



Universitetet
i Stavanger

UIS BUSINESS SCHOOL

MASTER'S THESIS

STUDY PROGRAM:

Master of Science in Business Administration

THESIS IS WRITTEN IN THE FOLLOWING
SPECIALIZATION/SUBJECT:

Strategy and Management

IS THE ASSIGNMENT CONFIDENTIAL?
(**NB!** Use the red form for confidential theses)

TITLE:

Information System Backsourcing – A review of the literature

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Acknowledgement

This master thesis is the conclusion of a Master's degree of Business Administration at the University of Stavanger Business School. It is written within the field of Strategy and Management. The process of writing the thesis has been tough, yet truly rewarding.

I would like to thank everyone who played a role in making this possible.

Summary

Information systems back sourcing describes the transfer of previously outsourced activities, assets, or personnel back to the company. By doing this they achieve control and ownership of the previously outsourced activity. As Information System Outsourcing (ISO) have gained significant focus in the literature, the phenomenon Information system back sourcing have not. Consequently, this thesis share the results and study the current papers that consider Information system back sourcing.

A literature review of published studies was considered and a total of 25 papers were found using several databases, relevant for the review on the topic. I categorized and identified different motivators using current literature and found factors that could ease or retain the decision to backsource. Finally, yet importantly, I identified implementation success factors for the back sourcing process, following the existing literature.

I found several holes in the current literature on IS back sourcing such as limited work on the implementation and the re-integration in the process. The motivators and factors that either ease or retain such a decision have gotten most attention, however there is also some parts that could get more attention in future research.

There is also some limitations in this thesis and the use of methodology. Cases of this was for instance, publication bias and aspects such as language and unavailable data. IS Back sourcing is an emerging trend, but needs more attention. Therefore, several suggestions for further research is discussed and proposed. This is mainly connected to the implementation process but also includes some aspects of the motivation for the decision.

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1.0 Introduction

1.1 Background

Outsourcing is a relatively known term for many and Information system outsourcing has grown into a typical alternative to running the information technology in-house. The IT services are growing and the availability in the outsourcing market are enormous. With the significance and relevance outsourcing have, information system outsourcing (ISO) and information technology outsourcing (ITO) has been researched for a long time.

Information systems (IS) are ..“An organized collection of people, information, business processes, and information technology designed to transform inputs into outputs, in order to achieve a goal.” (Huber, Piercy & Mckeown, 2007). As a subset to IS we have Information Technology (IT) that is the use of computers to store, retrieve, transmit and manipulate data (Daintith & Martin, 2010).

Many companies outsource because they want to create a competitive advantage, and we see that many of them are choosing to outsource to low-cost countries to cut the costs. This is nothing new, as the term was first introduced in the 1950's. The outsourcing trend was one of the strongest and permanent trends during the period of 1985-1995. In the end of the 80's and the start of the 90's the competition for firms increased as a result of the recession at that time. Organizations started to shift focus to cost savings and the firms needed to look at their costs and effectiveness. Two alternatives for strengthening the effectiveness was then present, either by taking actions internally such as downsizing staff, or to outsource (Hendry, 1995).

The term was more noticeable in the 1990's when for instance the multi-billion-dollar firm International Business Machines, known as IBM chose to outsource some of their IT-activities. There was also a certain economic growth that helped the trend. Under the expansion of the internet-based economy, several organizations initiated outsourcing with the aim to get their products rapidly to the markets. The outsourcing trend reached its high note during the last decade and have had such growth that is considered a standard in today's society (Zirpoli & Becker, 2011).

Facing the intense competition, companies are seeking to achieve a higher degree of efficiency and effectiveness by reconfiguring and reorganising their discrete value-added

activities and relocating them to the most appropriate destinations. When companies outsource abroad, the term offshoring is used, and the literature often finds that saving in costs is a big driver for the choice. Outsourcing and offshoring may enable companies and public institutions to be more efficient and effective and to do more with less, through streamlining operations and focusing on the core competences (Hamel & Prahalad, 1990). However, this is not the case for every company that have chosen to outsource some of their activities. At the same time, internationalization and development in technology made it possible to produce goods and services across borders. For the last decades, this have made companies west in the world to have easier access to low-cost labour from Eastern Europe and Asia.

The phenomenon of back sourcing is more present now than it has been before. When a company takes the action to bring activity that has been outsourced back in-house, back sourcing takes place. The literature states that there are several reasons as to why companies choose to back source, and often there is a combination of these. A company are considering their sourcing strategy at several points of time, this can be in the middle of a contract or for instance when the contract is about to expire. The company then will establish if they want to continue with the same vendor, change the vendor or bring back the activities in-house (Wong, 2008).

There are several examples of big companies that have chosen to back source, some examples are JP Morgan, Xerox and the British supermarket chain Sainsbury. In the JP Morgan case they prematurely terminated their two-year-old outsourcing contract with IBM in favour of performing the task in house (Overby, 2005). When looking at these cases mentioned, the total contract amount all extended \$ 1 billion (Veltri, Saunders & Kavan, 2008). According to Deloitte Consulting, nearly two-thirds of organizations have already brought some form of outsourced services back in-house (Wong, 2008). Many of these companies may have done this due to differences in expectations, as Boston Consultant Group revealed that expectations were not met in 50% of the contracts North American companies had signed on offshore outsourcing (Aron & Sing, 2005). This is supported by studies done on the field, which states that 20% of the companies that outsource cancel their outsourcing contract during the first year (Ebert, 2007).

The rapid development of IT has led to digitalization in almost all parts of the society. This means that many companies have digitalized their business model, and the needs and role of the IT department has changed (Heltzel, 2017). This has forced many companies to outsource tasks related to IT, but some of them bump into different challenges, problems or changes leading them to backsource. Global IT Outsourcing surveys conducted by Diamond Cluster International found that 21% of the firms cancelled their outsourcing contracts in 2004, and that number more than doubled in 2005 (Thibodeau, 2006). The strategic reasons as to why this is happening varies and are often a combination of more than one reason (Thibodeau, 2006).

Some companies are doing it to get back control over important business solutions, as MLC, Australia Oxford Health Plans, did back in 2002. This led to more effective and flexible use of technology, thus saving both time and money (Lacity & Willcocks, 2000). Strategic changes in the company may also lead to back sourcing due to the needs of the company organization being changed. This can for instance be that the company want to have rapid deployments of new functionality, which could be more effective in a strong internal environment. The IT industry is in constant change and new technology develops fast. Some companies may backsource to keep up with these changes, to make sure that they are not falling behind on the technology used, and thus risking a major cost in the future when old technology no longer is maintained (McLaughlin & Peppard, 2006).

Another main issue many companies face is the cooperation with the vendor, which can be challenging. Surveys done by Diamond Cluster International in 2003 revealed that none of the companies were completely satisfied with their outsourcing relationships and only 23% were only partially happy with their relationships (Diamond Cluster, 2003). Some of the reasons as to why the relationship is not satisfying may be that they can be dissatisfied with the quality of the service provided, which can happen due to lack of expertise on the vendors side. There can also be disagreement and discussions regarding the contract, thus leading to tension as well as using time and money to discuss contractual issues. Some of these issues may be due to different views on what is expected from the vendor (Hirschheim & Lacity, 2000). It is therefore important to have well defined contracts that clearly defines the service level that should be provided, as not doing so may lead to conflicts (McLaughlin & Peppard, 2006). This is clearly shown by surveys done on IT companies, which shows that 30-50% of offshore outsourcing contracts had been cancelled (Barney, Moe, Low & Aurum, 2009).

Some companies are also facing higher costs than expected concerning outsourcing, as they have underestimated the need for coordination between the outsourcer and the vendor (Akoka & Comyn-Wattiau, 2006). In fact, over 30 % of the companies outsourcing with the goal of reducing costs, were not satisfied (Caldwell, 2002).

1.2 Research Question

Over the last two years, I have gone through my master's degree courses with specialization within Strategy and Management. Throughout my degree, I have learned a lot about the strategic decisions for firms and organizations, and how important they are for their sustainability. Following this, I also learned how the strategic decisions such as outsourcing could be a failure or did not meet the expectations for either the firm that did outsource, or the supplier in the case.

During an assignment in one of my courses, I noticed the phenomenon backsourcing, I found the literature written on the topic to be interesting, and my first impression was that it was still an emerging research area. This motivated me to write my master thesis on this subject and to conduct a systematic literature review to determine the state of the research and the gaps in the research. Backsourcing is a significant emerging trend, and several companies have brought their outsourced functions back in-house. I therefore find my thesis relevant and future-oriented for the strategies that need to be set in companies. Further, I have had my focus on IS backsourcing, and I have classified IT as a subset of IS. Following this, papers that have investigated IT alone, and sourcing related to this is considered in this thesis. I found it most valuable for the quality of the literature review to outline the thesis to only literature focusing on IS sourcing to this date.

During my review, several authors that have their publication reviewed in this thesis stated that there was a significant variation in the number of outsourcing literature and the amount of research that was directed on backsourcing. The phenomenon of backsourcing has been a topic in the business world for several years now, but the research on the subject is considered inadequate. This master thesis aims to investigate the reason for backsourcing after the outsourcing arrangement, what is currently known about the phenomenon in the theory and lastly investigate the areas that require further research. There are key differences between outsourcing and backsourcing that permit a literature study of backsourcing, although there

are several literature reviews on IS outsourcing present (Wiener et al., 2010), (Gonzalez, Gasco & Llopis, 2006).

After the first initial search on the topic, I drafted one main research question, and two sub-research questions I wanted to investigate and answer in this thesis. One case of this is the knowledge transfer. This is easier in outsourcing as the outsourcing vendor are better rigged for the transfer of knowledge. In the case of backsourcing, the client firm is less rigged to handle the conversion of knowledge back from the vendor (Bhagwatwar et al., 2011), (Ejodame & Oshri, 2016).

RQ1: What is currently known about the phenomenon IS backsourcing in the sourcing theory?

RQ2: What are drivers for companies to backsource their IT/IS services?

RQ3: What areas in backsourcing process require further research?

To answer the above research questions, numerous theories are examined to understand the possible strategic, economic and relationship motives of the backsourcing decision.

1.3 Structure of the thesis

The thesis consists of FOUR chapters.

1. In the first chapter, I will introduce the thoughts and motivation behind my choice of research. This chapter will also contain how I developed the research question and how I aim to answer it.
2. This chapter consist of the reasoning for my choice of methodology. Further, it also explains how I executed the literature review, from start to end with help of research on the chosen methodology.
3. In the third chapter, there is first some clarification of different concepts that need to be addressed. Further, the literature review is discussed regarding to the papers I have included relevant for the research question.
4. Lastly, in the fourth chapter I will discuss the literature review regarding my research questions. I will address in what part of the process the theory is sufficient and in what

parts of the process it is lacking and requires some further research. Limitations regarding my thesis will also be addressed in this chapter.

2.0 Methodology

Method means to follow a certain road towards a goal and deciding which road to take to reach the goal in the best possible way, implicitly which method to use, is important in order to conduct a research in a satisfactory manner (Johannesen & Christoffersen, 2010). Method is essentially different tools for collecting, processing and interpreting data. It is important to decide on a research question before moving forward to choose how to proceed. Methodology is how we can obtain information about reality and examine if our assumptions are in conformity to reality or not (Johannesen & Christoffersen, 2010). The process is described in the figure below, from Jacobsen (2005).



Figure 1: Methodology process by Jacobsen (2005)

Figure 1 shows that the first step after deciding the research question is to decide the structure. Following that, you can begin to collect data through qualitative and quantitative methods, before analysing the data in order to reach the goal by presenting an answer to the research question (Jacobsen, 2005).

2.1 Choice of Methodology

This section provides an overview of systematic literature review (SLR) and will describe the research methodology, the design and the execution of SLR.

The research in this thesis was conducted as a systematic literature review. I conducted a systematic literature review to first search and select the available academic literature in a reproducible method, and then to critically evaluate and synthesize it with regard to the research approaches, research outcomes and key statements (Fink, 2014). A systematic

literature review is used to search, select, critically evaluate and synthesize the existing body of literature (Cook, Greenhold, Ellrodt and Weingarten, 1997). A literature review can be defined as “a summary of a subject field that supports the identification of specific research questions” (Rowley & Slack, 2004).

Systematic reviews differ from ordinary literature reviews in being formally planned and methodically executed. In findings, evaluating and summarising all available evidence on a specific research question, a systematic review may contribute a greater level of validity in its findings (Khan & Azeem, 2014).

According to Kitchenham and Charters (2007) .. "a systematic literature review (often referred to as a systematic review) is a means of identifying, evaluating and interpreting all available research relevant to a particular research question, or topic area, or phenomenon of interest"

Systematic literature review must be undertaken in accordance with a predefined search strategy, and the search strategy must grant the completeness of the search to be assessed. Kitchenham and Charters (2007) mention many reasons for performing a systematic literature review and the most typical reasons are:

- “To summarize the existing evidence concerning a treatment or technology e.g. to summarize the empirical evidence of the benefits and limitations of a specific agile method”.
- “To identify any gaps in current research in order to suggest areas for the further investigation”.
- “To provide a framework or background for appropriately positioning of new research activities”.

By executing this literature review, it allows me to identify the current literature, the limitations, quality and potential.

2.2 Literature review as methodology

For generating the best possible overview of the topic backsourcing I used the Five-step approach presented by Vom Brocke et al. (2009) below.

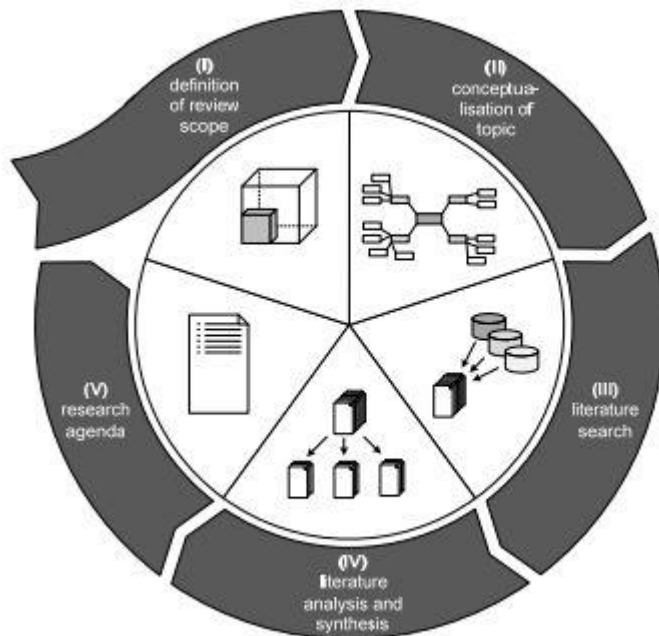


Figure 2: Five-step framework by Vom Brocke et al. (2009)

Vom Brocke et al. (2009) framework for conducting literature reviews has a particular focus on the process of searching the literature, and they state that:

“Things use to change and knowledge continuously grows, literature reviews often become out-of-vogue after a certain time, giving reason for an extension and update of the review”.

This is the case regarding the backsourcing phenomenon, the amount of backsourcing cases rises and its natural that we will gain knowledge and do more research on the theme.

(I) Definition of review scope

Using the taxonomy by Cooper (1998) and adopted by Vom Brocke et al. (2009), the literature search gets a necessary first step of clarification for the literature review.

Characteristic		Categories			
1	Focus	Research Outcomes	Research Methods	Theories	Applications
2	Goal	Integration	Criticism	Central Issues	
3	Organization	Historical	Conceptual		Methodological
4	Perspective	Neutral Representation		Espousal of position	
5	Audience	Specialized Scholars	General Scholars	Practitioners/Politicians	General Public
6	Coverage	Exhaustive	Exhaustive and Selective	Representative	Central/Pivotal

Table 1: Taxonomy of literature reviews (Vom Brocke et al., (2009)

I (1) focused on research outcomes, research methods and theories. My (2) goal was to integrate the literature published and clarify the central issues regarding my research questions. I (3) organized the review conceptually by categorizing the different research themes. (4) My perspective was neutral and my (5) audience is focused towards general scholars and general public. Lastly my paper aim for (6) exhaustive coverage.

(II) Conceptualisation of topic

Vom Brocke et al. (2009) states that a review must begin with an expansive impression of the concept, what is known about the topic and potential areas where knowledge may be needed.

Therefore, related working definitions and the search process is described, and it could also provide an opportunity to uncover relevant search terms.

(III) Literature search

This involves database, keyword, backward, and forward search, in addition to ongoing evaluation of sources. I used several databases when conducting the literature search. My goal was to have a broad overview, but at the same time use relevant databases in the search. I used the databases; *Business Source Complete (EBSCO)*, *AIS electronic library*, *Science direct* and *Emerald Insight*. The reason I used these databases was that after conducting some first-hand research, they were the ones that I found would give me best base for answering the research questions.

I did electronic searches of titles, abstract and keywords for these search terms: “backsourc*” OR “backshor*” OR “insourc*” OR ”reshor*”. The asterisk symbol (*) was used to include all words with the respective root of the keyword, for example, backsour* will return results for both backsource and backsourcing. The keywords were searched in the terms of the title, keywords of the publication, or if it was mentioned in the abstract. I selected several keywords based on the related works discussed in the previous section to ensure full-scale research, even if authors did not employ the term backsourcing to describe the same phenomenon. During the search, I only used Peer Reviewed journals and only journals and conference proceedings in the language English. The reason behind only using Peer Reviewed journals was to secure quality and credibility.

With these searches, I identified 240 publications. Since I have included several search terms that at times is used to describe the backsourcing phenomenon, I performed a practical screening to separate all non-relevant publications by reading the title, keywords, and abstract of the publications in the first search (Okoli & Schabram, 2010). After analysing and reviewing the abstract and title of the search I removed articles that were not relevant for the research questions in this thesis. Mostly this was publications that disclosed backsourcing for subject that was not relevant for the research questions in this thesis. It was also the case that some publications were present in several databases and therefore duplicates. Following this, the non-relevant publications was removed from the further selection process.

Following Levy and Ellis (2006) I then performed a forward and backward reference search using google scholar. It is very important to supplement the search more to reassure that all sources have been found and exhausted. I found this very useful and several publications were included in the deeper review from the forward and backward reference search.

In overall, 25 publications that was either journals or conference proceedings were identified as relevant for my research questions and paper. An overview of what journals and conferences the 25 publications were published in, can be seen in table 2 and consists of several different, but well-known and recognized journals and conferences.

IS Conferences	IS Journals
International Conference of the Association Information and Management (AIM)	Science of Computer Programming (SCP)
Third Global Sourcing Workshop	Journal of Information Technology (JIT)
Hawaii International Conference on System Sciences (HICSS)	The Journal of Information Technology Teaching Cases (JITTC)
Americas Conference on Information Systems (AMCIS)	Communications of the ACM (CASM)
European Conference on Information Systems (ECIS)	Empirical Software Engineering
International Conference on Information Resources Management (CONF-IRM)	Journal of Computer Information Systems (JCIS)
International Conference on Information Systems (ICIS)	Journal of King Saud University - Computer and Information Sciences
Management Conferences	Management Journals
IFIP International Conference on Advances in Production Management Systems	Long Range Planning (LRP)
IS Management Journals	European Management Journal (EMJ)
Information Systems Management (ISM)	California Management Review (CMR)
Academy of Information and Management Sciences Journal (AIMSJ)	Decision Sciences Journal (DSJ)
Information & Management	The Communications of the IBIMA (CIBIMA)

Table 2: Overview of journals and conferences

Figure 3 shows which year the conference and journal were published. The figure shows that most of the research on the topic was done after the year of 2005. One can also note that I found no significant research on backsourcing before 2000. This is in big contrast to outsourcing, which has been broadly researched long before that.

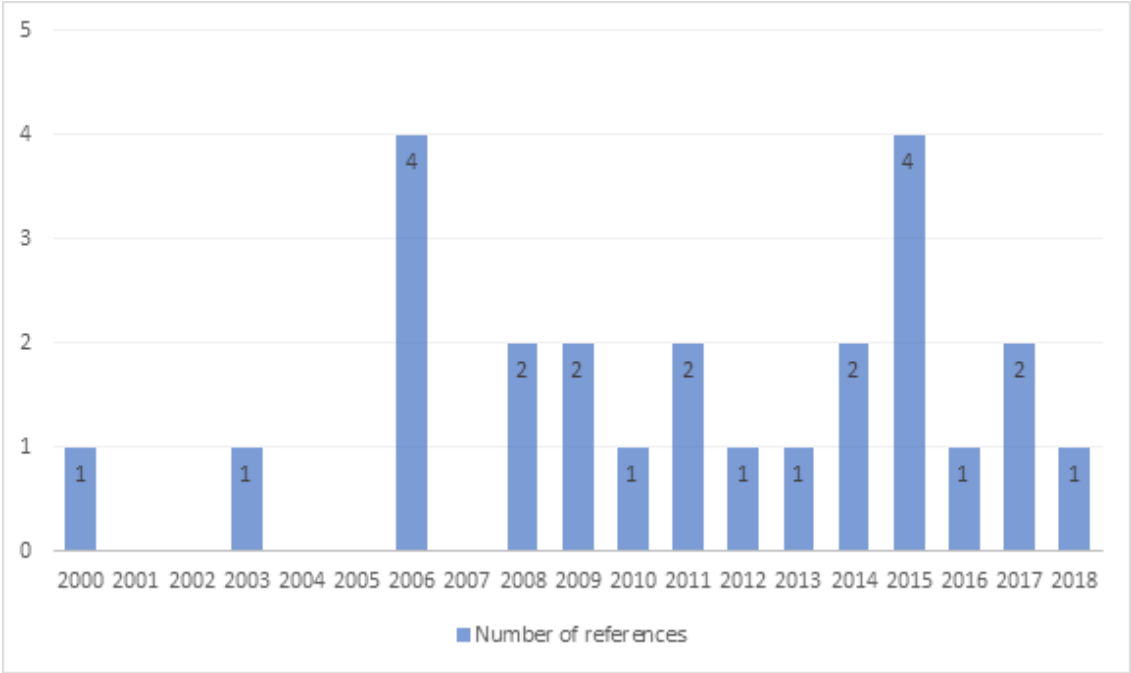


Figure 3: Year journal or conference proceeding published

(IV) Literature analysis and synthesis

Gailliers (1991) did an analysis of IS research and he differentiated between *approaches* and *methods*. *Methods* are carefully focused techniques and procedures for conducting research and *approaches* are more generic ways of going about research (Dibbern, Goles, Hirschheim & Jayatilaka, 2004).

2.3 Research approaches

By using Dibbern et al. (2004) view on research approaches, we differentiate between *empirical* and *non-empirical* approaches. In empirical approaches we use these types of epistemology; interpretivism, positivism and descriptivism. Non-empirical approaches on the other hand is either mathematical or conceptual.

Empirical

In Dibbern et al. (2004) framework empirical research is defined as that based upon some type of empirical data. Generally, empirical research contains at least one of the following research methods:

- (1) Survey - Data is collected in a large number of organizations (i.e. mail questionnaires, telephone interview or published statistics).
- (2) Case study - Data is collected from a limited number of organizations (i.e. participant observations, in-depth interview and long-term studies).
- (3) Action Research - Research that contribute to the practical concerns of people in an urgent problematic situation, as well as to the goals of social science.

Further, there was also labelled several **empirical interpretivist** research papers. These studies seek to understand the deeper structure of a phenomenon. This is done by using different approaches, such as trying to understand the meaning an act has for the actor himself, understand the observed world by spoken or written text, or understand the meanings that singular behaviour means to the subjects (Lee, 1991). These methods are often case studies and action research and place “considerable stress upon getting close to one's subject and exploring its detailed background and life history” (Burrell & Morgan, 1979). These papers are usually built on real case studies. Wong (2008) examined antecedents for back sourcing and based this on interviews, but did also consider additional media publications. Kotlarsky and Bognar (2012) and Nujen, Halse & Solli-Sæther (2015), did the same approach. Moe, Šmite, Hanssen & Barney (2014) lengthened this method by using internal company data which was considered in the reasoning behind the failure of the sourcing arrangements. One research paper did semi-structured interviews in a company that had back sourced their whole IT department (Butler, Slack & Walton. 2011). The goal was to find similarity between outsourcing and back sourcing. Lastly, Cabral et al. (2014) did a field study to investigate the influence of contractual and external factors regarding outsourcing failures.

Empirical positivist was also identified. Requirements that characterizes these types of studies are; use of controlled observation, striving for replicability, use of controlled deductions and

desire for generalizability (Landry & Banville, 1992). In the identified papers non-experimental methods, such as field studies and surveys were most common. Some of the research papers that was *positivist* was; Delen, Peters, Verhoef & Van Vlijmen (2016), and Whitten and Leidner (2006), in the latter one of those the authors used a survey of 160 IT managers and they considered different aspects of quality in their research on back sourcing. These papers are based on interviews with workers that were employed at numerous companies. The studies were based on factors of success and failure for ITO and to establish the reasons as to why companies backsource. Nicholas and Osei-Bryson (2017) did an event study to examine market reactions to back sourcing, and the result revealed that back sourcing is a good strategic decision.

One paper that is classified as **empirical descriptive** was found, and these are studies with "... no theoretical grounding or interpretation of the phenomenon; rather they present what they (the researchers) believed to be straightforward 'objective', 'factual' accounts of events to illustrate some issue of interest..." (Orlikowski & Baroudi, 1991). Bhagwatwar, Hackney & Desouza (2011) used an **empirical descriptive** method and analysed two case studies. They used the results to develop best practices with regard to knowledge reintegration when IS back sourcing is present.

Non-Empirical

This research is not based on specific data and is more abstract and intangible. It is the operation of developing knowledge through either conceptual or quantitative analytical reasoning. We distinguish between *conceptual* or *mathematical*.

Non-Empirical: Conceptual

In particular, these frameworks and arguments arbitrate unstructured thoughts and concepts that circumscribe the phenomenon under study. We differ between two types of conceptual papers. In one of the types, the extensive aim is to provide guidelines for management on the researched topic of scope. The other typology tries to develop frameworks that mainly serve as a basis for research by synthesizing existing knowledge and developing new concepts. Al-Ahmad and Al-Oqaili (2013) created a framework discussing the successful implementation of outsourcing and the reversibility of this. Veltri et al. (2008) created a framework for explaining the decision for back sourcing IT. They observed reasons for IT back sourcing to be an internally or externally motivated opportunity for stability and growth and not only as a

problem-solving measure. Akoka and Comy-Wattiau (2006) created a framework to understand: “Why to backsource IT”, they looked at rational and irrational factors. In addition, McLaughing and Peppard (2006) unified the backsourcing decision into an end-to-end sourcing model, and stated that backsourcing is one of numerous sourcing options. A stages-of-growth model for sourcing of information technology was developed by Solli-Sæther and Gotschalk (2015).

Non-Empirical: Mathematical

These studies involve mathematical models and analyses that are built on a set of restrictive assumptions about the nature of the world. It also considers the rationality of the actors involved. Zero papers in this literature review were identified under this categorization.

2.4 Selected papers for the literature review

There is a quite evenly distribution of empirical and non-empirical approaches (56% and 44%). The biggest approach is the non-empirical: conceptual with 44% followed by empirical: interpretivist with 28 % of the identified papers. Empirical: positivist did also contribute with 24 % of the total number, and empirical: descriptism was decidedly the smallest approach with only one paper (4 %).

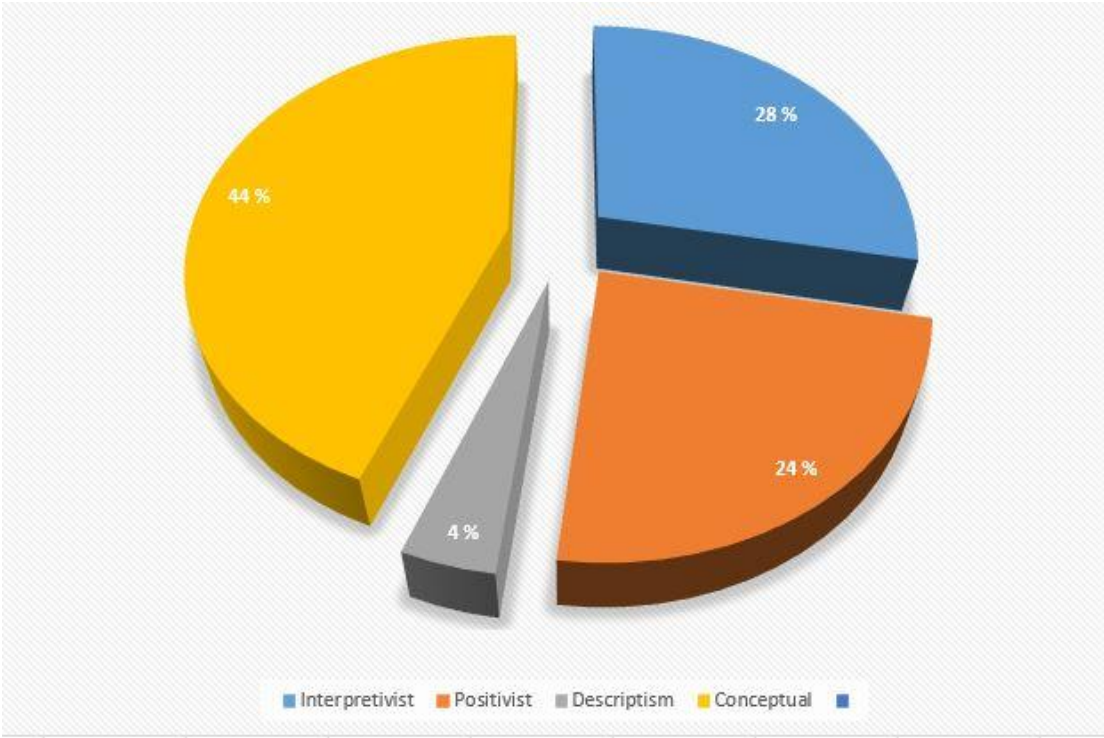


Figure 4: Distribution of research approach

REFERENCE

RESEARCH
METHODOLOGIES

WHY-STAGE

HOW-STAGE

	RESEARCH METHODOLOGIES					WHY-STAGE				HOW-STAGE								
	Empirical		Non-empirical			Motivators		Influential Factors		Implementation Success Factors								
	Interpretivist	Positivist	Descriptism	Conceptual	Mathematical models	Expectation gaps	Internal changes	External changes	Retain Backsourcing decision	Ease backsourcing decision	Communication	Employee re-hiring or new hiring strategies	Knowledge transfer	Knowledge re-integration	Project Team and Plan	Workforce requirements and responsibility	Security Policies	Continuity of Business operations
<i>Akoka and Comyn-Wattiau 2006</i>				x		x	x											
<i>Al-Ahmad and Al-Oqailii 2013</i>				x							x				x			
<i>Barney et al 2009</i>				x					X									
<i>Bhagwatwar et al. 2011</i>			x			x	x	x	X		x	x	x	x	x	x	x	x
<i>Butler et al 2011</i>	x					x	x	x				x			x			x
<i>Cabral et al 2014</i>	x							x										
<i>Delen et al 2016</i>		x				x												
<i>Ejodame and Oshri 2018</i>				x									x	x	x			
<i>Falaleeva 2003</i>		x				x												
<i>Hirschheim and Lacity 2000</i>				x		x												
<i>Kotlarsky and Bognar 2012</i>	x					x	x	x										
<i>Law 2018</i>				x		x	x	x	x	x								
<i>Mclaughlin & Peppard 2006</i>				x		x	x	x		x								
<i>Moe et al 2014</i>	x					x												
<i>Nagpal 2015</i>				x					x									
<i>Nicholas-Donald and Osei-Bryson 2017</i>		x					x	x										
<i>Nujen et al 2015</i>	x							x						x				
<i>Salge 2015</i>				x		x			x	x								
<i>Solli-Sæther & Gottschalk 2015</i>				x		x	x	x										
<i>Veltri et al. 2008</i>				x		x	x	x	x	x	x	x						
<i>Whitten and Leidner 2006</i>		x				x	x			x								
<i>Whitten 2009</i>		x							x									
<i>Whitten et al 2010</i>		x							x									
<i>Wong 2006</i>	x					x	x	x	x			x						
<i>Wong 2008</i>	x					x	x	x					x	x				
Total 25	7	6	1	11	0	16	12	12	9	5	3	4	3	4	4	1	1	2

Table 3: Matrix over the publications

Table 3 is an overview over the 25 publications reviewed, where they are classified in the different research methodologies, as well as what the authors address about the research theme in this paper.

Dibbern et al. (2004) developed a five stage-model of Information System Outsourcing where they divided the five stages into two main phases. This model can be used with the Information System back-sourcing as well. The decision process contains the following questions and stages: *the decision process* and *the implementation*. Further, the decision process consists of the following stages and inquiry.

(1) WHY: Asking WHY an organization might consider outsourcing its IS functions. What are the risks and rewards, or advantages and disadvantages associated with outsourcing? Why does an organization consider outsourcing, what are the drivers and antecedents?

(2) WHAT: Asking WHAT is outsourced, this is referred to things such as organizations and functions.

(3) WHICH: When decided what to outsource, the next question is “which choice to make”. Organizations adopt procedures involving a step-by-step process to reach an outsourcing decision. Guidelines or decision models are used to help them determine the various selection criteria and the actual selection of the final decision.

(4) HOW: When the questions prior have been answered, question the organization`s need to consider the implementation, and the decisions regarding this. This can be summarized by asking “how to outsource”. By “HOW” the focus is on the outsourcing implementation and there are three questions: selecting a vendor, structuring the relationship between the vendor and the customer and managing the arrangement.

(5) OUTCOMES: After and during the implementation of outsourcing, the organization must look at the outcome and result of their choice to outsource. Questions such as: What are the experiences of organizations that have outsourced? What lessons are learned from them? How could they lead to organizational success?

I do not intend to include all of the stages that Dibbern et al. (2004) introduced in this review, but I will limit the stages to the process of “WHY” and the implementation “HOW” stage in my literature review. I found that these stages are most relevant for my paper and will suit best for answering the current research questions in this paper, and is supported best regarding the current literature on IS backourcing.

The literature review will contain discussion of the author’s theoretical framework and what the authors could conclude based on their findings. Furthermore, I will highlight the findings in the theoretical framework regarding the research questions and discuss the different subjects and theories.

3.0 Theory – Literature review

In this chapter, relevant literature regarding the subject sourcing, but with a focus on backsourcing will be explained. It is used several definitions in the previous literature and it will be beneficial to explain this for the benefit of the reader. In the theoretical framework, it will be natural to start with outsourcing, because this must have been done in the past for backsourcing to be present. The goal is to understand different aspects of the theory that will help with answering the research question in this paper.

3.1 Clarification of Concepts

Below there will be presented several concepts related to sourcing. The purpose of this presentation will be to ensure that the reader will have a thorough understanding of the concepts regarding the field of study. Also, several of the concepts are defined very similarly, and could be used interchangeably. This can create confusion and is therefore important to clarify first for better understanding.

It could be used several different concepts regarding sourcing, and to explain the concept. I have identified six of them with help of prior research, as you can see in figure 5 below.

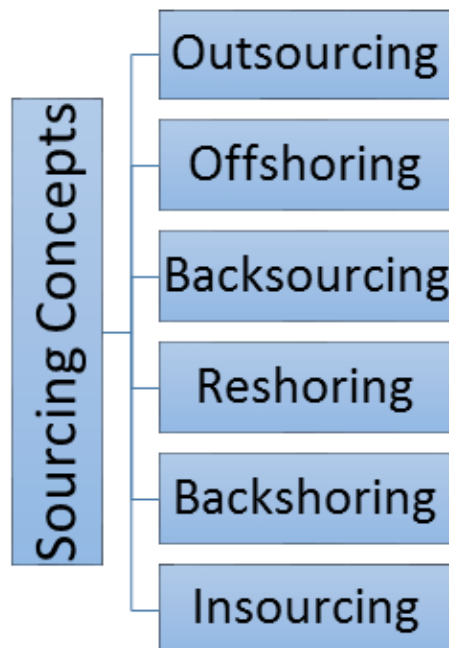


Figure 5: Concepts related to sourcing theory

As stated earlier, concepts are defined different by authors in the literature and some of the concepts are used interchangeably. An extended overview over the relevant concepts and preferred definitions is presented in table 4. Moreover, it is followed by a discussion and explanation of the different sourcing concepts.

<i>Terms</i>	<i>Preferred definition</i>	<i>Authors</i>
<i>Outsourcing</i>	... as "to hire an external organization to provide a good or service, rather than providing it inhouse"	(Domberger, 1998)
<i>Offshoring</i>	... as "the move of a manufacturing process from one place to another (location or supplier abroad)"	(Buckley & Mucchieli, 1997)
<i>Backsourcing</i>	... as "the action of bringing an outsourced service or good back in-house"	(Tadelis, 2007)
<i>Reshoring</i>	... as "...moving manufacturing back to the country of its parent company"	(Ellram, 2013)
<i>Backshoring</i>	... as "re-concentration of parts of production from own foreign locations as well as from foreign suppliers to the domestic production site of the company"	(Kinkel & Maloca, 2009)

<i>Insourcing</i>	... as "insourcing is the practice of evaluating the outsourcing option, but confirming the continued use of internal IT resources to achieve the same objectives of outsourcing"	(Hirschheim & Lacity, 2000)
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Table 4: Relevant concepts and preferred definitions

3.1.1 Insourcing

This term has several meanings and different authors have different definitions, which do not have the same meaning. Chapman and Andrade (1998) have defined insourcing as: "outsourced activities brought back in-house". Using this definition insourcing is explained by taking back activities in-house, that previously is outsourced. Oberoi and Khamba (2005) have defined is as simple as: "... As the reverse process of outsourcing". In this definition, it says nothing about the activities and if it has been previously outsourced. As for Hirschheim and Lacity (2000) they explain that "insourcing is the practice of evaluating the outsourcing option, but confirming the continued use of internal IT resources to achieve the same objectives of outsourcing". In this definition, insourcing is a process where one is considering outsourcing the function, but chooses to produce this function internally. As one can see the term, insourcing can have several meanings. The definition by Hirschheim and Lacity (2000) is used for the rest of this paper.

3.1.2 Offshoring

Buckley and Mucchielli (1997) defines offshoring as "the move of a manufacturing process from one place to another (location or supplier abroad)". The new location can be handled by an external provider but may also be under internal control. Organizations do in a greater degree execute offshoring for the benefits the sourcing-method offers. As with any sourcing strategy there are some challenges, hidden costs are often a problem that is mentioned in the literature. The cost associated with the hidden costs are; travel expenses, extra work because of communication problems, competence differences when initiated the contract and when formulating specifications, or extra work that arise because of development across cultures and geographical distance (Mahnke, Wareham & Bjorn-Andersen, 2008).

3.1.3 Backshoring

The terms back sourcing and backshoring are often not that clear, and this is the case for other terms regarding the sourcing aspect as well. Backshoring will be defined as “re-concentration of parts of production from own foreign locations as well as from foreign suppliers to the domestic production site of the company” (Kinkel & Maloca, 2009). The concept can be interpreted such as you take back a function (geographically) - that have been produced abroad under the organization's own control, or through a supplier. The term is essentially about location and not whom the vendor is as in the case of back sourcing. This is also the fact that differs the insourcing concept that are clarified above and used in this paper.

3.1.4 Reshoring

Reshoring can be defined as “...moving manufacturing back to the country of its parent company” (Ellram, 2013). This is consistent with the view Gray, Skowronski, Esendura & Rungtusanatham (2013) have on the concept. They state that academics in general defines reshoring as moving production functions back to the country where the organization operates.

3.1.5 Outsourcing

To understand the concept back sourcing, you also need an understanding of outsourcing and what that involves. Outsourcing, or contracting out, is by Domberger (1998) defined as “to hire an external organization to provide a good or service, rather than providing it in-house”. Zhu, Hsu & Lillie (2001) defines outsourcing as “the process of transferring the responsibility for a specific business function from an employee group to a non-employee group”. By Perry (1997), outsourcing is described as a contractual agreement that appear when an employer contracts someone to do the activities they have previously done themselves. However, it is important to notice that outsourcing is not a simple decision of whether to make or buy, but a whole series of decisions that needs to be taken to make the right one (Perry, 1997). When interpreting the definitions, one can assume that they both include the fact that an outsourcing agreement have one seller (external part) and one buyer (internal part).

Outsourcing goes a long way back in time. IT was the first area who started using outsourcing. It originally comes from the professional services and facilities management services in the financial and operational support areas during the 1960s and 1970s (Lee,

Huynh, Kwok & Pi, 2003). For an organization in today's competitive environment outsourcing is considered as a strategic mechanism. Outsourcing agreements are often known as being motivated by reduction in operational costs. The costs associated with the operational costs is one aspect to consider, but other antecedents should also be considered to understand the whole concept.

An organization make their decisions regarding their sourcing strategies for the IT at several points of time, and one of them is when the initial decision is made about the sourcing. When making this decision they have two alternatives, outsource or to do the activity on their own. If they choose to outsource the task is entrusted a vendor. Following the latter of these alternatives will make the internal IT-department responsible for the task. When we address the IT outsourcing this means to set up a budget, software, hardware and the workforce. This is literally the whole function (Solli-Sæther & Gottschalk, 2015).

When investigating outsourcing, several authors address the outsourcing to non-domestic countries. Solli-Sæther and Gottschalk (2015) describe this as a function that are moved to a non-domestic country where the vendor and the supplier are separated geographically. Normally the activity is delivered to a lower cost for the firm. Dibbern et al. (2004) states that this is typically done to countries that are not a part of the first world, such as China and India. When a firm evaluate if outsourcing to a non-domestic country is the right move, the costs are being rated highly. The difference in costs between a country in the first world and developing countries can be significant (Dibbern et al., 2004).

We see an increase in firms that outsource their IT to non-domestic countries (Dabir & Ness, 2011). Following this, the customer and the vendor are not close geographically and they have a difference in culture, language and in time zone (Solli-Sæther & Gotschalk, 2015). When experiencing differences in this aspect, the hidden costs that occur is significant. Tadelis (2007) explains that two of the most common hidden costs regarding outsourcing is the costs that can occur when thinking about the transfer of work and knowledge to the suppliers. Further the expenses for staff and the handling of the outsourcing relationship can also be significant.

Reasons for outsourcing

Pagnocelli (1994) has explored the main reasons for outsourcing, such as changing one business function to make it more "centralized" in pursuit of enhanced efficiency. Fan (2000) describes the most important reasons to outsource to be; decreasing costs, improve quality, service and delivery, improve organisational focus, increase flexibility and facilitate change. Winkleman, Dick & Lee (1993) states two important factors behind the growth of outsourcing: cost reduction and a strategic shift in the way companies are managing their businesses. Cost reduction is usually viewed as the internal motivation for outsourcing (Smith, Mitra & Narasimhan 1998), which means using the external resources to provide the same level of services at a lower price than operating it inside.

Dibbern et al. (2004) agrees with the motivation of optimized cost, but also adds the fact that access to highly qualified staff and access to new markets can be two reasons for a business to choose outsourcing as an activity. They further state that these elements weigh even more if the IT office suffer from high costs, lack of competence and do not get the focus that is needed because it is not a part of the core business for the firm. Lastly, Quélin and Duhamel (2003) summarized the main motives as; reduce operational costs, focus on core competencies, reduce capital invested, gain access to external competencies and to improve quality and change cost structure.

Types of outsourcing

There are different types of outsourcing that can take place for companies. Varadarajan (2009) has created a framework to display the different types of outsourcing. It also displays the benefits which is present when looking at it with a more expansive view, that methodically identify and derive detailed opportunities with potential for outsourcing to a wider design of external activities. The five different forms of outsourcing that are mentioned are; (1) Outsourcing to a firm's overseas subsidiaries, (2) Outsourcing to suppliers, (3) Outsourcing to customers, (4) Outsourcing to competitors and (5) Outsourcing to strategic alliance partner.

The first (1) of these types can be defined as moving an activity across national borders. (2) Outsourcing to suppliers can be either that a firm is outsourcing to a third-party firm where no former relationship have been settled or outsource it to a current supplier's additional activities that currently are being produced in-house.

(3) Outsourcing to customers is explained by that the responsibility of an activity is given to the end and intermediate customers. This can for example be self-check in on an airline.

(4) Outsourcing to competitors is when a company choose to invest in manufacturing capabilities and workforce to meet the steady demand but outsources production of additional quantities needed to face seasonal demand.

Lastly outsourcing to (5) strategic alliance partner is a way for cooperating firms to work together and split resources in-between them. The goal for this is to reach a specific or a common goal for the cooperating firms. The benefit is achieved by merging skills and resources at different stages in the value chain where they can contribute the most value.

Risks with outsourcing

The risks that comes with outsourcing is an important subject to discuss in this paper, because the risks are often factors that can take place in the process. Many of these risks can further be triggered and be the factor as to why a company choose the backsource the activity. Although there are several advantages linked to outsourcing, there are also certain risks that arise, both strategic and economic risks. When sourcing activities, buyers might lose critical skills that are crucial to their value chain (Quinn & Hilmar, 1994). This can take place when buyer firms need to re-enter production of activities that previously was outsourced.

Barthélemy (2003) argues for outsourcing as a powerful tool to develop the organization and to focus on the core competency in the organization. However, there is not only positive sides with outsourcing. Barthélemy (2003) created seven mistakes, or “seven deadly sins” that could be made when outsourcing. One or more of these sins have proven to be a part of unsuccessful outsourcing projects. **The first deadly sin** is outsourcing of activities that should not be outsourced. Activities that should not be outsourced is activities that are related to the core competence in the organization. Although, most of the functions are related to the core of the organization in one way, which could make it problematic to identify the functions that need to be outsourced to an external provider. **The second sin** is selecting the wrong vendor. The problems regarding this gets discovered when the vendor chosen is a specialist on one «single-component”, and not the whole function that got outsourced. **The third sin** is writing a poor contract. This can result in higher costs than expected, poor service level, opportunistic behaviour or costs associated to the renegotiation of the contract. **The fourth sin** is overlooking personnel issues. Personnel can feel job insecurity and can behave different based on this. This can result in a decrease in productivity or a strike that will be costly. **The**

fifth sin is losing control over the outsourced activity. This can often be based on two things: First, the client may not have the capability to manage the vendor, or the client do not have the opportunity to influence the provider. One illustration of this could be decreasing productivity at the vendor, which will result in loss and increased costs for the client. **The sixth sin** is overlooking the hidden costs of outsourcing. This can be related to search and contracting costs for instance. The last and **the seventh deadly sin is failing to plan an exit strategy**. Organizations suffer from thinking that the outsourcing contract has “based a long-term relationship”. This can result in a costly contract that are difficult to exit.

Based on the problems and risks that the authors address, this can take place both from the organization that outsource and the supplier of the outsourced activity. The part that outsource and the supplier often have different business goals, and this can naturally result in a conflict of interest (Barthélemy, 2003).

3.2 Backsourcing

The term backsourcing was originally introduced in 1998, and there has since then only been a few studies of the subject (Veltri et al., 2008). Backsourcing, as the term implies, follows the original outsourcing arrangement, and can be a result of an expired, renegotiated, or terminated outsourcing contract. Backsourcing can be defined as ‘the action of bringing an outsourced service or good back in-house’ (Tadelis, 2007). Hirschheim and Lacity (1998) defined the term as “pulling back in-house [previously outsourced] activities as outsourcing contracts expire or are terminated”. Other have defined the concept as: “the process of recalling operations 'back in-house' after they have been outsourced” (Bhagwatwar et al., 2011). When examining the definitions, we see that they all describes taking back a ‘function’ that previously have been outsourced. They also use the concept “in-house”, explaining that the company takes control over the activity. Following the terminology, a company can backsource a ‘function’ from a local provider, because the concept does not intend to be geographically dependent.

For backsourcing to even be possible, an activity must already have gone through the critical stage of ‘Make or Buy’ as part of the sourcing process. If the decision will be to buy, the activity is outsourced to an external third party. The client company should after they have outsourced regularly evaluate the outsourcing arrangement. When the client company re-

evaluate at a certain point they have three options; (1) continue outsourcing with its current provider, (2) outsource with another provider or (3) backsource (Veltri et al., 2008). In this paper, the last of these three is discussed.

There are key differences between outsourcing and back sourcing that justifies the independent study of back sourcing. In back sourcing, the client firm is less equipped to handle the transition of knowledge back from the vendor ((Bhagwatwar et al., 2011; Ejodame & Oshri, 2018). Knowledge transfer is more straightforward in outsourcing, as the outsourcing vendors are better equipped for the transfer of knowledge. Therefore, back sourcing involves unique challenges in the re-integration of knowledge. Further, outsourcing is path dependent while back sourcing is path breaking (Law, 2018).

One important aspect of the literature review will be to look up on the reference theories that was applied in the different publications. In case of the existing literature, there were two reference theories that were noticeable, and most used. Transaction Cost Economics (TCE) and Agency Theory (AT). TCE is defined as “A transaction occurs when a good or service is transferred across a technologically separable interface”(Williamson, 1981) Is the transaction easy and harmonious, or are there frequent misunderstandings and delays? Transaction cost analysis is about the comparative costs of planning, adapting, and monitoring task completion under alternative governance structures. The central idea of TCE is to not only economize on production costs but rather on the sum of production expenses and transaction costs (Williamson, 1981).

Because of this TCE is frequently used in IS sourcing literature. An argument for this is to identify and understand the reasons why companies choose to execute activities in-house or choose to outsource this outside and externally. When you look up sourcing and TCE together the most important sourcing decisions is connected to the fact that TCE have a perspective on all costs, not production costs alone (Salge, 2015). Transaction costs also refers to the effort, time, and costs incurred in searching, creating, negotiating, monitoring, and enforcing a service contract between buyers and suppliers (Falaleeva, 2003). As a result, TCE benefits when trying to achieve an optimal sourcing decision by also seeing project characteristics like asset specificity or uncertainty transaction frequency (Salge, 2015). Solli-Sæther and Gottschalk (2015) discuss this with the reasoning behind the theory that the sourcing of the service function will continuously be on the move, looking for the best way to save costs.

Agency Theory on the other hand notice the relation between the outsourcing company, called *principal* and its vendor, called *agent*. The theory assumes that it exists asymmetric information and divergent perceptions of risk between the *principal* and the *agent* (Jensen & Meckling, 1976). The concept of information asymmetry is central to principal-agent models: here the agent is assumed to carry private information that the principal (outsourcing company) is only able to acquire with extra cost and effort (Barki, Rivard & Talbot, 1993). Agency costs include the costs of structuring, monitoring, and bonding a set of contracts among agents and principals with conflicting interests. Agency theory assumes self-interest, and accordingly opportunism would be a potential threat for the success of the outsourcing relationship (Falaleeva, 2003). The quality of the vendor will be difficult to examine for the company that are outsourcing before the contract is signed. Consequently, there is a risk and can at worst be the factor that explains why the company terminates a contract and backsources their activities.

Still, AT and TCE diminish the effect of the cost savings generated by decrease in production costs due to IS and IT outsourcing. Transaction costs are important, but often underestimated, when the outsourcing contract is proposed. Contrary agency costs are often not sufficiently considered at the time of outsourcing. Costly care of the contract provisions has a negative impact on the success of the outsourcing and seems to tend to play a key role in the backsourcing decision. Unsuccessful outsourcing contracts are likely to be renegotiated or terminated upon reconsideration. Performing IS function back in-house at lower agency and transaction costs may create economic advantages, as well as providing strategic advantages.

I decided to set up three main subjects when reviewing the current literature. This was done conceptually as stated by Cooper (1998), so that the reader could have a better understanding and overview of the backsourcing process. The main subjects were titled **(1) *Motivators*** for backsourcing **(2) *Influence*** (Factors that have a positive or negatively influence on the backsourcing decision) **(3) *Implementation success factors***

Following the motivators, factors that have a positively/negatively influence on the decision and the implementation success factors will be investigated. Next section will be a synopsis

behind these three subjects. Summarized it contains the whole process of back sourcing, from the start to the end of the process.

The focus of this paper will be on back sourcing in terms of relocating IS services. As stated earlier the term backshoring is mainly used in the manufacturing reshoring literature but will be treated in this paper as well, when fitted. The reason for that is that many aspects discussed in these papers are relevant when looking at IS back sourcing. As mentioned in the methodology chapter this paper will have a focus on a “WHY” and “HOW” stage, and the decision process regarding these two phases. Why-stages will in this case be for the main subjects (1) *Motivators* and (2) *Influence*. Lastly, the HOW-stage will contain the (3) **Implementation success factors** for a back sourcing process.

3.2.1 Motivators - “WHY”-Stage

When investigating the literature several different, yet similar types of categorization of the back sourcing motivators were introduced. Veltri et al. (2008) used this categorization when looking at the different motivators for the decision:

- (1) *Contract Problems*
- (2) *Opportunities from Internal Changes*
- (3) *Opportunities from External Changes*

Wong (2008) later on used these terms:

- (1) *Strategic Factors*
- (2) *Power & Politics*
- (3) *Outsourcing expectations gaps*
- (4) *Changes in vendor organization*

Adopted from Veltri et al. (2008) and Wong (2008) I did organize the motivators into (1) **Outsourcing expectation gaps**, (2) **Internal organizational changes** and (3) **External organizational changes**. Both authors did use some sub-categories as well that is very helpful and covers the subject in a good manner. The categorization is practical as it reflects the fact that outsourcing agreements tend to be long-term, often over 5 years. It is realistic to expect these contracts and relationships to be subject to change over time. One important aspect that Veltri et al. (2008) stated was the fact that companies in general do not back source as a consequence of one individual factor, but by a combination of different factors.

(1) Outsourcing expectation gaps	(a) Costs (b) Poor service quality (c) Loss of control (d) Missing access to latest technologies
(2) Internal organizational changes	New executives New role for IT Strategic changes
(3) External organizational changes	Changes on vendor side Pressure from outside Technology

Table 5: Overview of backsourcing motivators

(1) Outsourcing expectation gaps

When a company decides to backsource and make an agreement with the supplier, they naturally have some expectations. It is natural to assume that these expectations are in good interest for the company, the upsides have beaten the downsides when they took the decision to backsource. Hirschheim and Lacity (2000) stated that companies that get in an outsourcing relationship regularly have great confidence and expectations when it comes to this new agreement. The background for the expectation gap is often found in the contract between the company and the supplier (Veltri et al., 2008). The sub-categories that Wong (2008) presented gives a good overview of the different aspects that comes in handy here.

(a) Costs is a big aspect when it comes to outsourcing, and it is important that the actual costs are considered to reduce the expectation gap here. Economic considerations plays an important role in the make-or-buy decision, this is also the case in the ISO decision (Dibbern et al., 2004). Unrealized cost savings through agency costs, transaction costs, hiring and

retaining costs is often the case. The outsourcing cost saving are often overestimated and when these original expectations do not appear from the agreement, the company shift to back sourcing for cost-savings. Veltri et al. (2008) also found that the expected costs in some cases did escalate throughout the contract.

Expectations about the economic efficiency related to costs could initially be good but may be short-term. (Veltri et al., 2008). Transaction and coordination costs within the outsourcing relationship tend to be a factor that makes companies discover higher than expected costs. One example of this could be the costly maintenance of the contract provisions. This has a negative impact on the success of the outsourcing and tends to play a key role in the back sourcing decision (Falaleeva, 2003) Agency costs tend to be underestimated as well (Falaleeva, 2003; Whitten & Leidner, 2006). When the client company's employees spend time coordinating the supplier's activities, costs that was not excepted occur. (Veltri et al., 2008).

Wages in countries that are frequently outsourced to, China and India for example, have raised the last decade which means that the costs are different now than it was when the contract was made. This could be a factor that makes the expectation gap bigger (Salge, 2015). Hirschheim and Lacity (2000) discuss the case that expectations regarding the advantage of outsourcing IT is so high because of press publications advocating the benefits of IT outsourcing. Therefore, many organizations choose ITO expecting to save costs.

(b) Poor service quality

One important, if not the most important factor, is the fact that companies are not satisfied with the service quality that the vendor deliver (Akoka & Comyn-Wattiau, 2006). Things such as poor responsiveness, lack of professionalism, and service delays from the vendor are factors that create dissatisfaction between the company and the vendor (Veltri et al., 2008). Firms that are experiencing poor service and product quality are more likely to backsource than to switch vendors (Whitten & Leidner, 2006). The absence of communication that can occur between the company and the vendor is another factor that can trigger poor service quality.

Cultural differences between the client and the vendor is also an aspect that goes under the quality of the service provided (Akoka & Comyn-Wattiau 2006; Moe et al., 2014).

Transaction costs is as mentioned earlier about opportunism, but several companies overestimate the supplier's competence and capability. Following this they also underestimate the likelihood of supplier opportunism, this combined with the fact that the supplier could be overselling their capability as well is not positive for the company (Salge, 2015). The vendor has in most cases elbowroom, and can for example select personnel to special problems and they can further use this in their own interest. Furthermore, vendors can also change their focus to the higher value contracts, thus resulting in organizations with lower value contracts feeling the change in the terms of service quality (Salge, 2015).

(c) Loss of control

Competitive advantage is something that all companies want to achieve in some way or another. They achieve this by utilizing valuable resources at their disposal. Following the Resource Based View (RBV), they should have their focus on the organizational resources in the organization that contribute a serious amount for the perceived customer benefits for the product (Barney, 1991). When there is a loss of control over the outsourced activities, there will be a limitation for the company to manage the delivery (Solli-Sæther & Gottschalk 2015; McLaughlin & Peppard, 2006; Veltri et al., 2008). When the company has less control, this consequently leads to limited flexibility for them compared to in-house operations (Wong, 2008). When an outsourcing client lose control, it will also lead to restricted flexibility compared to having the activity insourced (Wong, 2008).

(d) Missing access to latest technologies

This is referred to the case when the vendor does not acknowledge and react to the latest technologies (Falaleeva, 2003; McLaughlin & Peppard, 2006). It can also be the case that the vendor does not put in use the cutting edge of recent technology, by doing this they do not assure the best interests for the client company (Wong, 2006). Also, in some cases, the client could become dependent on the providers capabilities to respond to innovation when needed (Veltri et al., 2008). This can for instance be the latest technology available in the market.

(2) Internal Organizational Changes

In a company viewed internally, there are several circumstances that can affect and motivate back-sourcing. Some of these changes can be new executives. They arrive with their own ideas and experience. These ideas could be straight contradictory to the previous executives, and would create changes (McLaughlin & Peppard, 2006; Veltri et al., 2008; Wong, 2008). Especially new Chief Information Officer's (CIO) and Chief Executive Officer's (CEO) often 'reconsider the value being obtained from the IT outsourcing contract'. Resulting the reconsideration, they might find a different strategic value of the outsourced activities and choose to backsource (McLaughlin & Peppard, 2006).

Following the RBV-view companies should keep core functions internally, the changes internally with a change in CEO or CIO the IS function could now be looked on as a core function of the organization (McLaughlin & Peppard, 2006). Organizations that are rational adapt their structures and strategies in response to environmental conditions. Backsourcing could in one way be seen as an organizational innovation in answer to the current outsourcing situation (Akoka & Comyn-Wattiu, 2006). IS changes continuously throughout the new technology and are more relevant now than it was 20 years ago. We experience a world that are more digitalized towards the company's assets, products and towards customers. Organizations could be in a situation where they downsize, for instance by reducing the existing number of products, and this could be a reason for back-sourcing. The reason behind this is the case that the initial contract often ties the organization down to terms that reduce their adaptability for scaling up or down (Wong, 2008).

(3) External Organizational Changes

Wong (2008) and Veltri et al. (2008) states that the general organizational changes, such as mergers, acquisitions or divestments on the vendor side could favour a back-sourcing decision as well. The change could influence the behaviour and how the new vendor organization look at the existing outsourcing contract. Disputes and uneasiness could in this case be present and make the client be motivated towards back-sourcing (Wong, 2008).

Veltri et al. (2008) continue this reasoning and states that they can be based on newly acquired skills. Companies can be pushed to change by external forces such as trade groups, the government or parent organizations that have influence over them. Nicholas-Donald and

Osei-Bryson (2017) studied how the market reacts to back sourcing announcements and found that the market reacted positively to this. This is especially related to the stock markets. This can influence the fact that organizations could want to backsource for the benefit of a better position in the market. Pressures for back sourcing may also come from the institutional environment and bandwagon behaviour. This can also be a shift in the technology. (Cabral, Quelin & Maia., 2014).

There is rarely just one reason that take place before a back sourcing decision is made (Veltri et al., 2008; Wong 2008). Often several motivational reasons that are discussed needs to take place. When Veltri et al. (2008) did their research on the biggest back sourcing-cases to that date, two-thirds of the asked cases recorded two or more reasons, Wong (2008) observed similar results as well.

As contracts ends many of the companies are bringing the IT functions back in-house. Since the total number of companies that backsource is in growth, it is important to know the types of strategy organizations could apply to ensure successful implementation of back sourcing (Hirschheim & Lacity, 2000).

3.2.2 Influential factors – “WHY” Stage

Retain back sourcing decision

The previously main subject “**Motivators**” represent some triggers that starts a thought process in the organization about the sourcing situation. The influential factors, either positive or negative serve as factors that pushes the decision towards back sourcing or against back sourcing.

When a company is in an outsourcing agreement there are several elements that will retain them from bringing the outsourced activities back in-house and have a negatively influence on the back sourcing decision. These elements could keep the contract and relationship ongoing, although it may not be in the best interest for the company or the vendor. Below there is a short explanation by the different literature of the elements that hold back on the back sourcing decision.

Switching costs and locked in	High switching costs Locked in the contract Feeling invested in the relationship
Lacking factors	Missing IT knowledge Missing flexibility
Others	General Expenses and expertise Software licenses

Table 6: Overview factors that retain back sourcing decision

Moe et al., (2014) found that building a lasting outsourcing relationship requires potentially huge long-term investments and it takes a long time to merge two companies with their set of different cultures, technologies and process. It could therefore be the case that some companies feel so invested in the outsourcing agreement that they for that reason choose not to backsource. Switching costs is an element that is present when you are in an outsourcing agreement. It can be defined as “the costs associated with switching supplier” (Thompson & Cats-Baril 2002). There are several switching costs that should be considered due to an IT operation, and Whitten, Chakrabarty & Wakefield (2010) looked up on these. The switching costs that are considered is; (1) lost performance costs of past IT operations, (2) sunk investments costs of past IT operations, (3) uncertainty costs of future IT operations, (4) Management system upgrade costs for future IT operations, (5) Induction-retaining-performance costs during future IT operations, (6) Information transfer and setup costs, (7) Candidate search costs related to the personnel-replacement process and (8) Switching costs related to in-house learning. They found that outsourcing continuation was most preferred and back sourcing least preferred when switching costs were high and therefore this will retain a back sourcing decision.

Companies can also be locked in an outsourcing agreement, due to established organizational systems or high degree of knowledge or asset specificity in the outsourcing context (Law, 2018; Salge, 2015).

Missing IT knowledge is a limitation for any company that uses this in their business. Therefore, missing IT knowledge could retain a company from the back sourcing decision (Barney et al., 2009). The knowledge is missing, and the risk and uncertainty is more present than with sufficient IT knowledge. For companies the skill to have organizational flexibility is needed to respond to changes correctly in the market environment, and if this flexibility is narrow and limited due to a resource constraint the probability to bring the activities back in-house is restricted (Whitten, 2009). When taking the decision to backsource IT activities that was previously outsourced it could also be seen as admitting a misstep, and therefore they could feel uncertain when considering back sourcing (Moe et al., 2014; Wong, 2006).

When considering the need to transfer and re-integrate knowledge, capabilities and resources that is needed when completing back sourcing, there are several challenges related to those (Bhagwatwar et al., 2011). Any back sourcing requires significant expense and expertise on the client's part. The software licenses are typically country specific and may be impossible to transfer as well (Veltri et al., 2008). All of these elements could avert companies to bring activities back in-house.

Ease backsourcing decision

There are some elements in an organization and the outsourcing relationship that support the decision for backsourcing. We can argue that companies which have some of these elements present, have a greater chance to go through and end the outsourcing and bring the functions back in-house. Below there is a short explanation by the different literature of the elements that could support the backsourcing decision.

Precaution Factors	Termination clause Low asset specificity High IS competence
Organizational crisis	Emergency backsourcing
Others	Previous negative experience Low relationship quality

Table 7: Overview factors that ease backsourcing decision

A termination clause in the initial contract with the vendor will be an element that supports a backsourcing decision if that will be the case. For this clause to be supporting it should have a specific step by step documentation between the company and the vendor, and companies that have this taken care of will find it easier to backsource than if not (Veltri et al., 2008). When there is low asset specificity, the buyer and seller do not need to invest in specialized assets and will therefore be less dependent on each other. They can with ease then switch partners (Salge, 2015).

One challenging task that also operates as an element that supports backsourcing, is the IS competence for the client company. Companies that have this in place before hand have a greater chance to go through with backsourcing than a company that do not (Wong, 2006). If there is not sufficient competence on the IS in the company, there would be hesitation to go through with getting the activities back in-house. Backsourcing is simplified through high

competence for the internal IT ability. Companies that have low competence regarding this is more anticipated to be less successful than companies with medium competence on this (Nagpal, 2015).

A serious situation that danger the company and its existence is by Law (2018) named as an organizational crisis and can lead the company to be tempted to backsource. They will then leave the outsourcing path and are therefore afflicted by the current situation for the company. There is a need for change to keep the company alive. Law (2018) has named this “*emergency back sourcing*”, due to the limited opportunities for their outsourcing agreement.

Mclaughlin and Peppard (2016) and Whitten and Leidner (2006) argues that a negative previously outsourcing experience could be an element that support back sourcing in the first place. The quality of product, service and relationship was further analysed connected to the back sourcing decision by Whitten and Leidner (2006). Low service and product quality naturally increase the possibility of ending the current contract, but companies that had experienced a low relationship quality with the vendor are more likely to prefer back sourcing. Following, a relationship experience that is discontented is an element that could ease the back sourcing decision.

3.2.3 Implementation Success Factors – “HOW” Stage

When you compare the IS back sourcing literature with the IS outsourcing literature this is the stage where the biggest difference between the amount of literature occur. This could be explained by the fact that outsourcing have been present for a longer time than back sourcing. The study of IS back sourcing is limited and has so far focused on understanding the incentive and motivation for back sourcing decisions, but the process of back sourcing has not been clarified as much. As stated by Smith et al., (1998) cost reduction is usually viewed as the internal motivation for outsourcing, which means using the external resources to provide the same level of services at a lower price than operating it inside. Back sourcing on the other hand, is as discussed earlier often motivated by several motivators that take place in the same period.

The research in the “HOW”-stage I have chosen to narrow down to eight different aspects developed from Bhagwatwar et al., (2011). The eight different aspects are; *Communication, Employee re-hiring or new hiring strategies, Knowledge transfer, Knowledge re-integration, Project team and plan, Workforce requirements and responsibility, Security policies and Continuity of Business operations.*

Communication	<p>Informing back sourcing decision early</p> <p>Communication with the vendor during process</p> <p>Communication with stakeholders</p>
Project team and plan	<p>Establishing a project</p> <p>All hierarchy involved</p> <p>Geographical distance</p> <p>Experienced back sourcing advisory</p>
Workforce requirements and responsibility	<p>Return policy of properties</p> <p>Support staff in the process</p>
Security policies	<p>Secure important data</p> <p>Take care of disgruntled employees</p>
Continuity of business operations	<p>IT operations runs smoothly</p> <p>Backup system</p> <p>Project implementation techniques</p>
Knowledge transfer	<p>Transparency and willingness to collaborate</p> <p>Cultur and language</p>
Knowledge re-integration	<p>Different form of skills and expertise</p>
Employee re-hiring or new employee hiring strategies	<p>Cost perspective</p> <p>Early plan in the process</p>

Table 8: Overview of implementation success factors

Communication

Informing the back sourcing decision to the outsourcing vendor and in general communication is critical when being part of an outsourcing agreement (Al-Ahmad & Al-Oqaili, 2013). By keeping the vendor up to date as soon as possible, the company secure itself by ensuring that the vendor starts preparing for the knowledge process (Bhagwatwar et al., 2011). This will also benefit the company financially, because an early termination charge could be present and that could diminish where earlier in the process they communicate the decision to the supplier. Veltri et al. (2008) argues that companies should also communicate with the stakeholders that are affected by bringing the activities back in-house. For instance, customers and other suppliers of the company will be influenced by the back sourcing decision (Veltri et al., 2008).

Project team and plan

A guided re-integration process that is assisted by a back sourcing team and plan should be strongly considered. Al-Ahmad and Al-Oqaili (2013) cannot stress enough the challenging task successful back sourcing actually is. They therefore suggest establishing a project; this should be a project plan that looks at all the risks and it should be a defined project team from different levels of the company. The team that is in charge of the back sourcing project should typically involve executives, managers and technical staff from the client side. For best result, this team should involve staff from the supplier side as well. Involvement and responsibility from those would play a critical role during back sourcing (Bhagwatwar et al., 2011). One of the elements that needs to be considered is the relevance of geographical distance in different time zones, and if keeping the stakeholders up do date will make the management of the back sourcing process challenging. By having a demanding and forceful project management, the probability of meeting the transfer date increases (Butler et al., 2011). The required competence is not always in the company at the first place, hence the relatively high spread of the back sourcing phenomenon. Client firms should therefore consider developing back sourcing competence in-house or use an experienced back sourcing advisory to secure success (Ejodame & Oshri, 2018). It is also critical for the outsourcing client to create procedures on how to work with the vendor when transferring the previously outsourced activities back in-house (Veltri et al., 2008).

Workforce requirements and responsibility

The company that are bringing the activities back in-house must ensure that the vendor returns all the properties that belongs to the company. It is also important that they continue to support the staff for the backsourcing work for some time, until all the operations are resumed. The outsourcing vendor have a critical role in the backsourcing process. If there is limited support from their side, the company will face many challenges. When the employees are being transferred back, it is important that they do not have a feeling of job insecurity and are pleased with the process. A prior estimate of what responsibility and roles the different employees have during the process is also important. The reason for this is that knowledge re-transfer is a big part of the backsourcing process, and the employees are a big part of that (Bhagwatwar et al., 2011)

Security policies

The backsourcing process in which the entire IT systems are relocated back from a third party needs to have information procedures implemented. IT system involves data that are important, and it is crucial that it does not get in the wrong hands or leaked. Lay-offs could be the case in a backsourcing process and it would therefore be necessary for the company to have a fitting system security. This will involve aspects on detailed level, such as protection of password system, and one of the reasons is also that employees could be disgruntled and act irrational with the company data (Bhagwatwar et al., 2011).

Continuity of business operations

When the process of backsourcing is started, it is still important for the client company that the IT operations that makes sure the wheels are running throughout the daily operations does not get interrupted drastically (Butler et al., 2011). Therefore, it is necessary that the backsourcing project it planned in a way that there will be a backup system to handle the daily operations. The backsourcing process is expected to be a process that goes over some time, and often lasting months. The backsourcing plan might therefore affect the company's active operations momentarily. Bhagwatwar et al., (2011) further suggest project implementation techniques such as pilot project implementation or phased implementation to make the backsourcing process less complicated.

Knowledge transfer

The IS outsourcing literature proposes that at the time of outsourcing there is a knowledge transfer process of outsourced systems and function from the client company to the supplier (Vlaar, van Fenema & Tiwari, 2008). Backsourcing is an irregular experience for most companies; therefore, the client firm is likely to lack the needed expertise and competence for receiving knowledge from the supplier. The backsourcing process requires serious work by the client firm to bring the activities back in-house (Bhagwatwar et al., 2011; Wong, 2008). Further, the process of backsourcing have challenges that are uncommon for the client firm when re-integrating knowledge collected from the supplier. When Bhagwatwar et al. (2011) reviewed two cases of IS backsourcing, they explained that high transparency and the willingness to collaborate generates positive impacts on the transfer. They also argue that overlooking the importance of communication and the integration of employees into the shift, did indeed lead to negative impacts. Frequently mentioned factors that limit the knowledge transfer during outsourcing include geography or distance, limitations of ICTs (Information and Communication Technologies), union-management differences, language, problems with sharing beliefs and cultural norms and lack of incentives (Bhagwatwar et al., 2011). The process of transferring knowledge goes beyond just transfer of IT infrastructure, but also include various business processes, such as the overall structure of the organization. Thus, a continual exchange between client and vendor is needed to successfully transfer the knowledge needed.

Knowledge re-integration

Knowledge re-integration is a function in the backsourcing process that have gotten more attention the latest years (Bhagwatwar et al., 2011; Ejodame & Oshri 2018); Nujen et al., 2015). Knowledge integration has been defined as “the process of absorbing knowledge from external sources and blending it with the technical and business skills, know-how, and expertise that reside in the business and IS units of a firm” (Tiwana, Bharadwaj & Sambamurthy, 2003). A client firm is prone to meet challenges maintaining the knowledge of outsourced process and activities over time as its experts would either be relocated to the supplier or would be re-trained to perform new tasks within the retained organization (Wong, 2008), (Bhagwatwar et al., 2011). The process of knowledge-transfer does include re-integration of different forms of skills and expertise back to the client company (Ejodame &

Oshri., 2018). With this complex skills and expertise, there is no obvious way to transfer these assets.

Employee re-hiring or new employee hiring strategies

When backsourcing, the decision could involve employee re-transfer, but it could also involve hiring new employees. Hiring new employees or re-transfer of previous employees will create costs in the process. This is a one of the critical goals of backsourcing, and therefore it will be beneficial to establish an early plan respecting the re-hiring of the transferred people and the hiring of new employees. When analysing the backsourcing and its related costs this will be very beneficial in the process (Bhagwatwar et al., 2011). Backsourcing an offshore contract can be even more costly regarding this because you could have to transfer personnel from location overseas (Veltri et al., 2008). The hiring training of highly skilled personnel and service quality support are cost and time factors that needs to be considered for a successful implementation (Butler et al., 2011). The backsourcing plan should consider employee sentiments as a part of it, as it is crucial for the company to secure that the employees being transferred back are pleased with the entire process and do not feel job insecurity. It could be the case that a company are leaved with minimum or zero capabilities, for instance in the IT department. Recruiting the right resources with the right competence is demanding and should be treated early in the process (Wong, 2006).

4.0 Discussion and Conclusion

When accordingly conducted, reviews represent powerful information sources for researchers as well as practitioners that seek existing evidence to guide their decision making and practices. Studies that track and measure the impact of articles have found that reviews are cited and downloaded more, when compared to other types of published articles (Montori, Wilczynski, Morgan & Haynes, 2003).

In this paper the present status of the IS backsourcing research was reviewed and analysed. The paper present and examines an overview of the research into backsourcing over the past 19 years. The research provides a comprehensive review of 25 journals or conference proceedings published from 2000 to 2018, identifying various research designs and methods. This research was done including the entire backsourcing process with the focus on shedding light on the process regarding the research questions discussed.

Seventeen of the twenty-five publications were published in different journals and eight of them in conference proceedings. Looking at Table 2 there is a great variation in journals and conference proceedings where the publications is published. But we can note that Americas Conference on Information Systems (AMCIS) have three publications on the topic, but with two in 2003 and one in 2009. Thus, there has not been a focus the last 10 years on this conference, unfortunately.

Before the year of 2006, there have been a limited number of backsourcing publications. However, in the last thirteen years there have been an increase in the publications on this topic. Only two publications were published in the selected sources between 2000 and 2005, compared to twenty-three between 2006 and 2018. These finding confirms my initial thoughts about the attention IS backsourcing have gotten the last thirteen years and the limitations on the subject before that. With that said, when comparing to the ISO publications done in the same period the difference is still significant (Wiener et al., 2010) (Gonzalez et al., 2006).

Looking at the amount of publications and its factors that is included in the WHY-stage and HOW-stage we get a synopsis on what stages of the backsourcing process that have been allocated most times for research the last 19 years.

The amount of publications that mention and covers the WHY-stage are in majority, and quite significant. Looking at the twenty-five publications, almost all of them were focused towards the WHY-stage and factors such as motivation and drivers for the back sourcing decision. When looking at the three categorizations of motivation I stated, the category expectation gaps have gotten most attention in the literature as a motivation for back sourcing. In the sub-categories, the two most mentioned aspect are expectation gaps regarding costs and poor service quality. When looking at the ISO literature (Wiener et al, 2010), (Gonzales et al., 2006) costs is very influential, so it is natural that this is mentioned frequently in the IS back sourcing literature as well. Looking at the second WHY-stage and the influential factors that either retain or ease an back sourcing decision I found that more papers discussed and mentioned the factors that retain a decision to back source, respectively 9 against 5 papers. One can notice that the contract is discussed in both of the influential sides but in different manners. The publications that is focusing on this aspect of the process, was mostly aimed towards the IS back sourcing. In addition, some publications did examine ISO and failures connected to this. In other words, the drivers and motivation regarding the back sourcing decision have gotten some attention in the research work.

One thing to note is that most of the publications that involve the HOW-stage and the implementation process is published in the second half of the year period when the publication was published (2000-2018). Thus, it looks like the researcher have had more focus on the HOW-stage the last ten years, than the previous ten years. However, the research on the implementation and its success factors is still at the starting gate. It is not done too much research on the different factors in this stage and what outcomes that could be expected. It seems that there are some aspects that could create several challenges to the implementation process, and the literature states that transfer of knowledge and knowledge re-integration is two of them. This could be related to the difficulty to measuring these aspects and the complexity of the task.

Barthélemy (2003) did argue that there are "seven deadly sins" that are related to outsourcing. Several of these sins turns out to also be mentioned as motivators for IS back sourcing. This is factors such as; writing a poor contract that could result in higher than expected costs, poor service level or opportunistic behaviour. Higher than expected costs and poor service level are

two things that is mentioned several times in the literature regarding IS backourcing as stated. One other sin that Barthelémy (2003) discussed is overlooking personnel issues and losing control over the outsourced activity, this is also mentioned in the IS backourcing literature.

There are some limitations too when doing a literature review and they are also present in this one. The review can only be reviewing what is found and therefore it is an aspect of publication bias. Meaning the likelihood of a study being published by the findings of the study containing “positive” findings (Porta, 2014). Other sources of limitations maybe due to language barriers and unavailable data. My literature search in the databases was only set to English. This means that there could be several relevant publications on other world languages such as; Chinese, French, German, Spanish and Russian. As well, I conducted pruning by manually removing the unrelated publications after a read through of the abstract. At this time of the selection progress, it could be some limitations regarding my knowledge stock about the research theme when conducting the search as well. With the use of numerous search terms and several academic databases, I cannot exclude the fact that some publication could have been excluded in this review.

I also found that forward and backward reference search was very beneficial, and I did indeed identify several publications in this manner. When looking at this it could be the case that there was some academic database or search terms that was not included in the original search, but should have. In addition, my search did not include “Information Systems” or “Information Technology”, and following this my search result ended up comprehensive, but did possibly not get narrowed down as much as needed. I found that numerous publications did not fit my research questions following this.

I feel fairly confident that my selection progress has been comprehensive following the Vom Brocke et al (2009) five-stage, but it needs to be taken account for that some gaps are present in the review. When looking at this literature review and the selected papers I can conclude that research regarding backourcing is in the starting phase. This is based on referring to the literature review of IS offshoring done by Wiener et al., (2010) and the number of related publications found in their article. In comparison the authors identified 96 related publications on the ISO topic in 2010. I predict that this phenomenon will get much more attention in the coming years.

However, when looking at the publications, the fact that it is possible to backsource the previous outsourced activities to a new provider is not discussed that much. Take up on research on this may prove to be difficult as well, because you need to consider the new providers capabilities as well.

There have been no papers, to my knowledge, that have developed a typology of back sourcing based on drivers and expected outcomes of back sourcing, because the drivers and motivation for back sourcing can vary. Some prior research have distinguished the term as a failure of outsourcing (Moe et al., 2014), (Law, 2017), this could be the case, but not always. I will conclude that back sourcing is an answer on strategic flexibility and generates a positive outcome for the firm. Back sourcing does also have a strong relation to make/buy decision, and in the forthcoming, it might be important to evidently position back sourcing in the wider spectrum of make/buy research. One last mechanism that could get more attention in the literature is the internationalization, this is because back sourcing span across geographical and national boarders quite often.

Examining and the motivation and factors that affect the back sourcing decision is researched in the literature quite sufficiently. However, most of the papers are based on interviews, surveys and studying of different outsourcing cases that ended in back sourcing. It could be the case that the management and the organization do not make public the real reason for the motivation behind the back sourcing decision. This could be information that will hurt the organization in the future and which they do not want to get public under any circumstances. These kind of “hidden” motivation and influences would be interesting to get more research on.

I suggest that further research is necessary to segregate the various form of back sourcing based on the motivation and factors. Further research should also distinguish between looking at back sourcing as an outsourcing failure and when it is a strategic change involved in the decision. This could change the research approach and following the findings.

Another aspect that is not addressed in the literature sufficiently is investigating the duration of the outsourcing contract and how that will affect the back sourcing decision. One will assume that earlier in the contract duration the factors that retain the back sourcing decision is

bigger than the factors that ease this situation, but research should be done on this topic. I did not use the backsourcing theory that focuses on manufacturing backsourcing in this paper, but I will think that an investigation and comparing different industries would benefit the sourcing theory.

As discussed earlier on emerging technology is an important part of the IS backsourcing. In the literature, technology is discussed in the WHY-stage at several occasions. The global information technology is growing and CompTIA (2019) projects that this industry will grow at a rate of 4.0% in 2019. Following, companies get more dependent on the technology in the future regarding their sourcing decision and the need for further research in this area is needed.

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