in many organizations, oftentimes moving away from modularity, to better reap the benefits of multisourcing and interrelation (Aubert et al., 2016).

Modularity has gained popularity as a way to operate due to the increasing complexity of the modern technology. However, it's not always worth the cost (Langlois, 2002). Langlois (2002) argues that systems that do not change much over time or whose change

happens slowly, do not necessarily require much modularity. However, as companies are increasingly using technology as a competitive advantage, it is becoming harder to utilise systems that do not change at all or only change a little over time.

In the past, modularity has usually met the expectations and proven itself to be worth the cost. The question that should be nowadays asked is not if something should be modular, but how. A view is that the main goal is to minimize the interdependencies between different modules (create black boxes) (Aubert et al., 2016; Langlois, 2002). One of the most problematic issues that modularisation encounters are when the need for remodularisation emerges. This can happen through innovation or some other external influence. The remodularisation costs may sometimes rise high, if the existing systems need to be reorganized (Langlois, 2002).

Bapna et al. (2010) state that “the most important differentiating characteristic of a multisourcing environment is the interdependence between the tasks performed by multiple vendors.” The ability to observe and verify the conducted tasks was also listed as a crucial factor in the multisourcing model decision making process in Bapna, Barua, Mani and Mehra’s (2010) study. A modular strategy with fixed pricing makes it easier to keep track of the areas of responsibility and thus the results of each vendor. However, it also makes it easier for vendors to “take over” a function and thus possibly hinder the advantages of multisourcing in comparison to single-sourcing (Bapna et al., 2010). A modular approach can be referred to as more partnership-oriented, than an overlapping one. The firms are operating side-by-side on their projects, but not on the same ones (Aubert et al., 2016).

Modularity has been popular especially in large IT projects, since it breaks a large project into smaller parts, which are then easier to be appointed to different vendors that are specialized in the sector (Bapna et al., 2010). If the client is able to separate its project into modules, it has more options regarding the governing of the outsourcing project and vendors (Bapna et al., 2013).

Aron et al. (2005) list two modularity classifications: vertical and horizontal chunkification. This dividing is depicted in Figure 3. The left image represents vertical chunkification, a process is divided into separate activities that do not overlap. These activities are then allocated either to the client or to the vendor. The right image represents horizontal chunkification depicts which parts of an activity are the client’s area of responsibility and which are the vendor’s. The first method bears resemblance to the black box-method, whereas the latter integrates the operations of the client and vendor. Comparing to other literature, the vertical chunkification method can be compared to a modular approach and the horizontal chunkification to a highly integrated one.

Chaundry and Mehta (2011) stated in their research that “resistance to change, lack of proactive commitment, silos mentality and lack of co-operation between professionals”

cause challenges in outsourcing deals and implementing of services especially when multiple provides work on a single project. Reflecting on this, the vertical chunkification of Aron, Clemons and Reddi (2005) could present a situation undesirable for client due to its siloed nature.

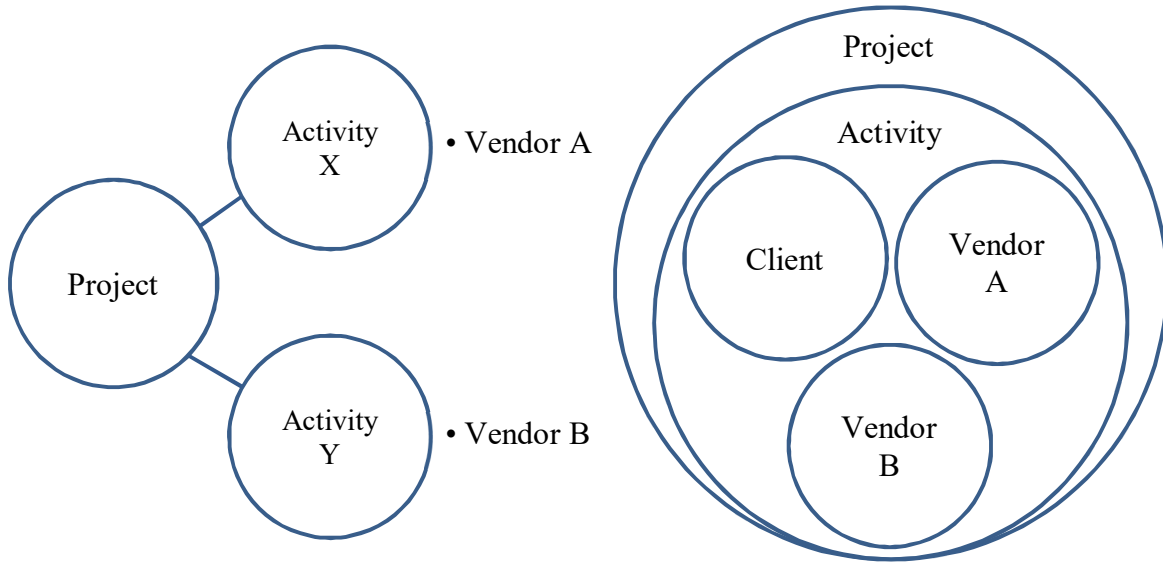


Figure 3 Vertical and horizontal chunkification (based on Aron et al. (2005))

2.4 Theoretical Multisourcing Models

2.4.1 Organizing of Projects

There are multiple different models that companies can use to multisource their IT functions. These models depict various methods in which the IT functions can be distributed between the vendors and also depict the relationship between the client and vendors. The models can be applied to an organization's outsourcing strategy and they are created to ease the organization of multisourcing projects. These models can be grouped into two main categories: vertical and horizontal. These categories describe the general nature of the multisourcing project and describe the level of collaboration between the client and vendors (Ukor & Carpenter, 2012).

The vertical orientation in multisourcing describes a situation in which multiple vendors operate on separate projects within the same function or on separate tasks in the same project (Ukor & Carpenter, 2012). This can be also described as a modular approach. Verticality is typical in models like the direct model as well as the mediated model, also

known as the guardian vendor model. In the latter the client selects one of its vendors to be the connection point to the other vendors (Bapna et al., 2010; Wiener & Saunders, 2014). Multisourcing in a horizontal manner describes a situation where the individual vendors provide services in a horizontally overlapping manner. This means that parts of the same activity within a project are done by separate operators (Ukor & Carpenter, 2012). Models that have a strong horizontal orientation in multisourcing and that are presented in this thesis are the overlapping model and the partnership-oriented model.

Aydin (2013) emphasizes the significance between different multisourcing models and the relationships between the various vendors. One interviewee in Aydin's study states that many companies are already doing selective outsourcing – having a part of the operations produced in-house and other parts by vendors, who are focusing on selected areas of the project. In these situations, the vendors are working independently of each other and the value that joining their operations would bring is lost.

An interviewee in Aydin's (2013) case study refers to the differences in multisourcing strategies as “multisourcing versus true multisourcing”. In this comment, multisourcing means that the different vendors are working on projects in a siloed manner and true multisourcing means that the operations happen in an integrated manner. In this research, no difference between the levels of multisourcing is noted, but rather all situations where a certain IT function is outsourced to two or more vendors simultaneously is considered multisourcing.

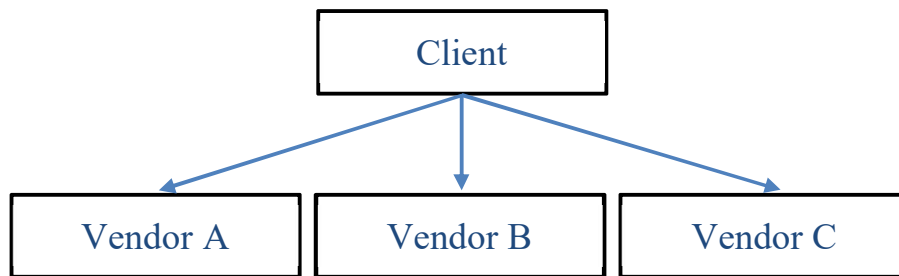
2.4.2 *Direct Model*

In the direct model the client communicates directly with each vendor and the communication interfaces between the vendors are limited, if existent at all (Wiener & Saunders, 2014). The client assigns specific project areas to the vendors, in sorts of modules, to lower the coordination and management costs (Aubert et al., 2016). The direct model differs from a single-sourcing situation only by the increased number of vendors and thus is very similar to traditional outsourcing. Some researchers do not even acknowledge the direct model as a multisourcing model, but rather a multi-vendor outsourcing structure (Lin, 2016). Typical for this model is high modularity, which makes it easier for the client to assign tasks to various vendors and manage the projects as their interdependency is low.

The direct model is a lucrative choice, if the client has broad experience in outsourcing and its management has the necessary skillset to operate as the main integrator. Multisourcing using the direct model is challenging especially for the client, because it requires

a large amount of time and costs for governing in addition to the internal change management. As the value of a project rises and the number of its segments increase, the probability of an experience client to choose multisourcing increases. This way, the client is able to reap the benefits of the vendors' special skills as well as mitigate the multisourcing costs due to its capabilities in the field. The direct model is depicted in Figure 4 as an adaptation from Wiener and Saunders (2014) and Aubert et al. (2016).

An example of this model is the Kodak-case (1989) which is more closely presented



in the case studies section. Kodak was one of the first large multi-national companies that outsourced a significant part of their IT functions to external vendors. They did not only outsource the functions to a certain vendor, but created a simple model of multisourcing in order to reap the benefits of each vendors' strengths (Applegate & Montealegre, 1991).

Figure 4 Direct model, adapted from Wiener & Saunders, (2014) and Aubert et al., (2016)

2.4.3 *Mediated Model*

The clear characteristic that separates the mediated model from the direct model is that it has a guardian vendor, that is the vendor in active contact with the client company and can serve as an integrator for other vendors. The guardian vendor delivers tasks further to the other vendors as project assignments are given. The cooperation between various vendors is moderate, and thus often creates some level of back and forth communication between the different vendors, even if the client is not associated in this interaction. This model has the strongest resemblance to a single-vendor outsourcing relationship from a client's perspective, since it includes a dyadic relationship between the client and the guardian vendor. The cooperation areas are mainly limited to area interfaces and thus do not create an overlapping system within the modules (Wiener & Saunders, 2014).

Even though the guardian vendor model has attained a fairly small amount of academic study so far, according to Goldberg, Kieninger, & Fromm's (2014) study, it is one of the most significant models used in practice. The benefit that can be attained by using a mediator is the experience they already have in outsourcing and can thus operate efficiently

with the other vendors. The disadvantages Goldberg et al. present in the model is that there can potentially be hold-ups with multiple levels of vendors operating in the project. The guardian vendor might also use their position in their own advantage and thus bringing the others into a disadvantage. The client loses a significant amount of control as a result of the guardian vendor setting (Goldberg et al., 2014).

The mediated model is often used in order to achieve better coordination in management and to streamline the communication between the client and vendors. However it contains a moral risk. The other vendors may start resenting the guardian vendor in the doubt that it distorts the truth to the client. In a mediated model the client is has a contract with several vendors, but the guardian vendor is the main link between the two operators. This means that the client is still in some contact with all of its suppliers, but must choose the mediator carefully based on its ability to intermediate without distorting any side's information (Bapna et al., 2010).

In their research, Wiener and Saunders depict the mediated model to be an only one way vertical interaction from the client to mediator to the other vendors. (Wiener & Saunders, 2014) In this research, it is found to be more describing to depict the vendors' relationships to be actively corresponsive since the vendors are usually in a more active relationship with each other than in the direct model.

By using a mediator, the client is mitigating its risk in the outsourcing setting. This does however not mean that the risk would disappear, but it's rather moved over to the guardian vendor. In this situation, the vendor in charge becomes responsible for the project's success or failure and needs to deal with unwanted situations when they occur. Where this has been a popular approach for the client, it can sometimes also be challenging to find a vendor that possesses the right skillset and is willing to take the responsibility of a guardian vendor. Some vendors even avoid these kinds of situations which limits the potential supplier section for the client even more (Aubert et al., 2005). This is a negotiable observation, because even though suppliers might be hesitant to act as mediators, such deals are so common and so desired from the client's side that the suppliers need to adjust their business operations according to that.

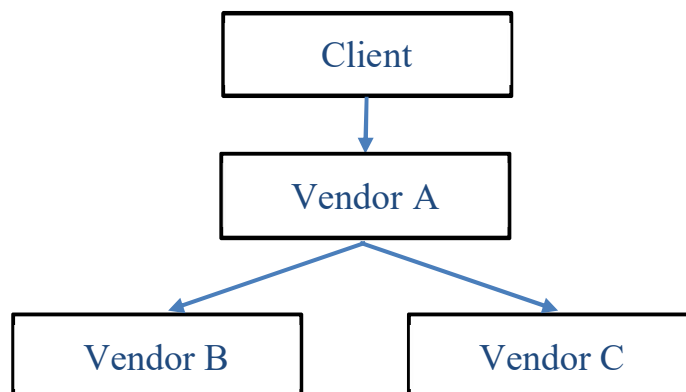


Figure 5 Mediated Model or Guardian Vendor Model (based on Wiener & Saunders, (2014) and Bapna et al., (2010))

A variation from the mediated model is the independent service integrator model. In this case, an outside integrator is given the responsibility to organize the cooperation with the vendors and thus works more as a negotiator than an outsourcing supplier. The client still attains the responsibility of employing the vendors but does not have to organize the details about the work. This can provide cost savings and increase quality (Goldberg et al., 2014). The advantages of using an integrator only pay off, if using them in itself does not become more expensive than the savings attained through the strategy.

2.4.4 *Overlapping Model*

In the overlapping model presented in this chapter, the client is in contact with all of the vendors, but the vendors are also working together on given projects. This setting can also be called “forced cooptition”, which means that the various vendors compete in an environment set out by the client. It is much alike a traditional competition setting, but the client orchestrates the environment and creates a forced competition setting (Wiener & Saunders, 2014). When the functions done by various different vendors are not independent, motivating the group of suppliers to give their best effort becomes increasingly challenging (Bapna et al., 2010). Overlapping and forced cooptition models are depicted in Figure 6.

In this model, the suppliers do not have the option to choose the level of cooptition but are forced into it by the client. It is a state where the vendors are in a direct relationship with the client but are also working in same operational areas and same projects. The point in forced cooptition is not only to create a highly competitive and in some situations even a hostile environment, but actively bring the vendors in close cooperation at project area interfaces, within the areas as well as singular tasks (Wiener & Saunders, 2014).

Because of the high level of cooperation between partners that often are forced into in an overlapping model, managing the setting is challenging. The client needs to not only manage the development of IT services but also ensure that the collaboration between vendors proceeds smoothly despite the competitive atmosphere (Plugge & Bouwman, 2015). Plugge and Bouwman (2015) point out that the collaboration between vendors sometimes causes disputes – especially if no organizational level agreement is agreed upon. An overlapping multisourcing setting is a sort of market environment, where the client is leading the functions and the vendors respond. It is more task-related than in a

more traditional setting, such as the direct model or mediated model (Wiener & Saunders, 2014).

A collection of Wiener and Saunder's (2014) case findings is that the vendors operate in a balanced set, meaning that every vendor has approximately as much responsibility. The areas overlap extremely widely, and projects are often operated by two or more vendors. Tendering out is done actively and the vendors have to competing about prices constantly. The factors that affect a forced coepetition situation are the number of vendors, the entry of new vendors and creating new contracts as well as the vendor learning opportunities (Wiener & Saunders, 2014).

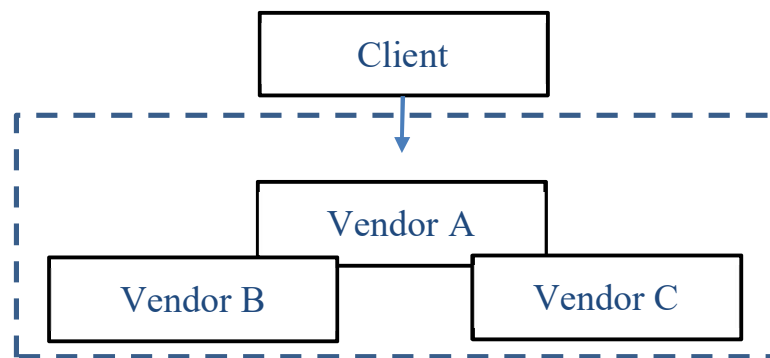


Figure 6 Overlapping or forced competition model (based on Wiener & Saunders (2014))

2.4.5 Partnership-Oriented Model

A partnership-oriented modular approach can be a collaboration, where the competition is limited to only the bidding phase, or it can be more “aggressive”, where the operations of various vendors are overlapping in multiple project segments (Aubert et al., 2016). In this study, the partnership-oriented model is separated from the overlapping model because of the differences in the levels of competitiveness between these models. The overlapping model usually contains constant competition between the clients through the forced competition setting. The partnership-oriented model does include competition also, but it focuses more on creating a liaison between the various vendors so that all best-of-breed services can be used simultaneously from each vendor.

The partnership-oriented model can be a competitive setting in the beginning, where the firms are selected to take care of a task based on what they do best and who creates the best offer. After that, a partnership is created between the client and the vendors to

usually last for a longer period of time (Aubert et al., 2016). In this way the relationship with specific vendors can be deepened, which is a benefit that is usually connected to single-sourcing.

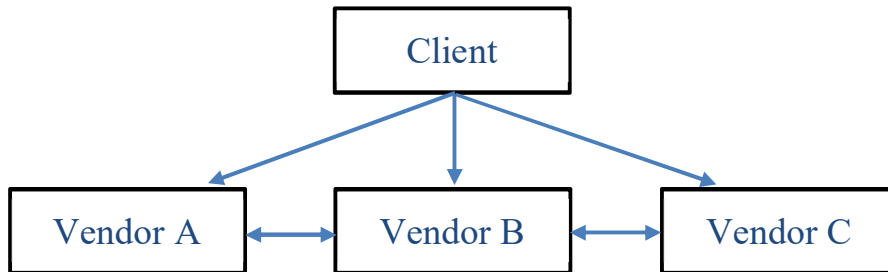


Figure 7 Partnership-Oriented Model

As with any practice – while multisourcing and the research on it becomes more common, its practices evolve at the same time. The overlapping and partnership-oriented usage of vendors in a multisourcing setting have only started to appear in research in the recent years and this poses new challenges to the management of these kinds of projects. The same hazards or benefits that are closely connected to the direct and mediated model do not necessarily exist in these modern methods.

2.5 Managing Communication with Vendors

A communication gap is a situation where the said thing is not completely or accurately communicated with the respondent. Communication gaps are a frequent challenge in outsourcing settings and especially multisourcing contracts. They are found on many different levels and the cause depends usually exactly where the gap exists. This is a crucial challenge for the management on both client and vendor's side to actively mitigate and ensure communication flows efficiently (Abbasi et al., 2014).

Aydin (2013) examined a telecommunication company in their study and how the firm organized the communication with vendors in a multisourcing situation. A method that was found to be effective was creating workshops for the different vendor companies so that they could themselves set a basis on how successful communication and streamlined processes could be created. To make the collaboration between the vendors as effective as possible, the case company gave them some level of freedom in organizing their collaboration methods in the multisourcing environment. Using OLAs (operational level agreement) was something that was utilized in this setting, since they provide a framework for the desired cooperation without being actual contracts with tangible targets. Involving the vendors in the process of creating management for the project was highly

profitable for both sides, because all participants were able to voice their opinion about the desired working and communication methods.

Compensation plays an essential role in multisourcing planning, since vendors are motivated by compensation and because in multisourcing, it can often be difficult to separate the outcomes of each vendor due to interdependency of tasks. The verifiability of output plays a significant role if the client desires to avoid friction between vendors and the right people accountable for the right success or mistakes. It can be challenging to follow up on the results of each vendor, especially if the model used for multisourcing requires many overlapping and integrated activities from the vendors (Bapna et al., 2010).

One way to answer to the complexity of communication within multisourcing projects is the agile approach. This approach has become very popular in business and especially within the IT industry in the recent decades, because it is a sort of a combination of best practices. Abbasi et al. (2014) created a collection of agile approaches to different communication situations in a multisourcing setting that could assist firms to reach best results with as little as possible communication issues. From the eleven practices nine are presented in Table 2. The decision to exclude two approaches was made on the basis of the relevance of the approach in correlation to the multisourcing subject.

The approaches may include very simple actions, like in a backlog, which resembles a to-do-list in its basic form or a release planning calendar, which presents the major milestones of the project. If a company does not have enough structure in their processes or operators in a project are struggling with communication, simple steps may provide an easy and cost-efficient way to ensure tighter cooperation and understanding. The more complex approaches, like SCRUM-meetings require often more effort and, in some cases, may need a specific person to execute them. The client needs to define the decided communication activities with the vendors and the nominated change or project manager should ensure processes are being followed and conducted. Communication does not happen by itself and the initiation for active contact should be reinforced from the highest deciding level onwards (Abbasi et al. 2014; Earl, 1996).

These agile practices are not the only available methods nor are they necessarily the best ones, but they do present an adoptable framework to improve the relationships and the organizing of cooperation within multisourcing deals. One organization may not have the ability to run all activities simultaneously, but choosing the right methods based on each situation's requirements gives the operators in multisourcing arrangements practical tools to mitigate communication risks and gaps in task performance.

Table 2 Agile approaches in IT multisourcing (Abbasi et al. 2014)

Agile approach	Definition
A Backlog	A list of the features or tasks of a project that play a crucial part in a project. If an item in the backlog is completed, it is removed from the list and thus the log keeps an up to date overlook of the elements in a project.
Burn Down Chart	A graph that shows the level of the quality of the work done as well as the time used to on the task as well as the time remaining to complete it. Works as a precautionary tool.
Frequent Releases	Frequent releases of the product to the end customer to inspect in various stages of development. This way feedback can be actively gathered in multiple stages and the end product modified to answer customer needs.
Ubiquitous Language	Agreeing upon using a single language in various fields of business practices; such as English both in business but also in software and system development. Developers are used to applying a lot of mathematic algorithms in their work, but if a part could be done in English, it would provide more operators in the business the ability to understand code, for example.
Velocity	Describes the pace in which activities are conducted. By evaluating how long it took to do an iteration previously, it is easier to estimate the length of future projects.
Customer/Client Collaboration	Maintaining constant communication between the client and vendor about the development of the project.
Iterative Development	Evaluating how much work can be done with a certain number of hours based on capabilities and experience.
SCRUM Meetings	Short meetings are held every day at the same time to bring everyone up to speed about the subjects important regarding coordination. Revising what has been done in the previous day and assessing what kinds of threats there may be in the process of completing the current project in the coming days. Ideally same meeting leader every day.
Release Planning	Creating a common calendar on the release times of different elements of the project, mainly used in regarding new functions of the software.

2.6 Case Studies

2.6.1 *Multisourcing in Practice*

This section presents five cases of IT multisourcing projects from different times and different companies. The goal is to show various IT multisourcing undertakings and analyse the methods of multisourcing as well as the reasons of the multisourcing undertakings of these firms. The multisourcing case studies include multisourcing projects of one imaging focused technology company, one bank, one multinational energy company and two multinational retail firms – one in the sports business and the other in the dairy industry. The origins of these five companies extend to three continents: one is North-American, four are European and one is Australian (Annesley, 2006; Applegate & Montealegre, 1991; Aubert et al., 2016; Barboza et al., 2011; Schoeman, Bakker, Borgers, Van Hillegersberg & Moody, 2008).

The case companies are gathered based on the literature and research available. Where there is a large amount of research about outsourcing strategies, there is a limited amount of research regarding multisourcing projects (Schoeman et al., 2008). As stated before, the moment that has been regarded as a turning point for outsourcing IT activities, was in 1989 when Eastman Kodak Co. outsourced a majority of its IT functions to three external vendors (Gupta & Gupta, 1992). The multisourcing cases presented in this thesis take place between the years 1989 and 2013.

2.6.2 *Kodak*

Eastman Kodak Co. is a photo-imaging company that created a mega-trend that would shape the ways large companies would organize their IT functions far into the future. Kodak outsourced various elements of its key IT functions in 1989 to IBM, Business Land Inc and DEC and with a \$500 deal. IBM took up a part of Kodak's data centers, Business Land provided personal computer support and DEC became the telecommunications support provider (Wiener & Saunders, 2014). Thus, it can be stated that Kodak multisourced the first massive outsourcing deal and used the direct model in the process (Applegate & Montealegre, 1991).

This outsourcing undertaking is seen as the beginning of “outsourcing mega-deals” and the start of a new era in organizing a firm's IT functions. Kodak was the first company that was on the Fortune 500 list and that stated that IT functions were not necessarily needed to provide in-house, but could be better provided by external vendors that have

expertise in the area (Gupta & Gupta, 1992; Lacity & Willcocks, 1995; Loh & Venkatraman, 1992).

Kodak created its outsourcing strategy in a manner that differs somewhat from the current trends in multisourcing. It kept the operating of basic IT functions in-house, so no major essential IT elements were overtaken by a vendor and thus created a dependency to them. The company moved 300 of its own employees to the employment of IBM simultaneously with signing the deal. These employees would then work for Kodak but just under the IBM name (Palvia, 1995). Kodak's cause for using this strategy was to avoid a situation where one vendor would be able to profit from its long-term business assets. At the time, Kodak also did not feel like any vendor had the skills to overtake its sophisticated applications development. Later many firms took on a different approach, where they transferred the maintenance of basic IT functions and the firm can focus on IT innovations mainly (Chapman, 2008; Gupta & Gupta, 1992).

At the beginning of 1990's, outsourcing was seen as an action of companies that were in financial trouble or were heading towards it (Lacity & Willcocks, 1995). As Kodak's project turned out to be quite profitable, the attitude soon changed towards outsourcing. No longer were especially IT companies regarded as passive buyers of standardized services, but they had to wake up to the tightening competition, where outsourcing was beginning to be an option, if not an asset (Venkatraman, 1997).

Kodak's outsourcing decision had such an impact in the outsourcing discussion that it was started to call "the Kodak-effect". Also, in the 1990s the terms pre-Kodak and post-Kodak regimes were used to describe the time before large outsourcing contracts and after. After Kodak made it acceptable to use outside vendors for critical IT function, there begun a significant boom in multi-million outsourcing contracts in all business areas (Loh & Venkatraman, 1992).

2.6.3 *Fonterra*

Fonterra Co-operative Group is a multinational retail company and is the largest dairy ingredients exporter in the world. In 2003 the company made a seven-year outsourcing contract with a large international vendor. In this project, Fonterra was looking for cost-savings in IT operations and IT personal. IT is a strategic enabler at Fonterra and it affects nearly all everyday functions in the company. Even though many functions were outsourced, many were still kept in-house (Barboza et al., 2011). Fonterra's aim was to establish and manage its entire IT system as a global, integrated and effective service entity (Al-Qirim, 2003).

After altering the outsourcing contract once in 2006, Fonterra moved to a multisourcing arrangement in 2008 in order to lower costs further and answer to the changed market requirements. Fonterra had been applying a “one size fits all” IT strategy that had proven itself to be unprofitable in the long run. The company emphasized the fact that it is nearly impossible to find a vendor that can provide good results in every aspect of the IT function. Thus, a multisourcing approach was taken into use (Barboza et al., 2011).

Due to the fact that Fonterra wanted a multisourcing arrangement, where all of the vendors work on the same operating model, they chose the modular model (Aydin, 2013; Barboza et al., 2011). Fonterra did not decide on a specific amount of vendors pre-project but rather assigned suppliers as the need emerged. The company representatives describe the process as a challenging one, since no particular model for the transformation from single-sourcing to multisourcing had been established. Fonterra wanted to gain on the emerging technologies and be able to work with vendors in different expertise areas depending on their need at a given time. Due to the multisourcing strategy they were able to tap into the benefits of new technologies and operate with experts in the area. Fonterra also succeeded in reducing IT costs through the multisourcing project. These savings were mainly achieved through price negotiations and since the vendors were bidding against each other, some very good deals were achieved. These arrangements were not only profitable to Fonterra, because the vendors were able to focus on the areas they were experts on and thus lower their financial risk (Barboza et al., 2011).

The challenges in the project were mainly in organizing management and the company had to reorganize their IT Infrastructure and service management teams to fit to the restructured outsourcing model. The fact that Fonterra is such a large company made it profitable for both the vendors and the client itself to make separate outsourcing deals, because all suppliers were able to “get their fair share” of the business. It had to be acknowledged, though, that the deal had to remain profitable to both parties throughout the project in order for the vendor to keep cooperating. The fact that Fonterra also chose the modular multisourcing model with overstepping vendor operations posed the risk of conflict between the vendors as the challenge of following “who did what” was present (Barboza et al., 2011).

In the end, Fonterra was able to achieve significant cost savings through IT multisourcing because of profitable pricing. The largeness of the firm was one of the reasons that made assigning multiple vendors profitable to all parties, because there was enough to operate on for everyone (Barboza et al., 2011). Here multisourcing had a significant positive impact, because the level of relationship-specific investments at Fonterra was high. This shows as a lowered commitment problem with the vendors (Bahli & Rivard, 2013).

2.6.4 ABN AMRO

In 2005 the Dutch bank ABN AMRO assigned five companies to execute an IT project in collaboration altogether worth of \$2.2 billion. The work distribution was the next: IBM took care of the IT infrastructure, Accenture for applications and three Indian companies were responsible for application support and maintenance (Aubert et al., 2016). Schoeman et al. (2008) conducted an interview with two managers from ABN AMRO in order to analyse the process of the bank's multisourcing process. The client highlighted the competitiveness as a significant factor in their multisourcing process, whereas the vendors did not mention anything about the subject in the interviews.

ABN AMRO considers IT not be a part of the company's core activities and perceives it best to be a specialized vendor's responsibility. The company is actively focusing on high quality vendors and uses the CMMI (Capability Maturity Model Integration) level as an evaluation about the company's success. Chaudhary & Mehta (2011) point out the challenge in multisourcing agreements, which is that even though vendors are accountable to the client individually due to service level agreements (SLA's), they are not accountable to each other. This can pose a risk in the level of communication between the vendors.

ABN AMRO said their core outsourcing drivers were to reduce costs and being able to focus on core competencies. The main risk mentioned by the consultants and clients of the bank's project were the loss of critical skills and competences, which is common in outsourcing and multisourcing projects. Nevertheless, ABN AMRO did not only use the multisourcing strategy due to these factors, but also mentioned that its aim was to score better pricing from the vendors due to the competitive setting (Schoeman et al., 2008).

Eventually, ABN AMRO was able to reduce the amount of IS staff – both internally and externally. Customer satisfaction was considered to increase as well. After three years of the initiation of the project, the bank had not yet been able to meet the targets based on historic data, even though the project had delivered positive results. (Aubert et al., 2016; Schoeman et al., 2008) At the moment ABN AMRO is owned by the Dutch state due to a 'bail out' in the financial crisis of 2008 (Elena & Silviu, 2010).

2.6.5 Royal Dutch Shell

The multinational Royal Dutch Shell announced a five-year \$4 billion multisourcing deal in 2008 in order to standardise its IT infrastructure. The company's network and telecommunications were to be managed by AT&T, storage solutions by Deutsche Telekom's T-system and Electronic Data System would integrate the entire infrastructure and take care

of end user computing services (Cane, 2008). Much alike ABN AMRO, Royal Dutch Shell's vendor competition was mainly done at the first bidding phase (Aubert et al., 2016).

Shell was officially seeking significant improvements in productivity and performance. The contracts included the relocating of 3000 Shell IT employees to the vendors and Shell kept 600 employees in-house to take care of the IT infrastructure worldwide. An expectation of Shell was to minimize redundancies within IT operations with this reorganization. In the multisourcing deal, Shell wanted to encourage collaboration between all of the vendors but keep full control of the strategic decision making. The main reasons for the multisourcing deal were the ability to react to the changing demands of the business environment. This enabled Shell IT to concentrate on innovation and improving the competitive state in the market when the vendors took care of basic IT functions (Chapman, 2008).

Royal Dutch Shell's IT multisourcing project had resemblance to ABN AMRO's in various ways. Both of the undertakings were of significant size and they were also carried out with a similar model: the mediated model. In this model, the client chooses one contact point of its multiple vendors and thus creates a "guardian vendor" that communicates with the other vendors on the client's behalf (Wiener & Saunders, 2014).

2.6.6 Adidas

The latest project discoursed in this thesis is the sports company Adidas' multisourcing undertaking, which handled the entire revision of Adidas' information systems and IT strategy (Aubert et al., 2016). Although there has been extensive research on outsourcing and some case studies about multisourcing, the focus is mainly on the client's side and the researches rarely discuss the view of the vendor. This research aims to create a view of the vendor in order to examine the profitableness of multisourcing projects from the supplier's side, mainly focusing on consultants.

Adidas made its first IT outsourcing contract in 1998 with an Indian vendor, but a decade after, the company noted that the quality of the vendor's services did no longer meet the complex requirements of the multinational company. Adidas' executive board wanted the company to better answer to the needs of the globalising market and increase cost-efficiency at every level of the IT operations. Thus, in 2009 Adidas initialized a large multisourcing project that would change the company's entire IT system and would eventually consist of two phases (Aubert et al., 2016).

In comparison to the traditional outsourcing approach, which is strongly based on partnership, Adidas undertook a more aggressive model in order to reach the results set out

for the project. Adidas’ model included overlaps between the vendors’ operations, in contrast to the “black box” model that was used by ABN AMRO and Royal Dutch Shell. In 2011, a multisourcing project was initialised by a new chief information officer in Adidas. They employed two other companies, both with a high level of CMMI (Capability Maturity Model), in addition to the already existing Indian vendor – an Indian company and an Easter-European company. All of the vendors were chosen so that any one of them could overtake another’s project at a short notice. Adidas intentionally incorporated significant overlaps to the operations of the various vendors to ensure best prices and best practices in each phase (Aubert et al., 2016; Chapman, 2008; Schoeman et al., 2008).

In 2013, the three vendor companies had reached the result estimates at a sufficient level, but the general management of Adidas wanted to further industrialise its operations. Hence started project phase two, where the IT services were to be streamlined also on a horizontal manner, in addition to the already existing vertical one. This integrated the functions even more, creating a tighter collaboration between the vendors. Even though the cooperation was forced, the model was more of a partnership-oriented than just overlapping. Adidas focused on deepening the relationships between the vendors and through active governance managed to create something that could be called a companionship (Aubert et al., 2016).

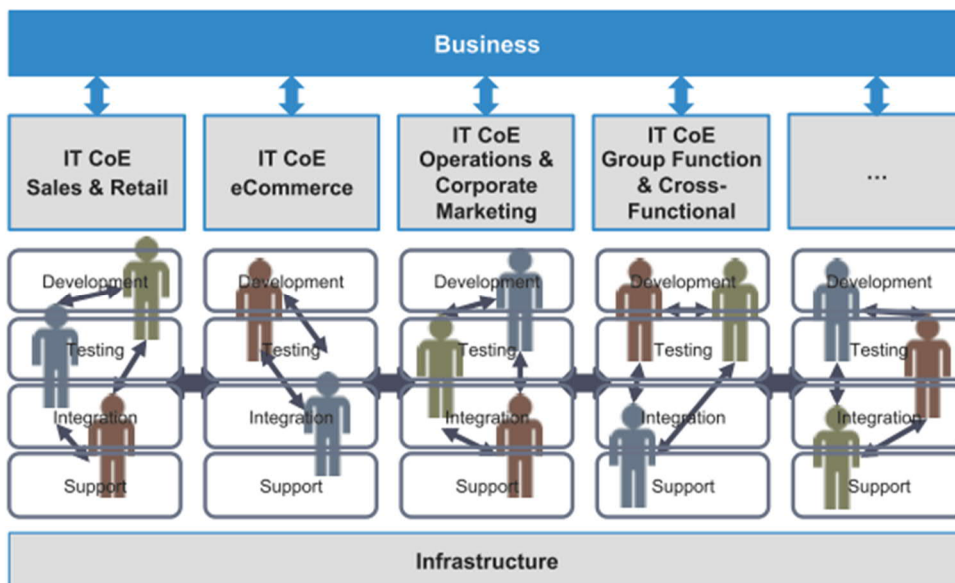


Figure 8 Vendor Overlaps and Interfaces in Case Adidas, Phase 1 (Aubert et al., 2016)

Adidas developed an overlapping multisourcing system with international vendors, who operated on different tasks simultaneously. Adidas’ project consisted of two phases, from which the first one included vertical overlaps and the second one horizontal. The three vendors are represented in different colours in the Figure 8. The model ensured

connection between the vendors inside various units but was lacking horizontal cooperation. The problem in this method was, that some processes were repeated by different suppliers and thus the model was not as cost efficient as the management hoped (Aubert et al., 2016).

In the second phase, Adidas added the horizontal aspect to the outsourcing strategy in order to eliminate the active repetition of functions on each level. Previous to the horizontal cooperation, multiple identical functions were done by the different vendors when there was a possibility to centralize them to one. The horizontal model increased the vendor interaction, because they were no longer replicating processes, but needed to be in close contact with each other to be able to carry out the functions assigned to them. It also reduced exclusiveness and modularity of the functions and thus increased competition. In this kind of a situation all vendors need to keep their prices at low level, because the areas of responsibility were increasingly easy to change. This model benefits the client in managerial costs also, because the outsourced work “blocks” are larger and thus require less coordination (Aubert et al., 2016).

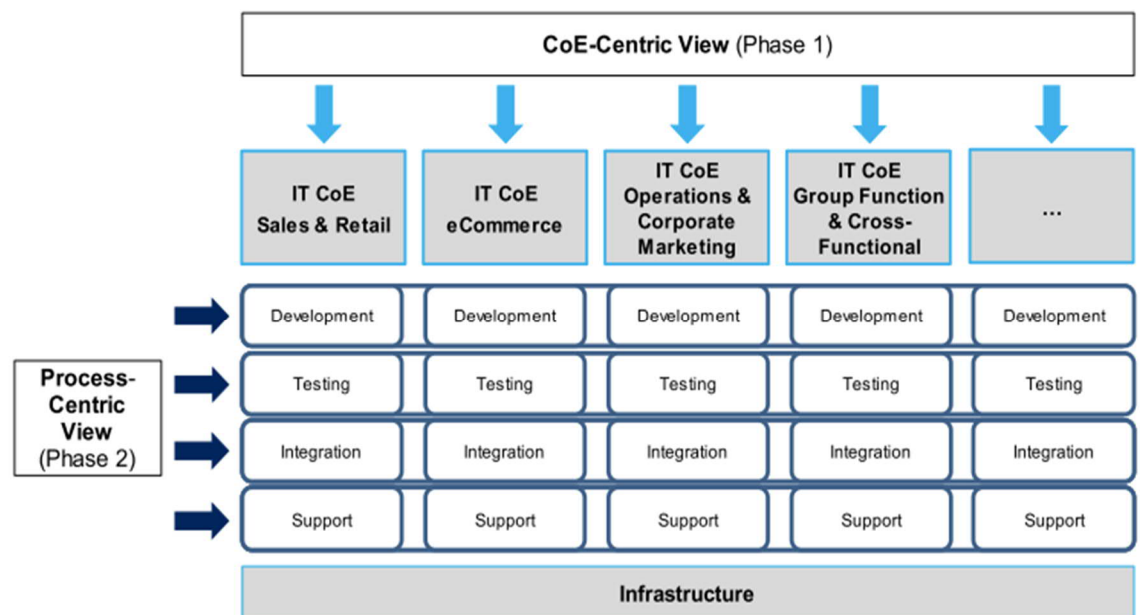


Figure 9 Shift from a Unit-Centric View of IT Activities to a Process-Centric View (Aubert et al., 2016)

In Aydin's (2013) Adidas case study, a substantial challenge was the level of actualised control – multisourcing requires different kind of management than single-sourcing, since it increases the amount of interactions between the client and vendors. The vendors may always be working for a rival firm and thus sharing confidential information must always be done carefully. The level of risk increases as more vendors enter the picture (Aydin, 2013).

3 METHODOLOGY

3.1 Individual Interviews in Qualitative Research

As stated before, multisourcing has so far been mainly done from the client's perspective and interviewing companies' representatives who have outsourced some or all of their IT operations. This research aims to support management outsourcing decision making both on the client's and vendor's side.

Multiple studies have been conducted about IT multisourcing. While studying the research literature, one prevailing research method stands out even though the data collection methods may differ. Majority of IT multisourcing studies have been conducted as case studies and the data gathering for these studies varies from qualitative to quantitative methods (e.g. Krancher and Stürmer 2018; Wiener and Saunders 2014; Hertz et al. 2012; Levina and Su, 2011, Levina and Su, 2008; Barboza et al. 2011). As this study focuses in the overarching attributes of IT multisourcing, the selected research method is individual interviews with experts that have a minimum of five years of experience in outsourcing and multisourcing in different industries.

This research aims to extent the knowledge of benefits and disadvantages of IT multisourcing projects from a management perspective with respect to existing literature. Prior to this research multisourcing deals are depicted as challenging for all sides of the project, but when a such project succeeds, it brings benefits to all parties. In scientific research, it is stated that multisourcing contracts are becoming more common, but the level of the occurrence of multisourcing contracts has not yet been entirely verified. (Krancher and Stürmer, 2018) Since there are many different companies that provide outsourcing solutions, the sizes and diversity of these vendors are also considered in this research.

Tuomi and Sarajärvi (2009) have described a six-step method for interview data analysis which have been followed in this research. The first step is to go through the interview data, decide what is relevant and stick to the decision. After this the data is reviewed and relevant parts marked – everything else should be left out of the study. The marked relevant parts should be separated from other data and gathered into one place. After this the data is categorized and classified. When the data has been separated into relevant themes, a summary can be generated and by analysing the data in this way, responses to research questions can be formulated.

Ensuring the validity and trustworthiness is more difficult for a qualitative research than quantitative research. This is due to the fact that quantitative research can be repeated, and it is more objective and positivist than quantitative research, which usually is more subjective (Tuomi and Sarajärvi 2009, 135-137). In this study, all interviews were

coded to assure no key findings were left out. The finding was then discussed in the analysis chapter and conclusions were drawn in the last chapter.

The interview method was decided to be semi-structured in order to receive results to the main questions of the thesis yet give space for free discussion (Rabinoet, 2011). Defining questions were asked in some situations where more depth was needed in order to reach the desired depth for the study's analysis. The interview participants' responses were based on their subjective views and experiences. The interview questions were kept open to reinforce diverse discussion and to extract as much knowledge as possible.

The commonness of IT multisourcing was seen as a fundamental question to be answered before bringing the focus into managerial questions. Multiple studies have been conducted about the advantages and disadvantages of multisourcing, but research has yet to discuss the extent to which multisourcing is being used in modern day IT projects (Levina and Su, 2008; Hertz et al. 2012). This sets a relevant platform to the discussion and strives to respond to the extent to which IT outsourcing projects are currently multi-sourced.

The interviews consisted of four questions:

1. How common is IT multisourcing in your experience?
2. What are the benefits of multisourcing?
3. What are the disadvantages of multisourcing?
4. What are the management challenges in multisourcing?

The study was conducted as individual in-depth interviews with eight experts that were chosen purposefully based on their experience in the IT outsourcing industry. All contacted interviewees responded to the request to partake. The interviews were based on the literature review and research questions. The aim of the interviews was to further fill the gaps between research and common practice in addition to what research has already been done. All interviewees were asked the same questions; however, the discussion was kept open throughout for other remarks. Four of the interviews were conducted face-to-face and four via telephone or Skype.

All interview participants have a manager status and a broad understanding of how the multisourcing business works. As Sachdeva (2009, p. 172) states in their book: "Managers basically do business research to understand how and why things happen". Qualitative research is designed to respond to these kinds of open questions. It helps to understand the hidden meanings that people have in their experiences and aims to give in-depth understanding of a phenomenon. Qualitative studies are often seen as "understanding", "soft" and "human centered" as opposed to positivist quantitative study methods. There has been no clear result on which is better, but both these study methods are seen as complimentary to each other (Sachdeva, 2009, p. 172-173). Based on these statements, the knowledge of experienced operators is of high value when trying to obtain a high-

level strategical understanding of a phenomena. Having experience from working with various operators in the business, business leaders have formed a bank of knowledge from interactions, negotiations, deliveries and accomplishments. Utilizing previous research in the areas of business and technology as well as some experienced managers' insights, a viewpoint on IT multisourcing from the vendor's side can be formed.

Some of the experts in the interviews have experience from both vendor and client's sides, whereas some have only worked on the vendor side. The experts were able to present their views and experiences about the benefits and disadvantages for both the client company as well as the vendor in such undertakings. This research is mainly a subjective one because the results rely strongly on the perceived experience of a multisourcing project by the operators in it. Some objectivity is presented in the relation of single-sourcing projects and multisourcing projects which is presented in a numerical manner.

The interview participants and their companies were kept anonymous in order to keep the responses as objective as possible. Most of the interviewees are IT consulting experts with experience from multiple business sectors. Consultants were used in the study mainly due to their broad experience from multiple sectors and thus, it was possible to get a manifold view on companies' multisourcing decisions.

A focus in the interviews was to discuss the commonness of multisourcing as well as the success factors of multisourcing projects in the different models presented in the theory part of this thesis. These models were the direct model, mediated model, forced competition and partnership-oriented model (Aubert et al. 2016, Bapna et al. 2010, Wiener and Saunders, 2014). The differences of these models were discussed in the interviews in order to reinforce management decision making in multisourcing strategy discussion.

The main challenges in multisourcing have been named to be in the management of the projects and the communication between the client and vendors as well as the collaboration between the various vendors (Bapna et al. 2010, Levina and Su, 2008). One focus point of this study is to determine if and how the choice of multisourcing model affects the success of the project.

Most interviewees work in the Nordic market at the moment, but seven out of eight have experience from global IT outsourcing projects with a focus on developed markets in Europe and North-America. As the topic of the thesis is broad and abstract and discussion is held on a governance and management level, the interview participants were chosen based on their versatile experience in various industries and outsourcing deals. Table 3 presents the interview participants and contains a short description of their industry experience, years of experience in outsourcing projects and their current employment position.

Table 3 Demographics of interview participants

Participant	Industry Experience	Years of outsourcing experience	Current employer company profile
P1	High-tech, gaming, automotive, healthcare, retail and manufacturing, both client and vendor sides	5	Large international software vendor company
P2	Finnish government and public sector, both client and vendor sides	20	Small/medium size IT consulting company
P3	Security and technology	10	Large international consulting company (A)
P4	Government, financial services, manufacturing, media, telecommunications	15-20	Large international consulting company (B)
P5	Software design for a wide range of clients, i.e. telecommunications, high-tech and retail	15-20	Medium size international consulting company
P6	Experience across all industries, main focus on technology, media and telecommunications	20	Large international consulting company (A)
P7	Technology and healthcare for public sector, both client and vendor sides	7	Large international research and advisory company
P8	Experience across all industries, main focus in high-tech	20	Large international consulting company (A)

3.2 Frameworks

Two frameworks are used to analyse the results of this study. The first one is Bapna, Barua, Mani and Mehra's (2010) Framework for Multisourcing Research. The framework

provides a relevant and broad structure to examine the various characteristics of IT multisourcing including the benefits, disadvantages and management challenges. The framework can be utilized for analysing most of the findings in this research, but it lacks in some essential sections. For these parts, baselines will be drawn from Goldberg, Satzger and Kieninger's (2015) The Service Integration and Management Capability Framework. As this study also aims to shed more light on the commonness of multisourcing as a practice, other research findings will be used to discuss the extent to which client companies utilize multisourcing in their IT projects.

Bapna et al. (2010) state that multisourcing research is lacking systematic frameworks and thus have created a framework that aims to offer a basis for multisourcing research. The framework includes the essential elements of task interdependence, cooperation, coordination, incentives, relational governance and learning. These aspects are of fundamental importance in multisourcing deals and provide a groundwork for research agendas. Unique in Bapna et al.'s (2010) model is, that it depicts the relationships between these activities and the causal effects of the various tasks instead of only describing the task. The essential uniqueness of the model compared to single-sourcing models is, that working with only one supplier, the cooperation and coordination tasks between different actors do not rise.

Goldberg, Satzger and Kieninger's (2015) framework identifies six capabilities for service integration and management in multisourcing research. This framework provides a more detailed structure to investigate the advantages and challenges of multisourcing management. Considering IT multisourcing from a strategical management view requires a more complex approach than only what Bapna et al. (2010) offer.

As this study aims to investigate IT multisourcing both as a phenomenon as well as analyse the method's advantages and disadvantages, these frameworks provide a solid base to which compare the results. Based on extensive scientific research, no framework with an emphasis on the vendor's view has been created and thus the findings will be scrutinized through the frameworks developed for client decision making.

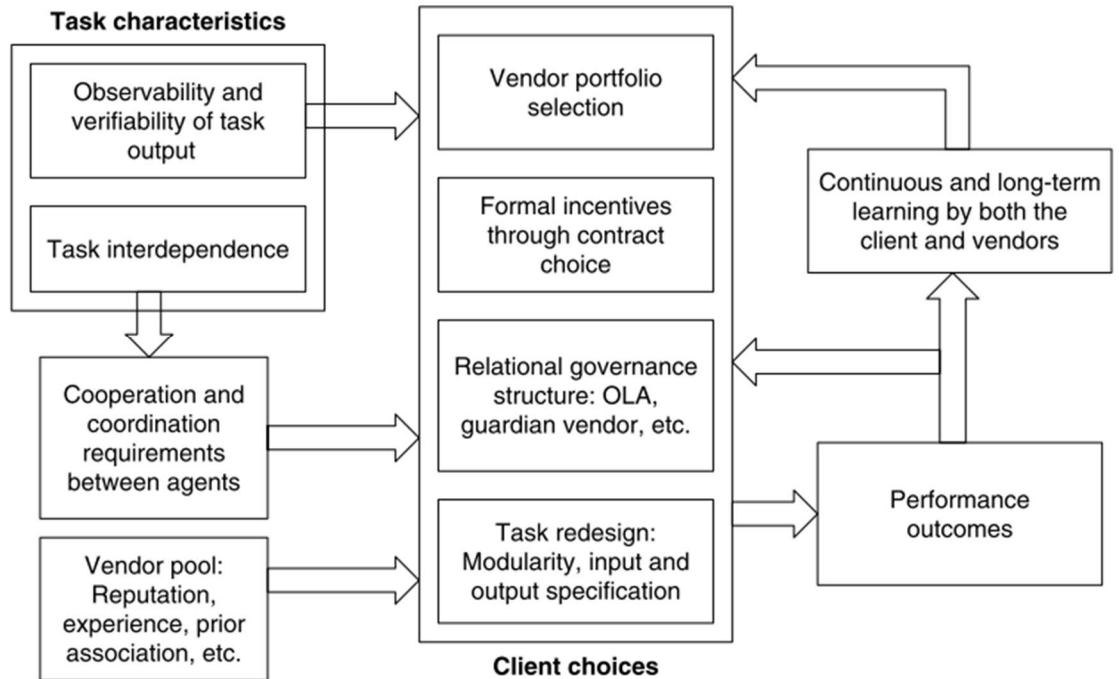


Figure 10 A Framework for Multisourcing Research (Bapna, Barua, Mani and Mehra (2011))

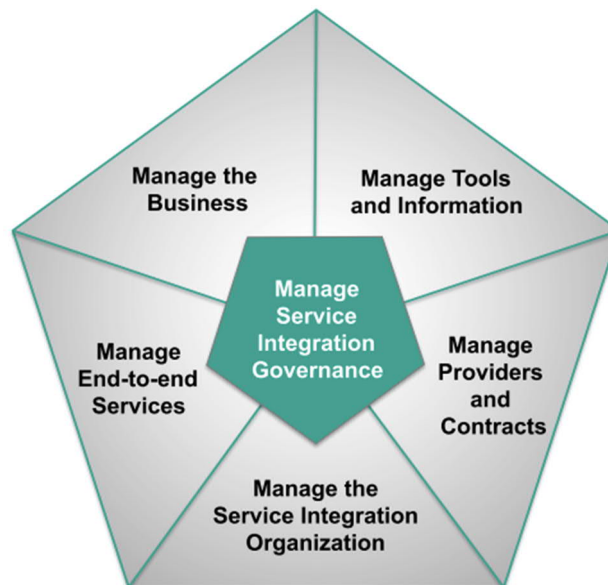


Figure 11 The Service Integration and Management Capability Framework (Goldberg, Satzger and Kieninger (2015))

The Service Integration and Management Capability Framework views multisourcing deals and the management actions they require from a higher governance angle. Relevant parts of in relation to this thesis are manage service integration governance, manage providers and contracts, manage end-to-end services and manage tools and information. As

the framework has been created with an emphasis on the client's side and especially implementation of the systems, service integration organization and managing the business sections are not relevant in this analysis. In order to bring further focus into the end-to-end project management and the various multisourcing models, Bapna et al.'s (2010) framework supports Goldberg et al.'s (2015) model.

4 ANALYSIS

4.1 The Present-Day Multisourcing Environment

Bapna et al. (2010) describe multisourcing as “the practice of stitching together best-of-breed IT services from multiple, geographically dispersed service providers”. They state that IT multisourcing is an example of the “leading edge of modern organizational forms”.

In the interviews, participants were asked to evaluate the commonness of multisourcing deals out of all outsourcing deals they had been a part of. As the interviewees all work on the vendors’ side, a distinction was made that all their projects are outsourcing projects. The relation of single-sourced projects versus multisourced projects was discussed at the start of the interviews.

As the IT industry grows rapidly, the needed expertise grows as well. It is increasingly difficult to get all required expertise for an IT project from a single vendor and thus companies opt for multisourcing solutions. Having multiple vendors that know the client’s systems and ways of operating, reduces the risk of having to rely on only one vendor and the possible lock-in situation it could pose (Aydin, 2013). Loboda (2013) states, that companies may choose multisourcing in order to lower uncertainty, even though this could mean higher transaction costs. Comparing to market exchange, mega deal and hierarchy, multisourcing is more likely to increase transaction costs than to decrease them. This could be in contradiction with firms’ interests to seek price reductions in multisourcing deals.

Even though most interviewees were employed by large, multinational companies, the overarching opinion was that completely single-sourced projects constituted only 10-20% out of all projects in the recent years. This is related to the fast-evolving IT environment in which companies operate. The views of the interview participants can be divided into two main points: as the requirements of IT projects become more complicated, some argue that there is no point for one vendor firm to position themselves to be able to take care of all functions required in a single IT project.

Another view was that as the IT projects become more complicated, management challenges increase as well (Cohen and Young, 2008). In order to be able to take care of these challenges, client companies may seek out firms that are able to provide all services in-house or through subcontractors. An important distinction here is, that there is a significant difference in whether a vendor creates everything in-house or through subcontractors, which can also be seen as a guardian vendor model. This model will be discussed further in chapter 4.4.1.

P2: If you look at the entire IT functions of a company, I'm amazed if you find one vendor that's able to provide everything. If you look at the IT sector, it also works in a capitalistic way and vendors focus on their own strengths in order to maximize their revenue. It would be very peculiar to find a company that provides on-site support for telephones and laptops, and at the same time provides shock support and security services.

P4: If we discuss management consulting, you oftentimes don't have the software development in your own delivery line-up and you need to cooperate with another vendor just to fulfil the client's requirements. Because often the requirements are quite specific and there's no way to have even half of the skillset in your line-up and you need to work and collaborate with other just to build the teams.

A significant decision a vendor company should make from early on is its position in outsourcing projects. Companies can decide to operate mainly as advice givers or integrators or they can also deliver the technical solutions themselves instead of using third parties. As described earlier, there are some companies that place their strength in providing end-to-end services in IT projects and implementation. This way the client only has to cooperate with one vendor, even though it might increase the risk of a lock-in.

P5: Our company has the ability to provide a complete end-to-end service. Our company has been growing organically since it first got started and it's our business plan to be able to provide the entire project. As we grow we kind of take in new competences. For solutions, we can be a hyper agency that gives advice on many different factors. Concepting the business side, making tests, checking which direction we should go in a very agile way.

P2: It depends on the consulting firm that we're talking about. For example, our company is able to code from scratch to finish a software, provide the implementation services as well as maintenance. So that would be a single-sourced situation, but it is fairly rare though.

In line with Bhattacharya et al., 2012, vendors felt like multisourcing contracts enable the various vendors to focus on their "sweet spots". Bhattacharya et al. (2012) also outline that this provides the vendors financial stability, since they are more likely able to deliver the project on time and respond to client needs. This study conflicts with this argument by questioning, why any vendor would sign a contract for a project that they aren't sure can be done by the company. Vendors are aware of the market situation and based on the interviews, open and willing to operate with other vendors in most situations, but there

are cases where especially large IT consulting companies do have the ability to run a project completely by themselves. If the vendor possesses the required skills, or can use subcontractors that they manage, these kinds of deals are financially more beneficial than multisourcing situations.

P8: Multisourcing is a very good instrument in playing one vendor against another and so on and so forth. From a vendor perspective, most vendors are nowadays mature enough to understand that they operate in a multivendor environment, where they will be required sometimes to work in close cooperation with their competition.

P4: If you think of a typical IT system delivery, you need to have someone to develop it, someone to work in the client interface, someone has to build it, someone has to maintain it. And someone has to run the data center and so forth. So then where the party who is the best developer maybe don't have the maintenance muscle, maybe it would be more efficient to use someone else to maintain it and be more cost efficient for someone to run the data center.

P5: In my own projects most of them [IT projects] also multisourced from the client's side, so client has kind of 2-4 trusted vendors who they use. They either have it so that we do separate projects that are in some way, but in many cases, we are working on same projects or even same teams with other vendors.

It turned out to be important to define single-sourcing to all interview participants in the context of this thesis. This is due to the fact that different consulting companies may define single-sourcing differently. A common way that single-sourcing was understood was the situation where the client contracts with only one vendor for a project regardless of whether this vendor contracts with other vendors or not. Due to the challenges of reaching a common understanding of single-sourcing, the relation can only be discussed in a highly indicative manner.

4.2 Relational Governance Structures and the Guardian Vendor Model

The relational governance structures include an analysis of the guardian vendor model due to its unique nature in comparison to the more traditional models of IT multisourcing. The constitutive elements of the direct model in multisourcing have not changed in recent years. Based on the interviews, the guardian vendor model entails many of the other ways

of multisourcing. Thus, in this section the focus is on discussing the nature and variations of the guardian vendor model.

Bapna et al. (2010) propose governance structures such as the guardian vendor model to be a method that requires further research. Through this study, more depth has been reached in the nature of a guardian vendor model and its relation to other multisourcing governance models. The guardian vendor model provides a big business area for integrator and consulting companies to work in and the models used in different scenarios are more manifold than what research has so far presented. Some challenges in differentiating IT multisourcing projects from single-sourced projects can be identified in the mediated or guardian vendor model. Many of the interviewees saw what has been included as a multisourcing method, actually as a single-source method due to the client's detachment to the third-party vendors.

P6: If we need third parties to carry out a project, it's very different than a client having a multivendor strategy where we provide services, another vendor provides services. What we call a service integrator model, where one vendor provides services, and another provides services and then one works as the service integrator and may manage the other vendors.

While interviewing the industry experts, it was concluded that there is significant difference in management strategy in whether the client manages the vendors themselves in a direct model or if they appoint a middle man or integrator and thus deploy a guardian vendor strategy. In many of the companies, working as an integrator was seen as one of the main businesses or even the main business.

P6: If you don't have a service integrator model and you have a multivendor strategy, you need to have a very strong vendor management organization and most clients do not. They don't understand what that means, and they aren't a professional services organization and they're not able to do that. But there are some clients that do that and do that well.

The focus of Goldberg, Satzger and Kieninger's (2015) study is to provide a framework to help the client organize their multisourcing governance capabilities. This leaves out a method to manage the various vendors that came up as a frequently used option in the vendor's view, which is the use of a guardian vendor as the manager of other vendors.

P2: Everyone does their part, but if one doesn't take care of the entirety, it's the client's job to make sure everything comes together and works. The client needs to have

the expertise in this and if they don't, the entirety won't work. The client accuses the vendors and the vendors accuse each other.

Bapna et al. (2010) also consider some moral hazards in the guardian vendor model. As one vendor gains control over the others, there is a possibility of resentment of the authority by the remaining vendors. This might result in a multitude of challenges, such as concealing knowledge as well as suspicion of the guardian vendor to alter the truth to the client. At the same time the client needs to create contracts with multiple vendors and ensure that the different operators cooperate on the given project. As they underline the paucity in the study of the guardian vendor model, some information to support the statements were retrieved in the interviews.

The interview participants agreed with the challenge of one vendor having the power over others. However, these challenges are usually mitigated by contracting. Contracting plays a significant part in IT multisourcing and especially in guardian vendor setups as it can help reduce the tension between the vendors. Most vendors are used to multisourcing contracts being a norm in today's IT operating environment and are aware of the moral challenges of it and how to mitigate them. If a situation comes, where the cause of a problem in a delivery cannot be located, the client is usually responsible for the expense. This can cause large extra costs to the client and should be further investigated.

P2: We have a contract with the client and juridically the client is then responsible for the extra work expenses. These are everyday problems that many vendors face. If not weekly, then at least monthly issues in my experience.

The level of authority that one vendor has over the others in a multisourcing situation may affect the execution of the project significantly. If the guardian vendor has full permission to lead the other vendors and also takes full ownership of the delivery, it can create better results than partial governance. This theory however needs deeper inspection.

P8: Of course, there will be certain activities, which may not be directly provided by that particular vendor, in which case the managed service model where there's a single vendor who then uses either subcontractors or other vendors but at the same time is fully responsible for the delivery of end to end service to the client. That sort of an environment is overall better for the client, simply because it enables them to have a single point of accountability but at the same time drive efficiencies and effectiveness by reducing the noise that is created by a multivendor

situation. It is something that obviously varies from one organization to another. But this does apply to most organizations.

One of the interviewees referred to a setting that has been mentioned in previous research, however has not been depicted in an article yet. It is a modification of the guardian vendor model, which is here presented as the partial authority guardian vendor model. In this model all vendors contract with the client and are in contact with them, but one vendor has authority over the others, yet also doing a part of the delivery simultaneously. This is a challenging set up for the client, managing the guardian vendor as well as the other vendors, but if managed correctly, it can bring advantages in flexibility and avoidance of vendor lock-in. In these setups, contracting and responsibility division plays a vital part in the success of the collaboration. Where in the depiction of the traditional guardian vendor model, the arrows between the vendors pointed both ways, they depicted mainly the information flow among the vendors. In this version, the arrows picture the flow of task delegation by the authority. Thus, the models are lacking some consistency and need to be explained to the reader in order to reach full understanding of the setting.

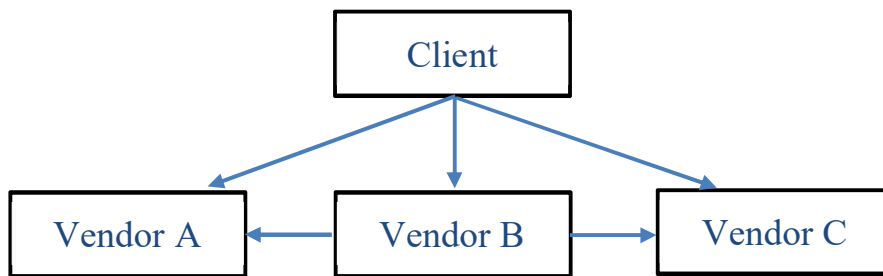


Figure 12 Partial Authority Guardian Vendor Model

4.3 End-to-End Service Management

4.3.1 Comprehensive Vendor Portfolio Governance

The end-to-end service management describes the key elements of a multisourcing setting from the vendor's point of view. In this chapter parts of Bapna et al. (2010) and Goldberg et al's (2014) frameworks are being used with some modifications. The coordination and cooperation between the various agents and in this context, vendors, describes the management requirements and challenges in getting the vendors to work together in the used multisourcing setting. The "observability of task output" –chapter describes the challenges in following up which actions has led to which outcomes, since both the literature

and the empirical study highlighted the difficulty of always following the causal connections.

4.3.2 Coordination and Cooperation Between Vendors

Bapna et al. (2010) state that there are two coordination elements in a multisourcing setting: coordination that happens between the client and vendors and the coordination that happens between the vendors. In Bapna et al.'s view, the vendors should create a common understanding of the task and name the interdependencies that are needed in order to execute the project.

The results of this study support this view, however underline the challenge of naming these interdependencies and responsibilities. Contracting and the multivendor governance model used mostly have a significant impact on how successful a project is. The planning and execution of information exchange and coordination often require extensive management activities, which may include significant transaction costs (Bapna et al. 2010). In some situations, the costs might outweigh the benefits of a multisourcing setting.

P6: Well, of course from the vendor's perspective the disadvantages are that of course you need a lot of people to do some coordination type of work. Because you know the knowledge doesn't transfer suddenly from one vendor to another unless there is a very clear governance structure in place, which usually there is not. It's clear that we need more people to take care of the governance and knowledge transfer, that's clearly one disadvantage. And at the same time, it's more expensive.

Taking the cost factor of multisourcing coordination and cooperation management into consideration, Bapna et al. (2010) underline the importance of identifying a set of operational performance measures that are complementary to outsourced tasks and help agents coordinate better is an issue for future research. The interviewees agreed on the fact that management and governance in a single-sourcing setting is easier than multisourcing.

P6: The whole management would be easier if there would be just one vendor. So, the governance is easier than comparing to multivendor situation.

Even though most vendors would prefer to deliver a service by themselves and using subcontractors of their own choice, multisourcing settings can also create lucrative future scenarios. This can happen for example as new client acquisition. Through multisourcing

settings companies can sustain relationships with partners that may not otherwise have approached them.

P3: It can be beneficial in a situation where we would get some new contract from the client and we show that we can do this, maybe next year we can do also this. We can get for example new clients or new business.

Having good relationships with other vendors may give a benefit in situations where the client demands competing organizations to work in collaboration. IT projects naturally have many interconnections between the different elements and systems, which almost inevitably always requires collaboration between multiple vendors in a multisourcing setting.

P8: When IT systems or processes are considered, these are not systems or processes in isolation. These are indicated processes and systems, even though the client tries very hard to break it up in a way that its siloed. In an efficient organization should never be siloed. So, which basically involves vendors working with each other sometimes on a business that they would have competed against each other on.

One interview participant described a multisourcing project they had been a part of, where the client company was renewing their strategy and building a completely new digital platform from software purchases as well as developing and integrating all parts together. The client ended up buying developers from about 12 different Finnish companies since there wasn't enough available resources in one company. In this situation the client had underestimated the need for project management, and the outcome was not as successful as initially planned.

P1: You need to have a really good project manager that juggles all parts and that comes a lot down to process and the tools that you have and how you share information how you share information between the different counterparties. The success of this project was not the best as I'm using one of the products myself.

Wiener and Saunders (2014) researched the forced coopetition setting in their study and found that this model in a multisourcing setting is distinctive due to the fact that in classic coopetition, the vendors decide themselves to enter the coopetition. In a multisourcing setting, the compulsion comes from another party (the client) and forces companies that may identify each other as competitors, to work jointly on a project.

Most interview participants felt like a forced competition is usually not the most beneficial setup for working jointly on a project. As multisourcing is usually inherently a competitive situation, creating a beneficial competitive setting requires much experience and knowledge. The decision to lead a competitive multisourcing setting should be made already in the situation of contracting and pricing, because these structures are likely to have an effect on the success of the multisourced project.

P3: Some clients see that it's beneficial for them that there is a clear multivendor situation and they believe that the vendors will compete against each other, which will increase the value of the project or the service quality. It might be true, but in a way, it might be that it doesn't happen because different vendors have different contracts and pricing structures.

P5: The client may want us to compete, so they can push around the prices and they want to see who is the best fit for you in this thing. If they provide it so that we do it for different projects, then that's a clearer setting and competition. But if we're in the same team with same goals, then it might harm the team's functionality. If the client is very good at managing and is very open about all of the things happening and they don't have one vendor who they prefer but instead see a problem that needs to be solved and ask help from everyone, then it's a more of a collaborative effort.

One of the significant challenges of multisourcing settings is, as Bapna et al. 2010 propose, that a vendor has to put more effort to the project than just its primary task. As there is usually an element of cooperation in multisourcing, vendors must “help” each other to perform their primary tasks. If the vendors are forced to compete in this situation, it can have a negative impact on the outcome of the project.

P8: There are other disadvantages to a multivendor setup, where you know, you typically have organizations trying to outdo each other as a vendor rather than concentrating on what they need to bring the best of, to the table, which again has a detrimental value to the client. This is easily overlooked but happens very frequently in the industry.

4.3.3 Vendor-to-Vendor Learning

Bapna et al. (2010) stated their expectations of further investigation of client to vendor and vendor-to-vendor learning in IT multisourcing deals. In this study, some comments

about vendor-to-vendor learning and its positive effects were mentioned. Cooperation of competitive vendor companies often poses a strain in the collaboration, but it can also be seen as a lucrative teaching experience from one to another. Vendor firms should aim to retain all benefits of a situation of working with another firm, and learning while delivering is a good way to achieve more benefits

P8: In a way the multivendor set up, even though in a way one might think it's not a very good environment to be in, but it also helps in the longer term the vendors to a certain extent. There have been multiple examples of a multivendor setup, where fierce competitors have come together to work together, be it IT, processes, operations, consulting, where they often have almost a symbiotic relationship.

4.3.4 Observability of Task Output

In the beginning of an IT multisourcing setting, it's important to make a distinction of how performance is measured. This can be tied to each vendor's own performance, the different vendors' relative performance with each other or the entire vendor setup's team execution. It is vital that the outcomes of the different operators can be followed and acknowledged. A significant matter is also to emphasize the vendors' helping each other in interrelations and not only carry out their primary tasks. In an interrelated multisourcing setting it is a motivation that can be d (Bapna et al. 2010).

In line with Bapna et al. (2010), there are challenges in motivating the vendors to communicate and cooperate with other vendors and not only do their part of the project. The findings of this study underline the importance of active vendor management and specific role distinction prior to beginning the project. As the vendors are usually competing companies, it requires careful planning to create a setting that enables the vendors to cooperate as easily as possible if that is the client's goal.

P7: The vendors are not too fond of open communication with their competitors. If they are working on the same program with competitors, usually they won't want to share too much information on what they're doing since everybody has hidden agendas. Obviously, everyone wants to sell more and have a bigger chunk of the work.

4.4 Contracting

The fact that contracting is often done individually between the client and vendor, poses challenges since service levels may be left unaligned (Ilmo and Nahar, 2010). As it was stated by multiple experts, aligning the work of the vendors in the contracting phase, prior to starting the work usually has a significant impact on the success of the project overall. The interview participants highlighted the importance of working in interrelation throughout a project, as a siloed IT undertaking is usually not successful.

Goldberg, Satzger and Kleininger (2015) state in their interview study that when services are being built one on top of another, service levels need to be agreed upon in alignment. Their findings state that although the parties often think they've done the contracts well, oftentimes this is not true. This statement can be supported by the findings of this study as well.

P6: -- if there are like different vendors, they might have different kind of scopes or their contracts are a bit different than our contracts, which means that even that. We may not have power to say to another vendor that they should do something, and if they're not doing something that might mean that our work is pending because of that. That might be a challenging situation. This then means delays to the project schedule and more costs.

In many occasions, when a problem occurs in the project, negotiations about the contracts and who will take responsibility of the costs caused by the issue need to be initiated. One way to mitigate the risk of compromising the relationships between the client and vendor as well as the vendors, is to take an objective middleman to lead the discussion and avoid further issues.

P2: Sometimes there are situations where the problem cause cannot be found, and I have experience on both from the vendor's and client's side, contract negotiations need to be started. When there are complicated and hard things, a middleman on the negotiations might be appointed so that the relations of the experts aren't jeopardized.

P5: In the case where the client employs us, and we use partners, it's a clear situation, it says in the contract that we run the project and we need to manage the partners. Obviously, they want to get out of it something, but they always need to negotiate with us since we own the contract. If the partners aren't happy they obviously don't want to make a good job. If the other vendors are contracting directly with the client – it

might work just as well, but there's more risk from our perspective, there are more unexpected things likely to happen.

It's important to consider both the vendors' risks as well as the client's risks in contracting any kind of a deal, and this is especially important in multisourcing settings. Depending on the task division and responsibilities set out to each vendor, the risk level should be valued simultaneously. In order to reach beneficial results for both parties in a project, all parties should focus on the risk-reward balance for all participators.

P6: -- if you don't have that (a service integrator model) and you push the service integration to another company, then you need to have a very good contract for both parties. And often what happens is that the third-party advisors have very unrealistic expectations on what sort of risks the vendors will sign up to in those models. And even if they sign up to those, what sort of risks the vendors will sign up to in those models will they be prepared and able to deliver on them. Because at the end of the day, if we're dependent on a competing vendor to deliver a solution, we have no leverage over them, zero. I've seen a lot of naivety from the third-party advisors, because the contracts are critical and have to be realistic on how to assign risk on the various vendors.

5 DISCUSSION

5.1 The Present and Future of Multisourcing

The initial aim of this thesis was to shed light on the benefits and disadvantages of multisourcing from a vendor's perspective. As the study progressed, it became clear that it cannot be scrutinized purely from the vendor's side. As vendors are responding to the needs of clients, they always have to take the client's benefits and challenges into consideration. An undertaking that is multisourced from the client's side could be single-sourced to the vendor. The way different companies categorize a project as multisourced and single-sourced varies. However, it was possible to get more insight on the vendor's benefits and disadvantages when operating on a multisourcing project. Purely knowing the client's expectations, experiences and outcomes gives a one-sided view on this new norm in technology outsourcing, that provides vast possibilities to discover as well as risks that need to be considered.

Based on the interviews, managing and coordinating multiple vendors requires more resources than operating with only one vendor. This automatically also creates more costs, and a value-cost analysis should be conducted before deciding on the outsourcing model. It is also essential to IT multisourcing strategy planning to decide early on which party will be responsible for the managing of the project. Oftentimes this is left undecided and the responsibility falls to the client. If the client in this situation does not possess the required talent to run the IT project, problems usually occur in the form of lack of communication and lack of control in causal relations. Some clients are well suited to lead a complex outsourcing project, an example of this are often high-tech companies, but it is vital for the client to recognize these abilities prior to launching the project.

Reflecting to Aaron et al.'s (2005) depiction of vertical and horizontal chunkification in multisourcing deals, based on the results of this research and on newer literature, vertical chunkification as it is presented in the article refers to a method often less effective than horizontal chunkification. This is due to the fact that an IT project's elements are rarely lucrative to be conducted in completely separated channels, since IT systems are being created increasingly integrated to another and customized to a company's needs. Some interview members described working in silos defuncting and insufficient. Literature that emphasizes the importance of cooperation of vendors in multisourcing projects support that statement (Krancher & Stürmer, 2018, Aubert et al., 2016, Chaudhary & Mehta, 2011).

In 2006, Cohen and Young stated that multisourcing "will be the new normal for successful business operations". Reflecting on this statement over ten years later, it can be

said that multisourcing is a norm than an exception in today's fast-evolving IT environment. The usefulness of multisourcing is also depends on the business area and the nature of the system. For example, complicated CRM systems on multiple levels of the business may benefit from multisourcing differently than security projects, in which seamlessness of operations and surfaces is crucial. Research on which industries benefit most on IT multisourcing is needed to reach a better understanding on the benefits the method can offer clients, as well as the vendors in some situations.

5.2 Benefits of Multisourcing from the Vendor's Perspective

In a service industry, the vendor's perspective is inherently constructed based on the client's perspective. This could be seen in the research, even though the main focal point was constantly kept on the vendor's side. Especially when it comes to the benefits of multisourcing, the advantages are scarcer in the vendor's position than the clients. However, as in every business transaction, also in multisourcing both sides of the scale need to be even in order for a project to be lucrative for both sides. Filling the gap between the benefits of the client and the vendor's benefits in IT multisourcing deals is one motive of this thesis. As it became clear from the interview participant's comments, most vendors are nowadays mature enough to understand that they operate in a multivendor environment, where they will be required sometimes to work in close cooperation with their competition.

Even though some vendor interviewees didn't think there were many benefits to a multisourcing strategy, if any, some elements were possible to be extracted from the interviews and literature. A multivendor setting enables the vendor to learn new areas through the client and other vendors. It can also present new possibilities and alliances to vendors as new clients may be reached through multisourcing projects.

Being in a multivendor setting helps the vendors to do continuous improvements to their services, "keeping them on their toes" and even though this may seem like an inconvenience at first, it can be beneficial in the long run. It forces the vendors to deliver their best service and continuously better their products and offerings. Some other firm might, after all, take over the work fast if it isn't satisfying to the client.

A benefit in multisourcing that can be a benefit for the vendor but not to the client is, that the responsibilities in all functions are not always clear and thus it may be easier for the vendor to shift responsibility to another operator. Task output verification and follow-up on issue causes can sometimes be difficult and in these situations it's one word against another. This element rose in the interviews a few times in context of management – it is crucial for the client to have a good multisourcing management organization to control

situations where the cause of an issue is hard to define. If the client doesn't have the ability or knowledge to control complex vendor settings like these, a strong suggestion from all interviewees was to seek out a skilled middle man. This setting can also be called the guardian vendor setting, which is increasingly popular in the outsourcing industry.

Multisourcing settings give vendors possibilities to break into new industries and client partnerships. For example, in first generation outsourcing, big infrastructure players may have sort of bundled large infrastructures into long-term deals which can lead to a monopolistic situation with the client. Clients have started to break out of these settings often through multisourcing projects and programs. This setting can pose a disadvantage to the existing vendor, yet an advantage to new vendors.

Many of the experts interviewed for the study work in organizations that provide IT outsourcing management solutions and also state that it is a very profitable industry if one has the skills for it. Thus, this study finding can be biased since the client side is not projected as much. The statement that can be made based on research so far is, that there is fundamental difference between the situations where the client manages the vendors directly and the situation where the client utilizes an implementor or a middle man.

From the vendor's point of view, operating as a guardian vendor and managing the other vendors is usually a better situation than working with them side-by-side. This statement cannot be applied to all situations due to the fact that not all vendors have the capacity to manage large multisourcing deals and not all vendors want to take responsibility and ownership of a project where they aren't in control of all elements. This is where contracting plays an important role: the contracts need to be made in a way that describes the vendor and client's responsibilities as accurately as possible so that future negotiations in situations where something has gone wrong in the service, can be resolved as efficiently as possible. This study has aimed to add more knowledge about the guardian vendor model to previous research (e.g. Bapna et al. (2010)), but more research is needed to understand the complexities of the model.

5.3 Disadvantages of Multisourcing from the Vendor's Perspective

Theory has so far found numerous benefits in multisourcing as it for example increases competition in quality and price between the vendors and lowers the likeliness of a vendor lock-in situation. Some new findings were done through the interviews that add to the existing literature and hopefully provide more support to multisourcing strategy decision making.

As in any IT project, communication is key in multisourcing. If relevant information does not flow seamlessly between the vendors that work on the same project, the end

result is likely to fail the client's expectations. As it was discovered in previous studies and the interviews in this study, communication does not happen by itself, especially if two otherwise competing companies are at the two ends. Multisourcing settings require a vast amount of vendor and communication management and the client should take the cost of this into account in all situations. Usually the request for a proposal process takes a longer time when multiple vendors are in question versus when there is only one. After this the multisourcing strategy and model should be decided and implemented. Then it's time to manage the vendors throughout the process and follow-up on task outcomes. As stated before, this can be done successfully by the client, but the client's understanding of its own capabilities should be realistic. By this, it's meant that the required resources should be allocated to managing multisourced projects and these resources should have the skills to plan and carry out the project end-to-end.

In this study it became clear that often the client overestimates its abilities to control the vendors and, in some situations, it has led to higher costs than initially planned. There were also cases where fixing the situation may have cost more than the project budget was at the start. Here it should be taken into consideration that the interviewees for this study were experts in IT consulting companies, where managing and advising services are a large part of the business. Even if these comments would be biased by the work environment, it is important for the client to assess its ability to manage multisourcing projects before initializing one.

A communication challenge between the client and vendors was described that the client sometimes expects the vendor to "read their minds" and understand what the client needs by reading between the lines. The client may not have enough documentation of what has already been done and how the systems operate. If in this situation the client wants to be up and running fast, the vendor may be forced to make assumptions that can lead to different outcomes than what the client initially had in mind. If the client and vendor do not take the time to discuss the objectives of the project thoroughly and contract accordingly, unexpected costs or issues may occur.

If the vendor utilizes the multisourcing situation to make the vendors compete with each other in a forced cooptation model, vendors may have the incentive to hide some information. As everyone wants a larger chunk of the deal, not working towards the same goal can jeopardize the situation. Again, here the fact needs to be acknowledged that the experts participating in the interview present the vendor's point of view and initially drive the vendor's interest. More research is needed on the forced cooptation model, since it has some upsides, like possible cost reductions.

Even though the interview participants mostly saw the integrator or guardian vendor model as a good way to multisource, there can be a fundamental conflict of interest. This is the conflict of giving a vendor responsibility over another vendor who's fundamentally

a competitor and ask them to take for instance liabilities from another vendor. Here the vendor setting, and the nature of the project have a crucial impact on the outcomes.

The fact that clients should always take into consideration is the value attained through direct multisourcing, versus single-sourcing, versus using some version of an implementation partner model. The time and resourced used to manage the vendors should be covered by the cost savings or profits attained through the project. The interviewees highlighted the importance of a trusted relationship between the client and vendor and thus, even if the client uses a multivendor setting, having a few trusted vendors that understand the client's business environment can provide a beneficial environment for multisourcing.

6 CONCLUSIONS

Based on the literature research done for this thesis, it was found that the scholar attitude towards multisourcing is more positive than neutral or negative (Aubert et al. 2016, Herz & Hamel, 2012, Bhattacharya et al. 2012). This could be based on the fact that most of the case studies and research done on companies provide a successful or somewhat successful result in multisourcing projects. Firms usually reap some benefit from multisourcing contracts but because of the time and money that is in most cases put into multisourcing arrangements, one rarely wants to state that the project has been unsuccessful. However, when interviewing the experts for this study, many mentioned numerous multisourcing deals that had failed partly or entirely. With the energy and assets allocated to carrying out a multisourcing deal, the client should closely weigh the options and see, if multisourcing is the most cost-efficient method to use. In many cases client companies opt for it without estimating the true eventual benefits. This may also happen, because estimation of effort gains is challenging in outsourcing and multisourcing planning.

The reason why the commonness of IT multisourcing was integrated into this study is because based on the extensive examination so far, research has not presented a realistic view on the extent to which multisourcing methods are used in IT outsourcing in the present period. The context in which the findings of this research are discussed is a crucial factor. IT vendors can usually not provide all the services needed to carry out a complete IT project, and even if they have the ability to code and create the needed service, often the long-term upkeep of this project is not part of their spectrum. These two factors may not be necessarily seen as parts of a simultaneous multisourcing project, a lot of cooperation is needed in transferring the services to another vendor, which can again be referred to as a multisourcing setting.

Bapna, Barua, Mani, & Mehra, (2010) describe IT multisourcing as “the leading edge of modern organizational forms”. As time advances, today, based on this research as well as other findings it can be stated that this prognosis was correct and multisourcing has become a frequent method used by a multitude of firms. (Könning, Westner & Strahringer, 2018, Kancher & Stürmer, 2018) Based on the literature review and the qualitative research findings, a statement can be formed:

IT multisourcing is more of a norm than an exception in modern IT projects.

The limitations of this thesis are the low number of interview participants and the findings are only based on managers’ experiences in European and North-American companies. Even in this context, only a part of the countries is presented and thus it cannot be taken as a generalized statement. Even though the experts interviewed in this study were selected based on their experience in multiple industries, more research is needed to find out what differences various industries may have.

Most articles discuss the benefits and challenges of multisourcing as potential winnings or hazards, since the success of the project is highly dependent on the governance and management. (Aubert et al., 2016; Bapna et al., 2010). Efficient project management and experience in outsourcing and multisourcing projects supports the likely success of a multisourcing undertaking.

Könning, Westner and Strahringer (2018) stated in their research that the part of multisourced projects in outsourcing projects is in a steady rise. This is unlikely to decrease in future years, as the demand for niche skills and knowledge becomes needed when client companies aim to differentiate themselves from competition through technological innovations. More research is needed to help determine, how common IT multisourcing projects are now, as Könning et al.'s research is only limited to European German-speaking countries and this research's interview findings are based on a small amount of participant's experiences. Further research is also needed in determining how the companies that multisource deals are geographically positioned, or if that has no effect in the digital environment. A presumption is that the most technically developed countries have the largest amounts of IT multisourcing projects. The distinction between a buyer and a seller of the services must be made in this discussion, because for example a large section of delivering IT deals is done from India, but all in all its technological infrastructure may not be comparable to technologically advanced European or American companies that buy the services. More research also on how frequently different business areas opt for multisourcing solutions is needed to obtain a clearer image on the usage of multisourcing.

Bapna et al. (2010) predicted eight years ago that the vendors that truly grasp the skill of competing and cooperating simultaneously will attain long term success. They will get larger collaborations with clients and reach larger profits. This statement can be endorsed by the findings in this thesis, as the interview participants strongly demonstrated their understanding on the fact that multisourcing has become a permanent part of the IT outsourcing business. For the time being, there are so few vendors that have the ability and lucrativeness to outbring an entire IT project by themselves, that vendors are forced to cooperation. The fights over the biggest parts in deals are difficult and vendors need to almost always go through a bidding competition in deals. The need for increasingly specific industry skills has widened the market to small and medium sized companies and created a situation where ofte, size does not matter. (Könning, Westner & Strahringer, 2018).

Comparing to Bapna et al.'s (2010) findings in long-term benefits in multisourcing, there was no clear connection seen in this study. Bapna et al. state, that multisourcing deals often provide vendors a long-term collaboration and thus, a long-term revenue stream. Based on the experts' views, there is usually no difference in the length of a contract in single-sourced versus multisourced deals. The popularity of multisourcing does

not leave the vendors other choice than aim to benefit from the deals the most they can and try to learn something from their collaborators or co-competitors simultaneously as well as build long and lasting relationships with their clients. Good collaboration skills become increasingly important in these kinds of settings.

The challenge of managing many vendors and variables in a project has increased the market for consulting services in the branch and many clients opt nowadays for a middle man to take lead of a single part of the project, like contracts, or the entire undertaking. This can be done in a guardian vendor model, in which the guardian vendor either may be a part of the IT project delivery, or purely a sort of a manager and implementor. The level of responsibility given to the guardian vendor may differ significantly. The guardian vendor model poses an important study subject for future research, since it is one of the most modern ways to organize multisourcing activities. Models like the setting of a partial authority guardian vendor model have gotten little attention, even though they are the basis of multiple companies' operations. Many consulting companies provide some software development services but may have their main market in integrating and change management. More research is needed to understand the task dividing to the various operators in these kinds of settings better. An interesting research area is that even though some firms have the ability to do all required tasks as an end-to-end service, why do some choose to do so and some not?

REFERENCES

- Abbasi, A., Noor, N., & Noor, M. H. (2014) Reducing Communication Gaps In Multi-Sourcing Using Agile Practices. *Science International (Lahore)*.
- Al-Qirim, N. A. Y. (2003). The strategic outsourcing decision of IT and eCommerce : The case of small businesses. *Journal of Information Technology Cases and Applications*, 5(3), 32.
- AlZain, M. A., Pardede, E., Soh, B., & Thom, J. A. (2012). Cloud computing security: From single to multi-clouds. *Proceedings of the Annual Hawaii International Conference on System Sciences* (p. 5490–5499).
- Applegate, L., & Montealegre, R. (1991). Eastman Kodak Co.: Managing Information Systems Through Strategic Alliances. *Harvard Business School*, 24.
- Aron, R., Clemons, E. K., Reddi, S. (2005). Just Right Outsourcing: Understanding and Managing Risk. *Journal of Management Information Systems*, 1222(December), 37–55.
- Aubert, B. A., Patry, M., & Rivard, S. (2005). A framework for information technology outsourcing risk management. *ACM SIGMIS Database*, 36(4), 9–28.
- Aubert, B. A., Saunders, C., Denk, R., & Wolfermann, T. (2016). How adidas Realized Benefits from a Contrary IT Multisourcing Strategy Drawbacks of a Modular Structure for IT Multisourcing. *MIS Quarterly Executive* (September), 210–225.
- Aydin, M. (2013). Analysis of IT Multisourcing Practice in a Telecommunication Company. *Journal of Outsourcing & Organizational Information Management*, (2013), 1–10.
- Bahli, B., & Rivard, S. (2013). Cost escalation in information technology outsourcing: A moderated mediation study. *Decision Support Systems*, 56(1), 37–47.
- Bapna, R., Barua, A., Mani, D., & Mehra, A. (2010). Cooperation, coordination, and governance in multisourcing: An agenda for analytical and empirical research. *Information Systems Research*, 21(4), 785–795.
- Bapna, R., Gupta, A., Ray, G., & Singh, S. (2013). Specialization, integration, and multisourcing: A study of large IT outsourcing projects. *International Conference on Information Systems (ICIS 2013): Reshaping Society Through Information Systems Design* (Vol. 4, p. 3537–3551).
- Barboza, M., Myers, M., & Gardner, L. (2011). Information Technology Multisourcing At Fonterra: A Case Study Of The World's Largest Exporter Of Dairy Ingredients Information Technology Multisourcing At Fonterra: A Case Study Of The World's Largest Exporter Of Dairy Ingredients. *ECIS 2011 Proceedings*.
- Barthélemy, J. (2001). The Hidden Costs of IT Outsourcing. *MIT Sloan Management Review*, 42(3), 60–69.

- Bhattacharya, S., Gupta, A., & Hasija, S. (2012). Single Sourcing versus Multisourcing : The Role of Effort Interdependence , Metric-Outcome Misalignment , and Incentive Design. *INSEAD Working Paper No. 2012/26/TOM*.
- Brown, B. (1992). Outsourcing's Side Effects Can Inflamm Instead of Cure. *Network World*, 9(17).
- Cane, A. (2008). Never start IT initiatives for the sake of IT. *Financial Times; London*, (May), 1–4.
- Chapman, S. (2008). Shell signs \$4B multisupplier outsourcing deal. *ComputerWorld*, 1–3.
- Chaudhary, A., & Mehta, D. (2011). Outsourcing in IT Industry. *Entrepreneurship and SMEs - Building Competencies, Volume 497*, 365–371.
- Cohen, L., & Young, A. (2006). Multisourcing-Moving Beyond Outsourcing to Achieve Growth and Agility.
- Dibbern, J., Goles, T., Hirschheim, R., & Jayatilaka, B. (2004). Information Systems Outsourcing : A Survey and Analysis of the Literature. *The Database for Advances in Information Systems*, 35(4), 6–102.
- Earl, M. J. (1996). The Risk of Outsourcing IT. *Sloan Management Review*, 37(3), 26–32.
- Elena, C. C., & Silviu, a J. G. (2010). IT Outsourcing: A Comparison between the Romanian and the Dutch Banking Systems. *Journal of International Technology and Information Management*, 19(2), 1–I.
- Goldberg, M., Kieninger, A., & Fromm, H. (2014). Organizational models for the multi-sourcing service integration and management function. *Proceedings - 16th IEEE Conference on Business Informatics, CBI 2014*, 2, 101–107.
- Goldberg, M., Satzger, G., & Kieninger, A. (2015). A capability framework for IT service integration and management in multi-sourcing. *ECIS*, (2015), Paper 58.
- Gupta, U. G., & Gupta, A. (1992). Outsourcing the Is Function. *Information Systems Management*, 9(3), 44–47.
- Herz, T. P., Hamel, F., Uebernickel, F., & Brenner, W. (2011). Managing and Monitoring IT Application Development and Maintenance Suppliers in a Multisourcing Context. *MCIS Proceedings 2011* (p. 1–12).
- Huber, R. L. (1993). How Continental Bank outsourced its “crown jewels.” *Harvard Business Review*, 71(1), 121–129.
- Ilmo, A. and N. Nahar (2010). Managing multi-vendors in software production through international outsourcing: A conceptual perspective. *Proceedings of PICMET '10*:

Technology Management for Global Economic Growth (PICMET). Washington: IEEE Computer Society, 1–12.

- Jiang, K., Klein, G. and Fernandez, W. (2018), From Project Management to Program Management: An Invitation to Investigate Programs Where IT Plays a Significant Role. *Journal of the Association for Information Systems*, 19(1), 40-57.
- Kaiser J., Buxmann P. (2017) Organizational Design of IT Supplier Relationship Management: A Multiple Case Study of Five Client Companies. *Outsourcing and Offshoring Business Services*, p. 153-195.
- Kliem, R. L. (2000). Managing the risk of outsourcing agreements. *Information Systems Management*, 17(4), 71–74.
- Könning, Westner & Strahringer (2018). Multisourcing on the Rise – Results from an Analysis of More Than 1,000 IT Outsourcing Deals in the ASG Region, *Proceedings of the Multiconference in Business Information Systems Sciences in Lünenberg, Germany*, p. 1813-1824.
- Lacity, M. C., Khan, S. A., & Yan, A. (2016). Review of the empirical business services sourcing literature: An update and future directions. *Journal of Information Technology*.
- Lacity, M. C., & Willcocks, L. P. (1995). Interpreting information technology sourcing decisions from a transaction cost perspective: Findings and critique. *Accounting, Management and Information Technologies*, 5(3–4), 203–244.
- Langlois, R. N. (2002). Modularity in technology and organization. *Journal of Economic Behavior and Organization*, 49(1), 19–37.
- Levina, N., & Su, N. (2008). Global multisourcing strategy: The emergence of a supplier portfolio in services offshoring. *Decision Sciences*, 39(3), 541–570.
- Levina, N. & Su, N. (2011) Global multisourcing strategy: Integrating learning from manufacturing into IT service outsourcing.
- Lin, T. (2016). Deviations Of Governance In It Multi-Sourcing: A Case Study Inviting The Audience.
- Loboda, 2013 Motives for multisourcing in the IT sector. *International Journal of Management and Economics*, 38(1), 46-66
- Loh, L., & Venkatraman, N. (1992). Diffusion of information technology outsourcing: Influence sources and the Kodak effect. *Information Systems Research*, 3(4), 334–358.
- Martens, B., & Teuteberg, F. (2012). Decision-making in cloud computing environments: A cost and risk based approach. *Information Systems Frontiers*, 14(4), 871–893.

- Oshri, I., Kotlarsky, J., & Willcocks, L. P. (2009). *The Handbook of Global Outsourcing and Offshoring*. Palgrave Macmillan.
- Palvia, P. C. (1995). A dialectic view of information systems outsourcing: Pros and cons. *Information & Management*, 29(5), 265–275.
- Plugge, A., & Bouwman, H. (2015). Understanding collaboration in multisourcing arrangements: A social exchange theory perspective. *Lecture Notes in Business Information Processing* (Vol. 236, p. 171–186).
- Sachdeva (2009) *Business research methodology*, Himalaya Publishing Houses.
- Schmerken, I., & Golden, K. (1996). Outsourcing megadeals: Drive the new IT economy. *Kathleen Wall Street & Technology*, 14(4).
- Schoeman, S., Bakker, N., Borgers, M., Van Hillegersberg, J., & Moody, D. (2008). Bridging the gap between the theory and practice of IS outsourcing strategy design. *The Second Information Systems Workshop on Global Sourcing: Services, Knowledge and Innovation*, (May 2014), 1–27.
- Su, N., Levina, N., & Ross, J. W. (2015). The Long-Tail Strategy for IT Outsourcing. *MIT Sloan Management Review*, 57(2), 81–89.
- Tan, C., & Sia, S. K. (2006). Managing Flexibility in Outsourcing. *Journal of the Association for Information Systems*, 7(4), 179–205.
- Tiwana, A. (2004). Beyond the black box: Knowledge overlaps in software outsourcing. *IEEE Software*, 21(5), 51–58.
- Tuomi, Jouni - Sarajärvi, Anneli (2009). *Laadullinen tutkimus ja sisällönanalyysi*, 7th edition. Tammi, Helsinki.
- Tuomi, Jouni - Sarajärvi, Anneli (2018). *Laadullinen tutkimus ja sisällönanalyysi*, new edition. Tammi, Helsinki.
- Ukor, R., & Carpenter, A. (2012). Service selection and horizontal multi-sourcing in process-oriented capability outsourcing. *Journal of Software: Evolution and Process*, 26(24), 259–283.
- Venkatraman, N. (1997). Beyond Outsourcing: Managing IT Resources as a Value Center. *Sloan Management Review*, 38(3), 51–64.
- Verity, J. (1997). Mega deals march on. *Computerworld*, 31(30), S10–S12.
- Weber, A., & Thomas, R. (2005). Key Performance Indicators - Measuring and Managing the Maintenance. *IAVARA Work Smart*, (November), 1–16.
- Wiener, M., & Saunders, C. (2014). Forced coepetition in IT multi-sourcing. *Journal of Strategic Information Systems*, 23(3), 210–225.