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## List of Abbreviations

CEO	chief executive officer
DC	dynamic capabilities theory
e.g.	for example
etc.	and so forth
FDI	foreign direct investment
i.e.	this means
IP	intellectual property
IT	information technology
MNC	multi-national company
MNE	multi-national enterprise
OLI	ownership advantages, location advantages, internalization advantages model
PR	public relations
R&D	research and development
RBV	resource based view
SC	supply chain
SCM	supply chain management
SEK	Swedish crowns
TCE	transaction cost economics
TPS	transport planning system
U.S.	United States of America
UK	United Kingdom
VP	Vice President
VRIO	valuable, rare, imitable, and organization

# I Introduction

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*As this thesis deals with the phenomenon of reshoring, the following introduction chapter will give a general overview on the whats, whys and hows of this topic. First, the evolution of offshoring and then reshoring is briefly presented before the research problem, purpose and questions (i.e. the reasons for why the authors are undertaking this research, are introduced) A few delimitations conclude this introduction chapter.*

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## I.1 Background

In the last decades, globalization has changed the rules of competition in business (Gottfredson, Puryear & Phillips, 2005), leading to a major outsourcing trend as the pressure on firms to improve efficiency and competitiveness has grown constantly (Baden-Fuller, Targett & Hunt, 2000). By outsourcing non-core business activities, companies can focus all their resources on their core-competencies in order to sustain their competitive advantage over competitors and other businesses (Sislian & Satir, 2000). This is why outsourcing was formally identified as a business strategy (Mullin, 1996). It does not only achieve cost reductions but it also helps firms to develop their competitive capabilities and understand better where efficiency can be improved (McIvor, 2009). When activities are outsourced to a foreign country, this ‘relocation of organizational tasks and services’ (Jensen, Larsen & Pedersen, 2013) is usually referred to as ‘offshoring’ (Kotabea, Molb & Murrayd, 2008). Offshoring can either happen in-house or as offshored outsourcing which means that both terms may not be used as synonyms (Bailey & De Propris, 2014a).

Ever since the opening-up of China in the 1970s and 80s, companies heavily made use of offshoring to profit in particular from low labor costs and later a business-friendly regulatory environment as well as access to raw materials. Therefore, outsourcing and offshoring are one of the most important strategic decisions for firms in today’s markets (Holcomb & Hitt, 2007). Its importance is also reflected in the plethora of scientific articles on the ‘manufacturing location decision’ (McIvor, 2013).

As one consequence of offshoring, millions of relatively well-paid manufacturing jobs in the developed economies have been replaced by a workforce in developing countries. This has led to a gradual decline of manufacturing activities in the western hemisphere. In the U.S. alone, the number of manufacturing jobs declined from 19 million in 1978 to 13 million in 2013 (Barrentine & Whelan, 2014). Although factors such as foreign market access have become more important over time, the major driver to offshore is still cost savings (Shah & Moushon, 2014). Scientists have attempted to explain this driver and other common drivers to offshore with a variety of models and theories (Kinkel & Maloca, 2009).

As all types of companies started offshoring, it is not just the number of success stories which increased but also the figure of offshoring failures. Within the last decade, it has been recognized by firms, consulting companies and the academia that offshoring is not always beneficial. For instance, it was noted that it is easy to underestimate the total cost associated with operations abroad and that current modelling techniques for decision-making are frequently incorrect or oversimplified (Brown, 2010). There are numerous examples of firms having issues with their offshored operations from the U.S., Canada and Europe. In an increasing number of cases, these problems ultimately led to the ‘reshoring’ of offshored manufacturing and gave rise to what is known as the ‘reshoring phenomenon’ – the major topic of this thesis.

Reshoring is a trend observed primarily in the U.S. and Western Europe (Needham, 2014, Economist, 2013, Sirkin, Zinser & Hohner, 2011, Janssen, Dorr & Sievers, 2012, Ferreira & Heilala, 2011) but also occurs in other high cost manufacturing environments such as New Zealand (Canham & Hamilton, 2013). The trend summarizes the increasing number of discernable cases where firms that previously offshored manufacturing operations are returning those to their home country (or former manufacturing base). According to Fratocchi et al. (2014), reshoring is not a new phenomenon but has been prevalent since the 1980s (Mouhoud, 2008). However, cases have only recently started to gain the media's, consulting firms' and politicians' attention.

The debate on reshoring seems to be driven by popular press and politics' increasing coverage of the topic. Both attempt to exploit the issue by interpreting it as a tool for job creation at the home base, which can provide hope in times of growing dependency on Asia, political tensions and economic uncertainties (Brown, 2010). In the U.S. "the Reshoring Initiative" is an organized attempt to encourage and support more companies to reevaluate their manufacturing location decision (Bangert, 2012). However, this is where wishful thinking and reality meet because even though reshoring may happen, the situation will not be like in the 1980s, the time before the major offshoring trend occurred (Bailey & De Propris, 2014b).

When discussing reshoring, it is important to recognize that the reshoring phenomenon is bound to appear in the context of offshoring done previously and that "backshoring activities thus consist of an interlinking of two sequentially following relocation decisions and can only be discussed in connection with the previously made offshoring decision" (Kinkel & Maloca, 2009). This connection could for instance be seen in cases such as Ford, Google and Lenovo in the U.S., and BMW, Siemens Energy or Electrolux and Husqvarna in Europe (Sirkin, Zinser & Hohner, 2011, Ferreira & Heilala, 2011, Economist, 2013, Svenskt Näringsliv, 2013), where those firms decided to move part of their production closer to home. A survey by *The Wall Street Journal* and *NBC News* showed that these shifts receive much attention from the public in the United States and *The Economist* quoted that "86 percent of U.S. Americans polled said that offshoring of jobs by local firms to low-wage locations was a leading cause of their country's economic problems" (Economist, 2013) emphasizing the public relation's impact of reshoring decisions.

According to Kinkel and Maloca (2009), empirical studies often do not recognize that the offshoring decision does not have to be irrevocable and that moving manufacturing back to the home base is quite common, which in itself has a wide array of drivers and antecedents. It even occurs that offshoring operations are stopped at an early stage due to reasons such as asset specificity, poor contractual design, and deficient monitoring (Cabral, Quelin & Maia, 2014).

## 1.2 Problem Statement

A strategic relocation of industrial manufacturing from low-cost to high-cost environments has not been widely recognized previously. This is why the reshoring phenomenon is somewhat new and emerging even though a few cases have sporadically occurred since the 1980s (Fratocchi et al., 2014). Business and management science are still catching up with a sufficient scientific coverage and evaluation of this issue. In other words, the area of reshoring is largely under-researched (Arlbjørn & Mikkelsen, 2014) unlike its predecessor "offshoring". Therefore, it is necessary to undertake research on reshoring to understand this new occurrence better and increase knowledge on its drivers and barriers.

There is already a rich coverage on reshoring in non-scientific publications – especially in connection to economies which have seen examples of reshoring happening within their boundaries. In addition, clear reshoring trends could be identified in some of these economies, e.g. in the U.S. (the Reshoring Initiative), and the usual suspects such as the local executive and legislative bodies and consulting companies have taken an interest in the phenomenon (Needham, 2014, Bangert, 2012). The former because the topic touches the critical issue of unemployment in North America and Europe and the latter as it could represent an opportunity for future consulting work. In order to verify politicians and consultants' views on reshoring more scientific evidence is needed.

A thorough literature review has shown that empirical research on reshoring is very scarce and it is not clear whether reshoring is perceived the same everywhere or whether regional differences exist. Although scientific studies on reshoring were conducted in Spain (Martínez-Mora & Merino, 2014), Germany (Kinkel & Maloca, 2009) and Denmark (Arlbjørn & Mikkelsen, 2014), there have been no academic attempts to tackle the issue in Sweden. In a survey, Svenskt Näringsliv (2013) found that there was no observable reshoring trend in the Swedish economy which was confirmed by a master's thesis from Uppsala (Enwall & Persson, 2014). Nonetheless, an increasing number of reshoring cases were reported in Sweden, e.g. Company C and Company D relocated parts of their offshored manufacturing back to their home country. Moreover, even though the Swedish economy is relatively small, Sweden can be considered a global player with many world-renowned brands such as Volvo, IKEA, Ericsson and Electrolux. Thus, this high-cost economy is a relevant candidate to further reshoring research making it worthwhile to identify and study the motivation of Swedish companies to move their production back and understand the drivers and barriers for their decision to reshore. Additionally, in the context of reshoring the motives for the initial offshoring decision should be explored and how the offshoring-reshoring strategy developed over time.

### **1.3 Purpose and Research Questions**

This thesis aims to close part of the existing research gap in regards to the reshoring phenomenon. Despite the fact that an increasing number of companies have reshored, a deeper understanding of and coverage on why firms return their manufacturing operations still remains to be developed. Therefore, the purpose of this thesis is to clarify the rather blurry concept of reshoring based on existing academic literature and to advance research on the phenomenon from a Swedish perspective.

With this purpose in mind, three research questions were created in order to guide the research process. The first step in fulfilling the purpose is to review what has previously been written on this topic in academic spheres. Although literature on offshoring is widely available, reliable quality coverage on reshoring is in its infancy. In contributing to closing this research gap it is necessary to identify the status quo of academic literature on reshoring and to clarify the rather unclear concept. The first research question was formulated accordingly and answered with help of a systematic literature review:

#### **Q1: What is the academic status quo of published research on reshoring?**

The second step in achieving the purpose aims to improve the understanding of the drivers and barriers for the occurrence of this phenomenon. In the Swedish context, it seems relevant to discover the motives of companies to return their manufacturing operations. Thus, the second research question of the thesis is:

**Q2: Why did Swedish companies reshore their manufacturing and which drivers and barriers were considered in the context of the reshoring decision?**

The third step in fulfilling the purpose is to explore to what extent drivers and barriers identified in the literature compare to the motivations found through the empirical investigation. This is expected to guide the finding of conclusions on how reshoring might affect firms in Sweden. Thus, the third research question inquires:

**Q3: To what extent do empirical results differ from the findings in literature and what should firms consider for future reshoring?**

In order to answer these questions a systematic literature review and a multiple case study including Swedish firms from the manufacturing industry will be conducted. Identifying and evaluating the motives for reshoring from a Swedish angle, and comparing those to the ones derived from the current body of literature, could illuminate strategic opportunities for this kind of industry in Sweden.

#### **1.4 Delimitations**

Considering time constraints and word limitations imposed on this thesis, delimitations had to be applied. The uniqueness of local characteristics of companies and differences between regions as well as the unique nature of reshoring entails that the findings cannot be directly transferred to other Swedish manufacturing firms or industries as a whole. Moreover, the study cannot confirm the findings' global relevance due to the limited geographic scope. Nonetheless, since reshoring is a topic of interest and literature on this phenomenon is scarce, the results of this thesis are likely to be useful for firms in Sweden and possibly beyond.

## 2 Methodology

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*The methodology chapter aims to inform the reader on how the data for this thesis was collected and analyzed as well as why the techniques applied were the most appropriate. Since the main objective of a thesis is to contribute to science by closing the research gap reflected in the purpose, the methodology has to be well suited. Moreover, this chapter is of integral importance to the thesis as it allows the reader to draw conclusions on the research quality.*

---

### 2.1 Research Philosophy

Although research on reshoring may involve objects, most often it will be primarily concerned with human actions and interactions. This is due to the complexity and uniqueness of business situations which can be seen as “a function of a particular set of circumstances and individuals coming together at a specific time” (Saunders et al., 2012). Thus, as with most business problems, researching the reshoring phenomenon requires the adoption of a research philosophy which allows the study of human actors, their actions as well as the interpretation of their subjective meanings by the researcher. Hence, the research philosophy adopted for this thesis is oriented towards that of interpretivism. This philosophical stream assumes person and reality to be inseparable and perception being bound to a person’s experiences which she or he have obtained throughout their lives. Accordingly, “knowledge is built through social construction of the world” (Weber 2014, p. VI).

### 2.2 Research Approach

When conducting research, one has the choice to take several methodological paths which influence the nature of the results. Hence, it is very important to pick the right path in order to receive the most valuable findings. According to Saunders et al. (2012), research can be inductive, abductive or deductive and uses a quantitative, qualitative or multiple method design. The nature of the research design can be exploratory, descriptive or explanatory.

A general-to-specific approach has been applied. We first consulted a broad range of existing publications on reshoring, which served as a theoretical foundation to formulate the research questions. Based on these questions a systematic literature review was compiled. The review serves as our thesis’ frame of reference on which the empirical study is based; in particular the guideline for the semi-structured case-study interviews. During the analysis of the empirical data we constantly refer back to theory. Hence, our thesis uses existing literature to further explore the reshoring phenomenon and can thus be best described as following a deductive research approach (Saunders et al., 2012).

Whereas quantitative research tends to focus on examining relationships between variables and uses statistics to measure these relationships by means of highly standardized data collection techniques, qualitative research is more interested in the meanings of and relationships between the subjects studied (Saunders et al., 2012). In line with our philosophical choice, our study is more concerned with the latter which is why we decided to conduct our research as a qualitative study even though this kind of investigation is often seen as more subjective, less reliable and harder to validate (trustworthiness issue) (Eriksson & Kovalainen, 2008). However, since the field of reshoring is one that is underresearched (Arlbjørn & Mikkelsen, 2014) and does not seem to be defined in a very ‘abstract’ way, the usability of a qualitative method is in line with the reasoning of Khan (2014) who states that “qualitative research is used to explore the potential antecedents and factors about which little has been known and explored”. A qualitative research method is specifically useful for identifying the ‘soft-dimensions’ of the reshoring phenomenon; the ones that cannot directly



be translated into numerical figures and are subject to a broad number of influencing dimensions and factors

Distinguishable from an explanatory and descriptive purpose of study, exploratory research is especially suitable for a purpose where the researchers seek to gain new insights in a (relatively) undiscovered phenomenon (Blumberg, Cooper & Schindler, 2014). Tools for such a study include the use of literature reviews, various kinds of interviews and focus groups (Eriksson & Kovalainen, 2008). Additionally, as the phenomenon of reshoring is relatively 'young' and scientific knowledge on it is scarce, an exploratory nature seems to be the most suitable purpose for this thesis. This choice can be further justified given the characteristics of the research and our own preferences for having a helicopter view on the topic. Furthermore, as exploratory studies primarily look to address research asking about 'what' instead of 'how and why' (explanatory) or 'who, where and when' (descriptive), the choice seems appropriate for all our research questions which are essentially about 'what' (even though one is formulated using 'why') (Saunders et al., 2012).

## 2.3 Systematic Literature Review

The research strategy of this thesis follows a funnel approach. At first, we conducted a systematic literature review to systematically unlock the topic and develop a deep understanding of the reshoring concept, its drivers and barriers, etc. This chapter gives an outline of the chosen strategy and its execution to facilitate transparency in the rationale behind the literature review for this study.

### 2.3.1 Research Strategy

According to Fink (Beske, Land & Seuring, 2014) "a literature review is a systematic, explicit, and reproducible design for identifying, evaluating, and interpreting the existing body of recorded documents". It provides the foundation for the research (Saunders et al., 2012) by helping the researcher to get an overview about the research published in his/her area of interest through summarizing its content and "identifying patterns, themes and issues" (Seuring & Müller, 2008). Thus the review can serve as a guideline to determine the scientific status quo of the relevant field, detect research gaps and contribute to theory development for future research (Squire et al., 2006). The material included in the review will often only cover parts of the literature available, as reading all documents published is impractical in many cases due to an abundance of publications. However, it is feasible to compile all-encompassing reviews if the research problem is narrowly defined or explores an emerging issue such as the topic of 'reshoring' in this thesis.

A scoping study (Saunders et al., 2012) revealed that at the time of writing no thorough literature review had been published on reshoring. Accordingly, we deemed it necessary to go one step further and conduct a systematic literature review. The reasons for this were twofold. First of all, the concept of reshoring is still rather unclear and by systematically reviewing the material available we aim to encompass all material on the reshoring topic. Second, only the most scientifically reliable sources were to be examined in order to ensure the quality of the review content.

Systematic literature reviews are based on an analytical review scheme to systematically evaluate the contribution of recorded documents (Ginsberg & Venkatraman, 1985) and require the use of an explicit algorithm to "perform a search and critical appraisal" (Crossan & Apaydin, 2010). By applying the scheme, the quality of the reviewing process and its results are improved because the gathering of documents follows a clearly defined, transparent and

repeatable procedure (Tranfield, Denyer & Smart, 2003). In general, the compilation of a review follows three steps which can be described as data collection, data analysis, and synthesis of the findings. According to Crossan and Apaydin (2010) each part has to be conducted with scientific rigor to ensure high quality results.

Unlike a common literature review, which is often a collection of data randomly selected by the researcher, the systematic review approach is less subjective due to the use of the predefined data gathering algorithm. The data analysis also follows a more stringent approach compared to a narrative review and may include either a qualitative or quantitative exploration of the results, the latter being superior to the former according to Hunter and Schmidt (1990). In this thesis, both qualitative and quantitative analysis were used during review preparation. However, quantitative approaches did not go beyond the level of descriptive statistics due to the limited number of scientific publications on the topic of 'reshoring'. On the qualitative side, Mayring's model of categorizing and pattern-matching was used (Mayring, 2010). The concluding data synthesis serves as the keystone of the review as it represents the breeding ground for new knowledge. The synthesis combines all gathered information in a new way and allows the researchers to draw conclusions for further research.

### 2.3.2 Data Collection

Following the strategy presented above, it is important that the researchers clearly define which material is acceptable and which should be excluded from the sample. For this thesis the delimitations outlined below were made:

1. The search focused exclusively on peer-reviewed academic journal articles, written in English and from the field of business administration / management. Papers in other languages or with different foci (such as construction engineering) were excluded. The abundance of popular press articles and studies undertaken by consulting companies were also not considered.
2. From the papers, which qualified under the inclusion criteria listed under point 1, articles whose main topics were FDI, divestment, offshoring, outsourcing and manufacturing location decision were excluded as their focus was too far away from the reshoring phenomenon.

After the definition and delimitation of the material searched, the main data collection was carried out as a structured keyword search (see table X below for search strings and appendix 1 for the specific search results) in major databases with Abi/Inform being defined as the primary database and Scopus, Business Source Premier, Science Direct and Taylor and Francis serving as secondary databases. The choice of databases was based on their overall content size, scope and content relevance for publications in business administration. All searches were conducted twice – once by each researcher – to increase the selection's reliability. Based on a quick content check, articles were independently in- or excluded by both of us. In a second step, a common list which would serve as a base for the next search level was compiled during a discussion session. Afterwards the abstracts of all material from the common list were screened and articles were categorized as "peer-reviewed and relevant", "interesting but not peer-reviewed", or "irrelevant". The results of the screening were again combined to a common list of peer-reviewed and relevant articles. All articles from this list were fully examined before being either in- or excluded from the final sample. In addition, the references were considered as a secondary source for the search but hardly any new material could be discovered. The final sample, satisfying all delimitations, consisted of 25 journal articles.

Table 2.1: Search strings used for structured keyword search

Combinations
reshoring OR backshoring OR onshoring
reshoring AND onshoring
onshoring AND backshoring
reshoring AND backshoring
reshored OR backshored OR onshored
reshore OR backshore
inshoring OR inshored
re-shoring OR back-shoring OR on-shoring

### 2.3.3 Data Analysis

As it seemed clear from the outset that the data analysis would focus on a qualitative examination of the literature, the framework for the systematic review was chosen accordingly. The selected model, proposed by Mayring (2010), emphasizes qualitative analysis of the data obtained by following four distinct steps which correspond to the above mentioned review phases:

- 1) Material collection (data collection)
  - Definition and delimitation of material searched
  - Definition of unit of analysis (e.g. journal articles)
- 2) Descriptive analysis (data analysis)
  - Assessment of formal aspects (e.g. publications per year)
- 3) Category selection (data analysis)
  - Definition of content categories (either deductive or inductive)
- 4) Material evaluation (synthesis)
  - Content analysis guided by defined categories
  - Interpretation of results

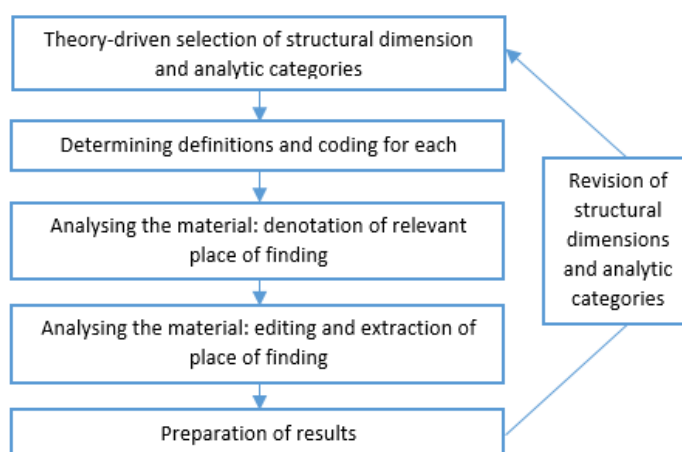


Figure 2.1: Process by which articles are analyzed. (Adapted from Seuring & Müller, 2008)

Analysis and synthesis are closely connected in Mayring's framework. Fig. 2.1 clarifies this connection by detailing the process by which articles are analyzed (including a feedback loop). In step 3, broad categories are devised to sort the research material. Also, definitions

and coding for each category are determined. In step 4, the documents are analyzed according to the coding structure and relevant parts of the material are extracted to be included in the results. This analysis might have to be repeated several times as categories might be changed or adjusted (Mayring, 2010). Overall, this method formed the foundation of the systematic literature review presented in this thesis.

## 2.4 Case Studies

After conducting the systematic literature review, case-studies using semi-structured interviews were conducted in Sweden. The following paragraphs describe our empirical strategy, data collection and analysis procedures in great detail.

### 2.4.1 Research Strategy

Saunders et al. (2012) provides a broad number of possible research strategies that can be used for qualitative studies. To carry out the empirical research of this thesis, we used one of these, namely case studies. Yin (2013) defines a case study as “an empirical enquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (Yin, 2013, p.13). The latter characteristic certainly applies to our topic, where the phenomenon of reshoring seems to be intertwined with a broad range of contextual factors.

Since a number of companies have been included in the sample and semi-structured interviews were replicated, this study can be regarded as a ‘multiple case study’ (Yin, 2013). As compared to a single-case study, the findings may be observed as more reliable since constructs that are unique to a single informant are more likely to be identified. Furthermore, since the aim is to find more contextual insight into reshoring decisions made in Sweden, a multiple case study facilitates the obtainment of data from different companies’ perspectives. This provides the researchers with a broader exploratory foundation as compared to a single case study.

Purposive sampling was used in this thesis since the number of companies which have reshored to Sweden is limited and no comprehensive database specifically listing these cases exists. Based on Patton’s 16 sampling strategies, the ‘intensity sampling strategy’ was adopted. This strategy purposefully picks information-rich cases which manifest the reshoring phenomenon intensely (Patton, 2002). Consequently, all cases in the sample have experienced decision making processes concerning the reshoring of manufacturing operations. Additionally, it should be noted that we did not distinguish between companies that outsourced manufacturing offshore or had wholly owned facilities since it has been assumed that reshoring is essentially a location decision and not one of ownership (Gray et al., 2013).

Guided by these principles, an extensive online search on reshoring in Sweden and countless conversations by phone, email and in person with people in the authors’ networks led to a list of 24 potential candidates. These candidates were approached by the research team with a request for interview. First contact was usually made by email, which in most cases led to no reaction from the companies. In line with the chosen sampling strategy, follow-up phone calls to a selection of 11 particularly interesting cases yielded five firms willing to take part in the study. The final sample covers all kinds of reshoring; reshoring from offshored supplier outsourcing (Company B), reshoring of one product/production line (Company A, Company E) and reshoring of entire manufacturing plants (Company D, Company C) providing a broad base for data collection.

The time horizon for this study is cross sectional, meaning that the study is carried out in a single moment of time and does not seek to review how the phenomenon of reshoring has developed over time (Saunders et al., 2012). Although the systematic literature review could be interpreted as having some longitudinal elements, we seek to provide a ‘snapshot’ on the reshoring phenomenon and thus to project the current status.

### 2.4.2 Data Collection

Yin (2013) lists six sources of evidence that are most commonly used in case studies; for investigation of our topic the most suitable tool to collect evidence was interviews. Several strengths of this data gathering method is that it has a clear target, focuses purely on the topic of the case study and that it can offer profound insight into perceived causal interferences (Yin, 2013). Three types of interviews can be used: unstructured, semi-structured and structured. Since it is desirable that the interviewee is given room to explain him/herself without completely risking losing thread of the interview topic, a semi-structured interview has been chosen. This will help the interviewers to keep a constant line of inquiry, where the stream of questions is likely to be fluid rather than rigid as with structured interviews (Rubin & Rubin, 2011).

To simplify the interviewers’ work, an interview guideline (appendix 2) with questions was developed. Questions are based on the examined body of literature with the overall aim to collect data to answer the second and third research questions. They were formulated according to Patton’s recommendations using a funnel approach from general to specific and allowing for probing and follow-up questions during the interviews. Key-themes and questions do relate, but are not limited to, contextual factors, decision making processes and priority setting. The interview guideline was identical for all cases and respective interviews to enhance comparability and allow the identification of consistent patterns.

In order to obtain profound and detailed data from well-informed sources, case interviews have been conducted with people in managing positions. Please see the table below for interview details.

Table 2.2: Interview details

#	Company	Interviewee (s)	Interview Type	Length
1	Company A (Group A)	CEO	Face-to-face	90 min
2		Quality Manager	Face-to-face	40 min
3		Finance Manager	Face-to-face	60 min
4		Production Manager 1	Face-to-face	60 min
5		Production Manager 2	Face-to-face	60 min
6	Company B	Senior VP Cab and Chassis Production	Phone	55 min
7	Company C	Purchasing Director (formerly Production Director for the reshored plant)	Face-to-face	115 min
8	Company D	Site Manager	Phone	50 min
9	Company E	CEO	Face-to-face	45 min

All interviews have been recorded and notes were taken simultaneously. In order to obtain the most detailed and complete information the interviews were in most cases conducted in the interviewees' mother tongue. Subsequently, the obtained records were transformed into translated transcripts in the form of summaries to allow comparisons and analysis.

As a result of different types of semi-structured interviews (face-to-face or phone) and different characteristics of each case, the empirical results show differences regarding the topic under investigation. Especially the ease / difficulty in explaining the topics of interest have led to an imbalance in data in our cases. Nonetheless, all interviews were built on the same questions and themes. Although the length of the interviews and collected material from each of the case companies may vary, this thesis has a similar amount of data on each of the cases and findings were analyzed on equal grounds. However, more interviews were conducted in the case of Company A which makes this particular data collection more verified than the single interview cases.

### **2.4.3 Data Analysis Procedures**

As usual for qualitative studies, data analysis started directly after the first interview (Farquhar, 2012). A preliminary analysis of the interview gave the researchers the possibility to revise the verbal communication techniques for subsequent interviews. Later on, data analysis was executed using an 'a priori' coding technique (Farquhar, 2012), which is a deductive coding technique that identifies words, phrases, categories or themes according to theory that was used as a foundation. Within our context, this means that the reshoring dynamics categorized in the literature review were compared to the interview data. Further cross-case analysis (which is a means of grouping together common responses) was used as a tool to identify emerging patterns (Patton, 1990).

### **2.4.4 Documentary Secondary Data**

Additionally, documentary secondary data was used as back-up evidence for the interviews by obtaining further information about cases that have been included in our sampling frame. For instance company presentations and reports were reviewed to get a better perspective on the various operations that are carried out (Yin, 2013). Furthermore, as an introduction to the empirical findings, secondary data was obtained from Svenskt Näringsliv. The material results from a survey among approx. 9000 Swedish companies and contained questions addressing the reshoring phenomenon. The raw data, in Swedish, has been included as appendix 3. On the basis of this data, a short overview is presented on why Swedish firms had reshored operations or why they plan to reshore operations. Together with the empirical results of the case-studies and the findings from the systematic literature review, the data was analyzed to come to a well-rounded conclusion.

## **2.5 Research Quality**

Only quality research "generates dependable data, which is derived through practices that are conducted professionally and that can be used and relied upon" (Blumber, Cooper & Schindler, 2008, p. 15). To assess the quality of the research design, the previously described case study and systematic literature review can be subjected to a number of 'tests' that evaluate to what extent the results can be considered as 'valid' (specification of the domain and degree of general applicability of results) and to what extent the research operations can be regarded as 'reliable', (i.e. when following the same strategies others' would come to identical results). This quality assessment is of great importance as only quality assured research can contribute to science.

### 2.5.1 Systematic Literature Review

*Validity* was addressed by following the guidelines outlined above. The systematic and structured approach of the research process safeguarded objectivity throughout the review. In addition, a third researcher was occasionally involved to review and criticize the thesis work. To ensure *reliability* of the research, all steps of the search and analysis were undertaken by two researchers (the authors). This may be seen as the minimum requirement, but given the time and scope of the study and the limited availability of additional researchers, no other solution was feasible. The different search results were reviewed individually to acknowledge differences in their possible comprehension by the reader. If for instance articles were excluded from the sample by one researcher and included by the other, these papers were singled out for a closer examination and discussion before being either included or excluded from the final selection of articles.

### 2.5.2 Case Studies

As the empirical study uses a qualitative research design, validity and reliability were assessed by applying qualitative assessment criteria instead of the ‘traditional’ measurements for quantitative research (internal, external, construct validity and reliability) (Trochim, 2006). Research methodologists within the interpretive tradition propose criteria for evaluating knowledge claims like credibility, transferability, dependability, and confirmability (Weber, 2004). Even though this approach has been much debated among methodologists (Trochim, 2006), we felt that the ‘traditional’ quality measurements were unfit to measure the quality of our research appropriately.

*Credibility* essentially questions whether the data gathered is sufficient to support the researchers’ claims and whether other researchers would arrive at similar conclusions when analyzing the same material (Eriksson & Kovalainen, 2008). In this study, credibility was enhanced by following strict and explicit guidelines in regards to data collection and interpretation. Each step of data analysis has been documented over the research period. Moreover, data was not gathered from just one, but from several companies which solidifies the foundation for our research conclusions. Hence, we are confident that if other researchers examined our material using the same analysis techniques, they would arrive at fairly similar conclusions. Although validity regarding credibility is not ‘a numbers game’ (Diefenbach, 2009), the findings of this study are not ‘statistically valid’ and credibility remains to be impeded by the small number of interviews.

*Transferability* covers the area of ‘generalizability’ as it aims to connect one’s research results to that of other researchers (Eriksson & Kovalainen, 2008). It concerns the similarities between the findings of this thesis and previous research. The foundations to build the case study design, and more specifically drafting the interview questions, are based on a systematic literature review which serves as a connection to previous research. Qualitative techniques in general and case studies in particular are “invaluable tools for hypothesis formulation” (Achenbaum, 2001) and our findings can be used for analytical generalization which is “a process that refers to the generalization from empirical observations to theory, rather than a population” (Dubois & Gibbert, 2010). Accordingly, the case studies in this thesis can help in theory development and be used for a cross-case analysis which can contribute to further analytical generalization.

*Dependability* refers to ensuring the trustworthiness of research and makes sure that the reader can depend on the research process being logical, traceable and documented (Eriksson & Kovalainen, 2008). To ensure this, all data obtained was documented and stored safely which ensures that detailed information on the research process and of the data is available upon request.

*Confirmability* assesses to what extent the data and interpretations of an inquiry are not imaginary (Eriksson & Kovalainen, 2008). As a first step, it was checked that the applied research methods were suitable to actually collect the right evidence to achieve the purpose. Regarding the used qualitative research design, it is generally known that confirmability of data can be enhanced by not only using interview data, which records an individual's 'belief system', but by also including data from other sources (Dubois & Gibbert, 2010). Therefore the data used to build the case study design, and more specifically drafting the interview questions, is derived from a thorough systematic literature review. Additionally, the authors followed strict guidelines and directions based on articles on how to conduct a literature review and asked follow-up questions during interviews, when answers seemed to be inconsistent with the reasoning of theory. For details on the interviews we refer to section 2.4.2. Nonetheless, despite all steps which are taken to reduce 'subjectivity' all research by human actors naturally contains some imagination, which cannot be fully erased.



### 3 Frame of Reference

*The frame of reference is structured as a systematic literature review on ‘reshoring’. Although the search for material was extensive, it resulted in only 25 articles, as the authors did not want to broaden the search horizon and compromise on the material’s scientific quality. In the following paragraphs, the material is first analyzed descriptively and then content wise before conclusions are drawn. We also introduce our framework in this chapter.*

#### 3.1 Descriptive Analysis

Following the evaluation framework outlined in the methodology chapter, the first part of the analysis used descriptive dimensions and statistics for an initial round of categorization of the collected material. Articles were identified as being purely theoretical or containing a substantial empirical part in addition to theory. Furthermore, the distribution of publications over time, their individual medium of publication, applied research methodologies and geographical spread were assessed to determine the articles’ usefulness to our research.

##### 3.1.1 Publication Details

The body of literature satisfying the inclusion criteria consisted of 25 scientific journal articles (including editorials, research notes or commentaries) of which 13 were more of a theoretical nature and 12 presented empirical evidence in addition to theoretical considerations. In regards to the distribution of publications, the earliest article was published in 2009 and the last articles in 2015. The allocation of papers in the period with findings is presented in figure 3.1. Almost half the articles were published in 2014 and more than 75 percent within the last three years which clearly exemplifies the ‘newness’ of the reshoring phenomenon. The high number of recent publications could be interpreted as an increasing interest in reshoring.

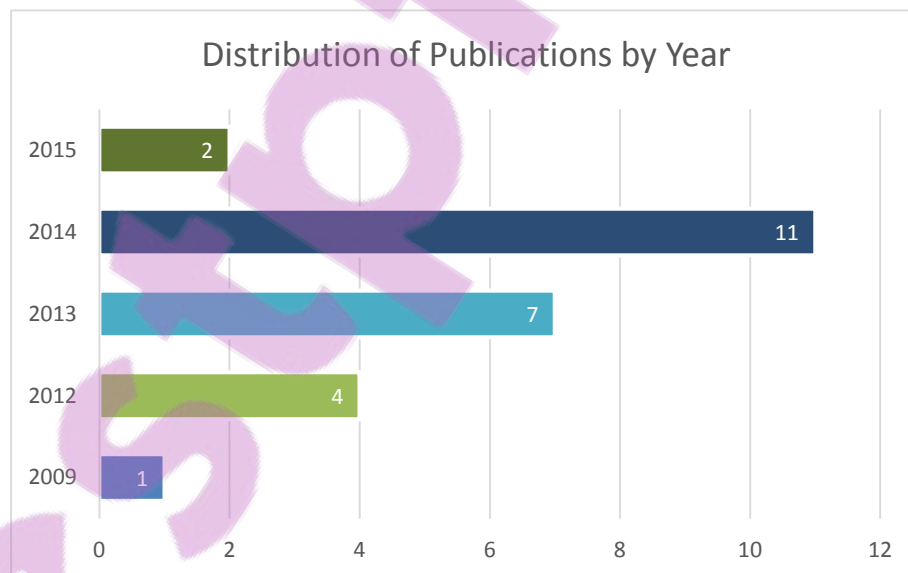


Figure 3.1: Distribution of publications by year.

Articles from the sample appeared in the following journals (figure 3.2):

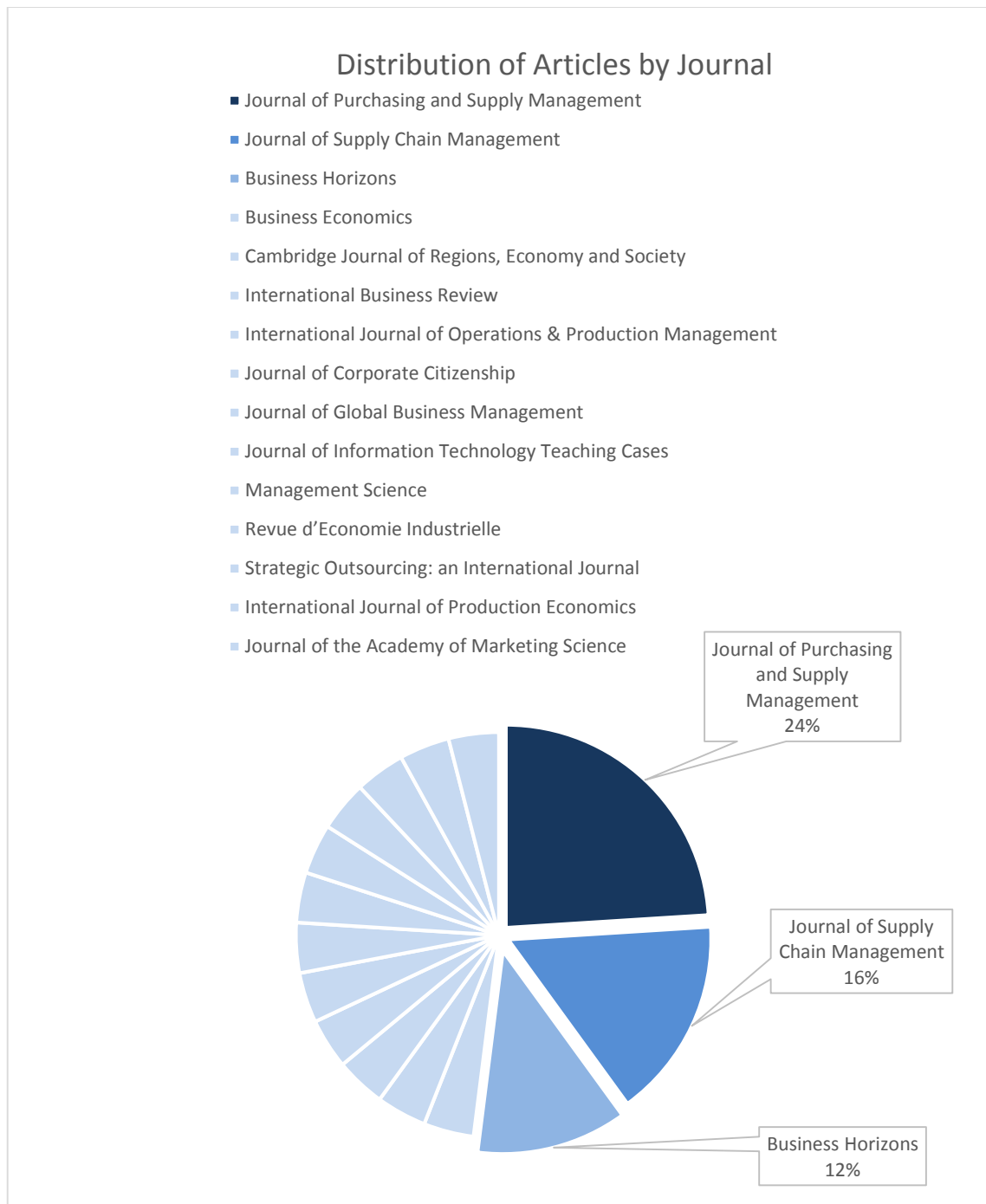


Figure 3.2: Overview of journals.

With six articles in the Journal of Purchasing and Supply Management, this journal published the most articles from the material collected. Five of those articles appeared in the same issue (March 2014). The Journal of Supply Chain Management ranks second with four papers which were also all from the same issue (April 2013). In Business Horizons, three articles on reshoring were published in different issues but in the same volume. Hence, these three journals covered more than 50 percent of the articles published on reshoring (13 out of 25).

The remaining 12 papers each appeared in different journals. An analysis of the articles' geographic emphasis showed that most papers had a U.S. or European focus. The geographic distribution of the papers can be seen in figure 3.3.

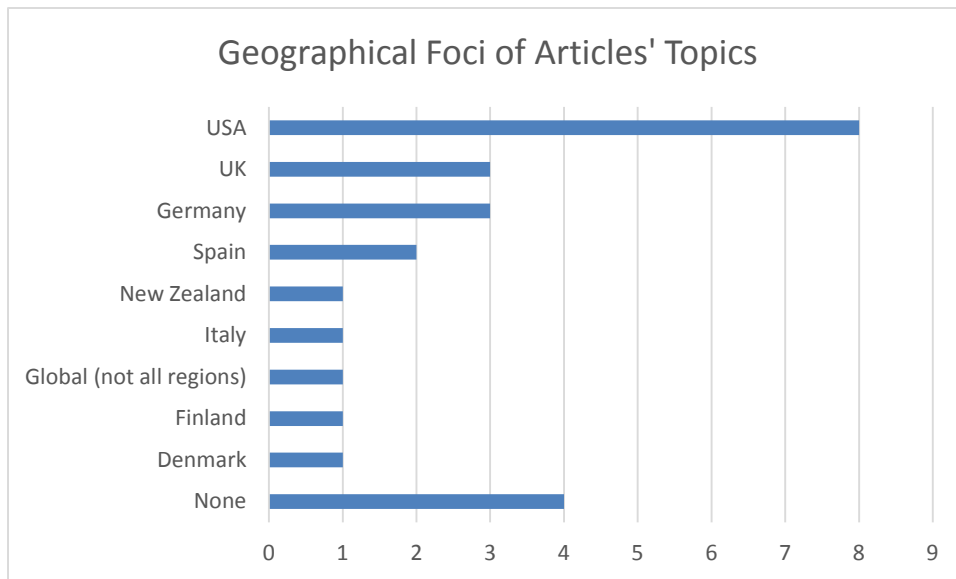


Figure 3.3: Geographic distribution of papers.

### 3.1.2 Applied Research Strategies

Papers were classified in six groups according to their research methodologies. The different groups were characterized as either theoretical and conceptual papers, surveys, cases, modelling papers, literature reviews or mixed method (survey / modelling + case(s)) papers. The distribution of the grouping is presented in figure 3.4. Ten papers were found to be purely theoretical or conceptual as they did not present any empirical research. This large number does not come as a surprise as the topic of reshoring is emerging and thus unexplored (Seuring & Müller, 2008). There are several surveys, case studies and mixed method articles whose methodological choice allows them to explore the reshoring phenomenon and provide empirical evidence (Yin, 2013). Due to the 'newness' of reshoring, there are few modelling articles and no literature reviews.

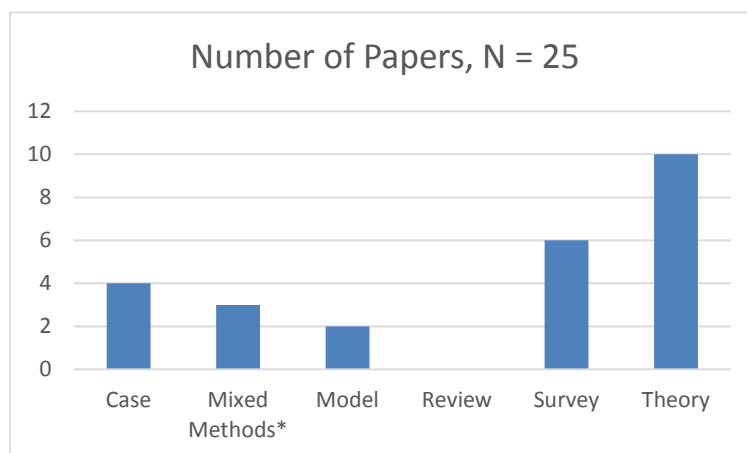


Figure 3.4: Categorization of papers under review based on methodology.



## 3.2 Content Analysis – Categorization and Synthesis

As the field of reshoring is so narrow, the authors had to adjust Mayring's approach according to the particular needs of this review. Firstly, articles were scanned for a definition of the term 'reshoring'. This step was necessary to ensure that articles actually dealt with the same issue, since terms addressing the same phenomenon (such as back-shoring) differ. Even though they use different terms, a similar understanding of reshoring could be confirmed. Secondly, all papers were sorted according to their theoretical argumentation. Through this step, several theories to ground reshoring could be identified, e.g. **T**ransaction **C**ost **E**conomics (TCE), the **R**esource **B**ased **V**iew (RBV) and the **O**wnership advantages, **L**ocation advantages, and **I**nternalization advantages model (OLI). Thirdly, as drivers and barriers for reshoring are of particular importance to this thesis, categorization subsequently focused on identifying articles which mentioned either drivers or barriers for the reshoring phenomenon. Articles on reshoring which did not contain any of the former were sorted in a separate group. These would only serve to frame the wider field of reshoring mentioned above. From the primary group of articles, drivers and barriers were systematically extracted in order to identify different types and their frequency / prioritization of being mentioned by the different authors. Following this round and to clarify the findings, papers were cross-examined to identify those which only repeated others and those which actually added new knowledge. Finally, all articles' contributions and implications were discussed before the review was concluded.

### 3.2.1 Reshoring: A Definition

To define reshoring, a list of definitions from the articles was compiled (Table 3.1). Since many papers do not directly come to a clear definition of the term, it seems there is no congruent definition available yet. Nonetheless, based on the search parameters that were used, it is observed that the term 'reshoring' is most often used for the phenomenon this thesis addresses.

A few elements stand out in the different definitions used: Firstly, all definitions explicitly or implicitly acknowledge that reshoring refers to the relocation of previously offshored activities. Secondly, the definitions suggest that the destined location of reshoring is not always identically described, i.e. whereas Ellram et al. (2013) describe it as a return back to the country of the parent company and Bailey and De Propriis (2014b) mention a return to the home economies, Tate et al. (2014) refer to a return to more attractive offshore locations and Arik (2013) considers reshoring as "the relocation of the business operation to the U.S. mainly from emerging markets" (Arik, 2013). These various definitions indicate that authors focus on different elements when reviewing the relocation destination of reshoring; some emphasize the closeness to the parent company, others stress the closeness to demand-markets and yet others set the focus on the 'development/maturity stages' of markets reshored to.

A number of recent papers could direct future clarification on the reshoring destination. For example Arlbjørn and Mikkelsen (2014) deviate from earlier papers by explicitly emphasizing that reshoring does not necessarily imply relocating manufacturing to the country where it was originally offshored or outsourced to, but that it can also mean that it is backshored or insourced to a facility in another country owned by the company. Accordingly, Fratocchi et al. (2014) have proposed the term 'manufacturing back-reshoring' by which they understand the reshoring of manufacturing to the country of origin (home country of the company) while 'reshoring' describes a 'generic change of location' of previously offshored manufacturing to any other place. They also suggest that 'back-reshoring' does not necessarily mean the repatriation of an entire company or plant but does also include the relocation of parts

of production operations. Tate et al. (2014) also attempted to clarify the reshoring destination by differentiating between reshoring as in ‘homeshoring’, i.e. moving manufacturing back to the firm’s home country, and ‘nearshoring’, i.e. the reshoring of activities to a country closer to home.

Zooming in on Table 3.1, several synonyms of reshoring have emerged, of which ‘backshoring’ is most quoted. Definitions are rather identical to reshoring and refer to the home country being the destination for reshoring. Other synonyms for reshoring are ‘onshoring’, ‘backsourcing’ and ‘inshoring’, but when reviewing the scarce number of papers that use those, these umbrella terms seem to be less relevant in the main discussion. Although ‘onshoring’ definitions are in line with definitions of reshoring, backsourcing seems to only apply to reshoring cases where activities were previously outsourced to third parties in a foreign location (Kotlarsky & Bognar, 2012).

Table 3.1: Overview of definitions and synonyms

Umbrella term	Definition	References
Reshoring	<p>Arik (2013): “Re-shoring: This concept refers to the reversal of the previously offshored business activities. In the U.S. context, this means the relocation of the business operation to the U.S. mainly from emerging markets.”</p> <p>Bailey and De Propriis (2014a, p. 1): “However, in recent years offshoring has cooled and there have been some tentative signs of multi-national firms moving parts of their value chains back to their home economies.”</p> <p>Ellram (2013, p. 3): “Moving manufacturing back to the country of its parent company.”</p> <p>Gylling et al. (2015, p. 92): “Repatriation of activities or functions from another country to be carried out in-house by a company in its home country.”</p> <p>Martinez-Mora and Merino (2014): “However, in more recent years, the process of offshoring manufacturing activities has been subject to reconsideration by some industry leaders, which has led to cases of bringing back operations to the country of origin. This process has been called insourcing, inshoring, reshoring or backshoring.”</p> <p>Tate et al. (2014, p. 381): “The relocation of manufacturing facilities from traditional offshore locations to more attractive offshore locations, or even home to the United States.”</p>	<p>Arik JGBM 2013 9 (3)            Bailey CJRES 2014            Bailey REI 2014 90 (2)            Ellram JSCM 2013 49(2)            Ellram JSCM 2013 49(2)            Grappi JAMS (2015)            Gray JSCM 2013 49(2)            Gylling IJPE 2015(162)            Martínez-Mora JPSM 2014 20(4)            Moutray 2013 BE 48(2)            Pearce BH 2014 57(1)            Tate BH 2014 57(3)            Tate JPSM 2014 20 (1)</p>
Backshoring	<p>Arlbjørn and Mikkelsen (2014, p. 60): “Moving production in the opposite direction of offshoring and outsourcing is termed as backshoring or insourcing. These practices do not necessarily imply relocating manufacturing to the country where it was originally offshored or outsourced, but could mean that it is backshored or insourced to a facility in another country owned by the company.”</p> <p>Canham and Hamilton (2013, p. 278): “It is converse of offshoring, viz., the subsequent decision to return some or all of the offshored activity to the home country, and it is important to understand its extent and drivers.”</p> <p>Kinkel and Maloca (2009, p. 155): “Accordingly, 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.”</p>	<p>Arlbjørn JPSM 2014 20(1)            Canham 2013 SOIJ 6 (3)            Fratocchi JPSM 2014 20(1)            Kinkel IJOPM 2012 32(6)            Kinkel JPSM 2009 15(3)            Kinkel JPSM 2014 20(1)            Wu MS 2014 60(5)</p>
Onshoring	<p>Fine (2013) : intellisourcing, no definition for onshoring</p> <p>Kazmer (2014, p. 464): “Some manufacturers are returning part or all of their foreign production to domestic facilities, an action that has been termed <i>onshoring</i>.”</p>	<p>Desai JCC 2012 (45)            Fine JSCM 2013 49(2)            Kazmer BH 2014 57 (4)</p>
Backsourcing	<p>Kotlarsky and Bognar (2012, p. 79): “Backsourcing, defined generally as bringing services outsourced to a third party back in- house, is now a growing phenomenon.”</p>	<p>Kotlarsky JITC 2012 2 (2)</p>
Back-reshoring	<p>Fratocchi et al. (2014, p. 56): “A voluntary corporate strategy regarding the home- country’s partial or total relocation of (in-sourced or out-sourced) production to serve the local, regional or global demands”, making the phenomenon a strategic option for manufacturing firms in regards their international relocation activities.”</p>	<p>Fratocchi JPSM 2014 20(1)</p>

Figure 3.5 illustrates the distribution of the different ‘umbrella terms’ which were used in the papers under review.

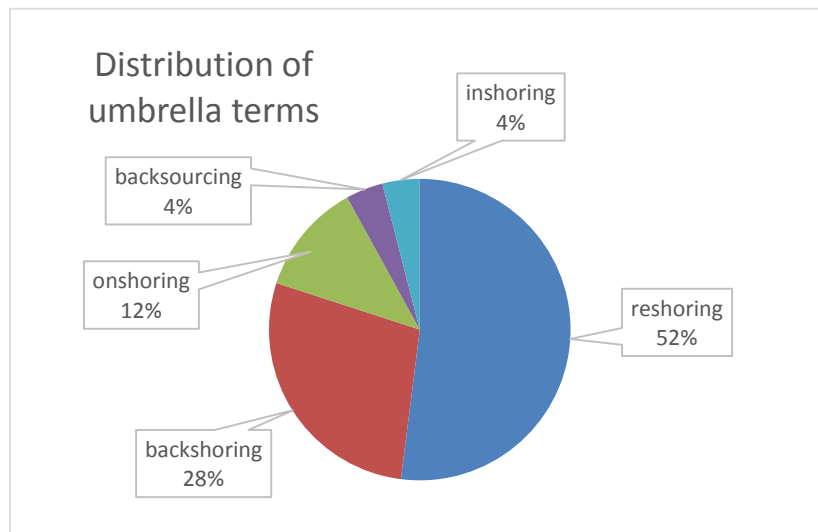


Figure 3.5: Distribution of umbrella terms.

Altogether, it can be derived that a congruent definition has not yet been developed in academic spheres. However in 2013, Gray et al. made a first attempt to structure the reshoring debate by introducing five generic assertions, of which 3 are relevant in this context:

1. Reshoring is a location decision.
2. Reshoring can only occur if offshoring has occurred previously.
3. Often both decisions (offshoring and reshoring) are flawed.

Linked to assertion 1, Gray et al. (2013) categorized the options to reshore as displayed in figure 3.6. All categories have in common that reshoring is treated as a location decision irrespective of the ownership mode.

Through their framework consisting of both assertions and categories, Gray et al. (2013) approached reshoring and the manufacturing location decision from a supply chain perspective (Ellram, Tate & Petersen, 2013) and delivered valuable input for further structuration and synchronization of definitions.

**Reshoring Options**

		<i>To: Onshore</i>	
		In-House	Outsourced
<i>From: Offshore</i>	In-House	In-House Reshoring	Reshoring for Outsourcing
	Outsourced	Reshoring for Insourcing	Outsourced Reshoring

Figure 3.6: Categorization of reshoring options (Gray et al. 2013).

In their contribution to the reshoring debate Arlbjørn and Mikkelsen (2014) emphasize that it is important to distinguish between offshoring and outsourcing and their reversals ‘backshoring’ and ‘insourcing’. In their opinion, the ownership perspective, which other authors mainly disregard, does matter. Accordingly, Martínez-Mora and Merino (2014) implicitly confirm that it seems that the reshoring motivation for outsourced manufacturing and offshored greenfield manufacturing reshoring can differ, which may also be industry related. However, this is not empirically confirmed in literature and no clear cut distinction of motivation, based on the ownership mode, can be made. Like many other authors, Ellram et al. (2013) partly disregard the ownership mode by seeing reshoring as a pure manufacturing location decision for which many drivers exist which are both connected and unconnected to the preceding offshoring decision.

Based on the definitions described in the sample of papers, the authors developed their own definition of ‘reshoring’ for this thesis in order to prevent any confusion in regards to the term. Firstly, it is acknowledged in line with the assertions above that reshoring is primarily concerned with *where* manufacturing is performed, rather than *who* performs it. In other words, the operational mode and ownership status of a firm’s manufacturing in another country is disregarded. Secondly, after examining the reasons for offshoring, the authors came to the conclusion that the reshoring destination should be defined as either a return to the home country, to a location close to demand markets or to a market with similar characteristics as the home country. Thus, the distance between manufacturing location and demand market plays a role. Additionally, the market’s characteristics of the reshoring destination are taken into consideration. This is due to the fact that the primary reasons for reshoring seem to be related to (labor) costs, supply chain responsiveness and market characteristics. On a side note it is important that the reshoring ‘wave’ has only been observed from a perspective of developed markets and that this is therefore the perspective the authors wish to take. Concluding, the following definition of reshoring is used in this paper:

*Reshoring* is defined as a strategic reversal of previously offshored manufacturing activities to either the home country or other locations regarded as ‘developed’ with close proximity to demand markets.

### 3.2.2 Reshoring: Theoretical Perspectives

Even though the evidence for reshoring is limited, the topic has provoked debates in several countries (Bailey & De Propris, 2014b). To explain the issue scientists have borrowed knowledge from different existing theories in order to build a theoretical foundation. Many approaches refer for example to TCE, RBV or the OLI model, which is outlined below. Consequently, the academic discussion has developed along different paths aligned within these theories (Bailey & De Propris, 2014b). Most often reshoring is either described (a) as a location and cost-related choice borrowing from internalization theory (e.g. Ellram, Tate & Petersen, 2013, Gray et al., 2013) or (b) as a phenomenon caused by diminishing cost advantages, volatile demand and smaller / segmented markets (e.g. Wu & Zhang, 2014), or (c) as an occurrence primarily concerned with network management and ownership issues (e.g. Martínez-Mora & Merino, 2014). Moreover, there are other theories from International Business literature such as foreign divestment and de-internationalization theory. These concepts usually cannot sufficiently describe reshoring as they often either exclude key features of the phenomenon or, in the case of divestment literature, only describe the repatriation of whole plants.



According to Tate (2014) business is rather cyclical – especially as it relates to geography. Science has to understand this cyclicity of the economy and business better. Particularly in regards to the make-or-buy decision which is the area where Tate locates the ‘shoring’ decision. In relation to this, Martínez-Mora and Merino (2014) argue that the theory of Transaction Cost Economics (TCE) can provide valuable insights into the cost of exercising ownership in distant locations despite TCE being developed to evaluate in-house / arms-length decisions. TCE is a theory widely used for make-or-buy decisions and suggests that individual firms will move from high cost to low cost environments / regions, *ceteris paribus* (Ellram, 2013). However, it has been revealed that cultural differences or limited intellectual property protection are impediments for this ‘natural flow’ mentioned by TCE, and creates high potential for opportunism. Hence, low cost countries where this applies are perceived as less attractive (McIvor, 2013).

In addition, the OLI model shows that companies develop their international activities internally if internalization advantages are present. The OLI framework is often used in economic and business literature to enhance insight into FDI decisions and was developed by Dunning (1980). The framework aims to explain the origin, level, pattern and growth of activities offshored by MNE’s and over the years has been developed to one of the leading paradigms in international business (Eden & Dai, 2010). Three determinants are considered, **O**wnership advantages, **L**ocation advantages, and **I**nternalization advantages. For this research on reshoring, the location advantages are of primary importance. The latest relevant factors according to Dunning (1998) are firstly the resource seeking advantage which includes the availability of raw materials, infrastructure and also a network of local partners. Secondly, marketing seeking advantages address the availability and cost of local talent and suppliers, access to domestic markets and government (economic) policies. A third set of locational advantages deals with efficiency seeking advantages which regards the combination of production and cost-related factors, favorable industry clusters and diminishing trade barriers. Finally, strategic asset seeking advantages evaluate the knowledge related assets, gathering of marketing intelligence and economies of agglomeration to keep a local presence. These advantages can be identified by using the conclusions of TCE literature in regards to, among other, asset specificity and the risk of leakage of intellectual property (Martínez-Mora & Merino, 2014).

In combination with the **R**esource **B**ased **V**iew (RBV) of the firm, the conclusions of TCE can be used as a base to explain reshoring (McIvor, 2013). The RBV is a popular framework for gaining an understanding of how competitive advantages are achieved and how these advantages can be made sustainable over time (Elsenhart & Martin, 2000). It mainly focuses on the internal organization which makes it a valuable attribution to this thesis. RBV perceives firms as being bundles of resources that are uniquely spread among firms and which persist being different over time. Accordingly, resources can be evaluated on the basis of the VRIO (Valuable, Rare, Imitable, and Organization) framework and firms can improve their competitive position by creating strategies that create sustainable resources which cannot easily be copied by other firms (Cardeal and António, 2012). Comparing the RBV with TCE, they both focus on two different aspects that deal with where manufacturing is sourced from; RBV deals with the search for competitive advantage whereas TCE reviews the governance structure (McIvor, 2013). In this regard, following the argument for the RBV, firms will invest their capital in areas where they possess key competencies and outsource all other (non-critical) activities (Martínez-Mora & Merino, 2014). Martínez-Mora and Merino point out that according to their research the existing theoretical framework from International Business literature can sufficiently explain the location choices of firms including the reshoring phenomenon.

Other existing theories which may contribute to the reshoring debate and which were mentioned in the articles are internalization theory, dynamic capabilities theory, the pollution-haven hypothesis and the concept of factor market rivalry. Similar to TCE, Internalization Theory evaluates the make-or-buy decision. As perfectly summarized by Dunning (1998), "...the critical choice of a multi-activity firm is whether it should internalize its intermediate product markets within its home country or in a foreign country; and that the outcome of this choice is primarily determined by the costs and benefits of adding value to these products in the two locations" (Dunning, 1998, p. 5). The theory deals with the size and scope of firms. The rationale is that some types of interdependencies are better organized within a firm than through contracts or on-spot in the market. This leads to the presumption that this theory may help explain reshoring.

Dynamic Capabilities theory closely links to the RBV as it claims that a firm's invisible assets are essential for creating a sustainable competitive advantage (Itami & Roehl, 1987). It might also fill a perceived shortcoming of the RBV, as the latter does not elaborate on why companies can have a competitive advantage in unpredictable environments that are subject to rapid change (Eisenhardt & Martin, 2000). Dynamic capabilities can be defined as: "The firm's processes that use resources - specifically the processes to integrate, reconfigure, gain and release resources - to match and even create market change. Dynamic capabilities thus are the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve, and die" (Eisenhardt & Martin, 2000, p. 1107).

The keen observer notices that the focus here does not lie on the resources themselves but rather on how these are used. In unpredictable, rapidly emerging countries dynamic capabilities are a true source of competitive advantages and it is likely that a company in a competitive, unpredictable environment needs to apply an intertwined approach using both the RBV and Dynamic Capabilities to become a dominant market player. Dynamic Capabilities could therefore also support the reshoring debate. Same holds true for the pollution-haven hypothesis. This theory is based on the basic assumption that compliance with environmental regulation raises firms' costs. Essentially, the question that should be asked is if pollution intensive industries have a tendency to relocate to countries with more loose regulation. Strong evidence has indicated that the pollution haven effect is undoubtedly of influence in decision making of firms in the chemical industry (Wagner & Timmins, 2009). Additionally, empirical research has also found that air quality regulations have a significant impact on the destination choices of plant relocations (List, McHone & Millimet, 2003). However, the extent to which this phenomenon, which has also been named 'environmental capital flight', influences the manufacturing location decision is not always that clear (Jeppesen & Folmer, 2001).

Tate et al. (2014) introduce the concept of factor market rivalry to the reshoring debate. Factor market rivalry describes and causes a shift of production sites away from formerly low-cost manufacturing destinations to either other low-cost countries (this is reshoring according to Tate) or closer to customers / markets (nearshoring or homeshoring according to Tate). Hence, factor market rivalry occurs when the conditions for manufacturing in a (low cost) country change due to the increasing presence of firms competing for the same, limited resources. In other words, costs increase as more companies compete for scarce resources including human labor and other factors which are usually not considered as strategic such as transportation capacity (Tate, 2014).

Despite many pure conceptualizations and empirical based investigations on reshoring, little has been published on modeling approaches. Three articles from this category are those of Grappi et al. (2015), Wu and Zhang (2014) and Kazmer (2014) which were included in the

final sample due to their contribution to the reshoring debate, although the latter two take a more game-theoretic/macro perspective on the reshoring phenomenon.

Grappi et al. (2015) discuss reshoring from a moral perspective as their research is centered on consumer stakeholder responses to the phenomenon. Similar to Fine (2013) they look at the ethical and moral implications of companies' reshoring activities. Using different surveys they evaluate customers' willingness to buy and willingness to pay based on statistical variable models which assess the influence of reshoring on 'righteous anger', 'gratitude', 'sadness' and 'happiness' in regards to consumer's buying decisions. Their research indicates that consumer buying behavior might be positively affected if consumers are aware of producers' reshoring initiatives.

Kazmer (2014) was able to show that multinational manufacturing, including the use of overseas outsourcing, is likely to happen when significant opportunities exist in the foreign market. If these opportunities decrease and 'intermediate barriers' (transaction costs) increase, a reverse development is likely to occur. Hence, the model is dynamic and helps to clarify that manufacturing reshoring on a larger scale will only be sustainable for firms if additional (to the model extrinsic) incentives such as tax breaks, etc. are granted by governments. This means that a 'rebalancing' of Western European or North American economies will most likely not occur without state intervention. Kazmer's model indicates that a 'global manufacturing equilibrium' is likely to be reached in the long-run as economies evolve over time from low-cost to more developed destinations creating a 'virtuous cycle' of development. The model assumes a closed system.

Wu and Zhang (2014) created a game-theoretic, multi-firm level model on sourcing strategies under competition. They distinguish between two types of sourcing strategies each firm can choose. The strategies are defined as follows: "The first strategy is called efficient sourcing (e.g., overseas sourcing), under which the procurement price is low but the delivery lead time is long. The second is called responsive sourcing (e.g., domestic sourcing), under which the procurement price is high but the delivery lead time is short" (Wu & Zhang, 2014). Based on different simulation rounds, Wu and Zhang were able to contribute to the reshoring debate as their results suggest that more firms will reshore if the market size decreases, demand volatility increases, or sourcing costs rise. Furthermore, one firm's reshoring "will reduce competition on the cost dimension, whereas its impact on the informational dimension is ambiguous" (Wu & Zhang, 2014). This connects to Tate et al.'s (2013) theory on factor-market-rivalry as one firm's reshoring decision changes the overall market structure (depending on firm size this might be an incremental change) and leads to Wu and Zhang's (2014) conclusion that if reshoring from an offshoring destination occurs, it can be beneficial for firms which use the offshoring country to stick with their original sourcing strategy.

### 3.2.3 Reshoring: Decision Making Frameworks

Following the above theories, many authors have pointed out that an offshoring decision should never solely be based on labor cost advantages at the offshoring destination. This is partly due to the tendency of markets dynamics, which tend to change quickly and adapting to these changes flexibly is not easy for many firms. Kinkel and Maloca (2009) point out that firms often base their offshoring decision on simple models without considering dynamic developments over time. Simple models are used as other approaches such as 'real options' are too difficult to use for many companies. Also, qualitative factors such as attitude towards quality at the offshoring location are not taken into account appropriately, even though they are crucial to be considered (Kinkel & Maloca, 2009). Decision making processes with regard to reshoring generally appear to be underresearched.

The few authors who tried to conceptualize these processes always included them in a context of a constantly changing continuum between offshoring and reshoring decisions. Arik (2013) proposed a model in which firms' off- and reshoring decisions are driven by global competitive dynamics, the home state competitive environment and firm-specific factors. Conversely, decisions are influenced by global constraints and incentives, home state level constraints and incentives, and firm level constraints and opportunities. After the initial offshoring decision (which is based on the above and a wider field of firm-specific strategic goals such as the wish to entering a new market or becoming a dominating market player) the firm decides by means of a 'host country opportunity matrix' (which considers risks, low cost of production, market failure and low market potentials) if the status quo requires any changes. The problem of this model is that it appears to focus too much on the home country and opportunities to reshore (as the name 'home country opportunity matrix already suggests) instead of also seeking for opportunities abroad.

Fratocchi et al. (2014) outlined the reshoring decision process as a part of the general strategic approach to the internationalization of production. They conceptualized the internationalization of manufacturing in a multi-step process. In the first step, the decision to internationalize is taken. Additionally, the 'governance structure (in-sourcing vs. outsourcing)' and the geographical distance to the home country have to be determined. Companies have two alternatives as they can either near-shore within their region or offshore their production (Ellram, Tate & Petersen, 2013). In the second step, the firm can change its production location strategy. It can either (a) increase the geographical scope of its offshoring activities, (b) relocate production to a closer destination country (nearshore), or (c) reshore its production by repatriating to its home country. In subsequent steps, which are not elaborated in the article, firms can further revise their shoring strategy.

### 3.2.4 Reshoring: Why Do Firms Reshore?

#### Dynamics in making the manufacturing relocation decision (overview in figure 3.7)

The body of literature evaluates the reshoring decision mostly from a ‘why’ perspective. Within that process some barriers to reshoring can be identified (mostly when relative comparisons are made), but most articles focus on what drives firms to make the reshoring decision despite the locational advantage of having low labor costs at the offshoring location. Figure 3.7 lists the most important dynamics. The factors in the figure have been derived from the articles that are included in the systematic literature review and are all perceived to impact decision making processes leading to the final reshoring decision. The following assumptions / principles are important for the logic behind the structuration of dynamics in the figure:

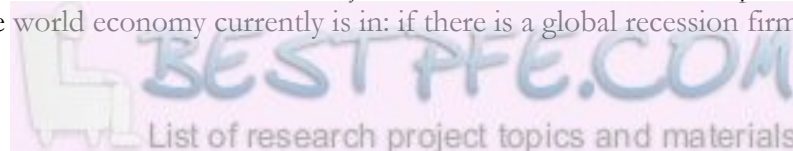
- Generally, offshoring results in business operations being dispersed. This dispersion has negative aspects which must be outweighed by location specific factors at the offshoring location. If this is not the case, reshoring is more likely to happen.
- The decision to reshore is always a result of changes in the status quo (which is here, having manufacturing processes at an offshoring location up and running). Therefore changes in various aspects which are relevant to financial performance have to be reviewed.
- Within dispersed manufacturing operations these changes can be allocated to specific areas; external (in home or host country), in between (supply chain) or internally (firm-specific).
- The current reshoring trend applies to firms that have their demand markets at the home base or at relative close proximity to the home base (if this does not apply, logic demands that for most industries the case for reshoring becomes less relevant).
- Essentially, a cause/effect approach has been applied; the effect (reshoring) is caused by a wide variety of elements (i.e. changes in factors that led to the initial offshoring decision, and others) in different areas. Once the combined ‘value’ of this variables is in favor of production at the home base, then manufacturing is inclined to move back to the home base.

#### Explanation of categories in figure:

##### *Global competitive dynamics*

These are broad sets of variables that apply to any set of locations which are compared to each other when making international manufacturing location decisions; they are relatively unpredictable, hard to influence on micro level and subject to continuous change. When making a detailed overview of causes and effects of global shifts, those broad factors are often not mutually exclusive but can be strongly related. The mentioned global factors function as an ‘umbrella’ for many other factors that are included in the overview. This is in line with Ellram et al. (2013), who call for emphasizing the need to recognize that location differences are dynamic and important with regards to the manufacturing location decision as the parameters influencing a region’s attractiveness for businesses constantly change.

First of all, the state of the world economy is a broad term and referred primarily here to which cycle the world economy currently is in: if there is a global recession firms will gener-



ally have more difficulties. Secondly, political tensions can severely and unexpectedly interfere with trade flows. Thirdly, comparative advantages which are of primary importance for manufacturing (such as tax rates and labor costs) are to be reviewed. Labor costs have been regarded as a prime consideration for location decisions, however, it has been noted that it is important to regard those in combinations with other levers for cost savings (Jonsson et al., 2011). Fourthly, currency volatility is of major importance to global trade flows; unfavorable developments can quickly outweigh factors that were previously perceived to benefit a certain location (Tate et al., 2014). Lastly, factor market rivalry describes and causes a shift of production sites away from formerly low-cost manufacturing destinations to either other low-cost countries (this is reshoring according to Tate et al. (2014)) or closer to customers/markets (nearshoring or homeshoring according to Tate et al. (2014)). Hence, factor market rivalry occurs when the conditions for manufacturing in a (low cost) country change due to the increasing presence of firms competing for the same, limited resources. In other words, costs increase as more companies compete for scarce resources including human labor and other factors which are usually not considered as strategic, such as transportation capacity (Tate et al., 2014).

Fratocchi et al. (2014) somewhat simplify the above by suggesting that there are two types of reshoring cases – those provoked by the global crisis and government incentives to increase jobs at home and those which occur in countries where no such incentives are given to companies. This leads them to conclude that “complex dynamics involving locational, industry, and firm-level factors are at issue and deserve closer attention” (Fratocchi et al., 2014, p. 54). Some of those dynamics are listed in figure 3.7.

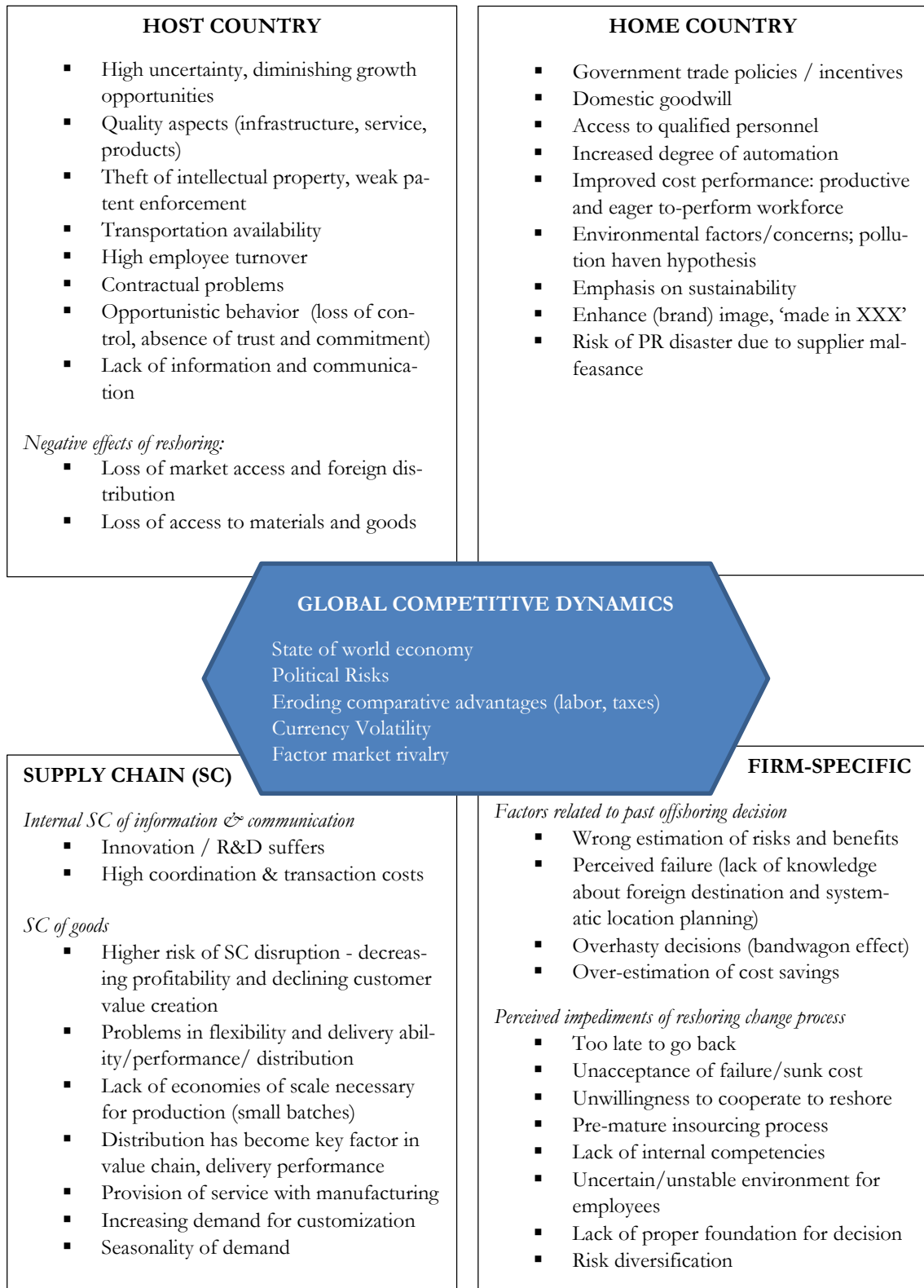


Figure 3.7: Categorized dynamics influencing the reshoring decision.

### *Host country*

This part of the model contains factors that are specific to the host country, and which appear to positively influence the reshoring decision. These factors often seem not to be recognized at the time when the offshoring decision is made and thus emerge as a relevant factor over time when reflecting on the manufacturing location decision. The reshoring cases that have appeared to date show especially that quality problems are an important driver to move back manufacturing. Taking into account that quality is relatively easy to measure, this can contribute to the understanding of drivers of reshoring. Factors such as a 'lack of information and communication' are hard to quantify but may have a significant impact on day to day business operations. Another important characteristic to host countries, and in general about emerging markets, is that of weak patent enforcement and flawed protection of intellectual property rights. This is especially applicable to high tech industrial operations that move abroad.

### *Home country*

Home country specific factors often catch the eye once a firm moves manufacturing operations and realizes that some market aspects are relatively more appealing in the home country. On the other hand, market demand characteristics change over time; certain regulations at the home base can be loosened and specific conditions relevant to manufacturing may alter. During the last decade it has been observed that more automation has become available and that the productivity in developed markets improved (Bailey & De Propriis, 2014b, Arlbjørn & Mikkelsen, 2014).

Within public relations and marketing departments, priorities have changed over time. More scandals related to manufacturing in emerging markets have been revealed and were put in the spotlight by the popular press. Environmental concerns have been voiced in the public discourse and the pollution haven hypothesis still persists but is not necessarily always well-received further down the supply chain. The emphasis on and demand for sustainable practices has become more outspoken and public perception of a company and its supply chain is very powerful; due to increased transparency supplier malfeasance is not to be taken lightly anymore.

### *Supply Chain*

Offshoring results in an extended supply chain (SC), where information and goods have to travel longer distances and control generally becomes more difficult. Within the SC we can distinguish between mental and physical distances. Mental distances refer to the increased difficulty of synchronizing business functions: for instance, it has been observed that in situations where R&D is not located next to the production site, efforts are prone to reap fewer benefits (Amaral, Anderson Jr & Parker, 2012).

Physical distances refer to the impact offshoring has on supply chains, where most of the goods produced have to be shipped from production sites in emerging countries to matured markets. Several factors or preferences within the area of supply chain can catalyze the decision to reshore; during the last decade, leagile supply chains, excellent distribution practices and delivery performance have been prioritized. These are important dynamics since it is even said that, within the current business environment, entire supply chains compete rather than individual firms. As for transport duration, changes in ocean transport increasingly tie up capital as ocean passages take more time than they used to because ships sail slower (slow steaming) to save on expensive fuel and lower environmental pollution (Ellram, Tate & Petersen, 2013).



Additionally, demand for customization, fast order delivery, provision of service with distribution and increased risk to bear SC disruptions can be factors favoring the reshoring decision. Ellram et al. (2013) point out that supply chain factors are nowadays increasingly considered when offshoring or reshoring as firms have started to take a total landed costs perspective when deciding on where to base their production.

*Firm-specific*

Apart from explicit external factors there are firm-specific dynamics that can either work in favor or against taking the path of reshoring. A reshoring effort may thrive or fail based on the degree to which human resources are employed and the employee morale and culture can have a substantial impact. Strategic decision makers on the shoring decision sometimes forget how important and complex the human element is. In some cases of offshoring, resentment on previous decisions can appear since the relocation to an emerging market can be perceived as ‘failed’. Dynamics driving the reshoring decision are the perceptions that previous decision making was overhasty, risks were incorrectly estimated and planning was insufficient. At the same time, realization that decision making processes were not correct makes firms extra careful in their analysis about the possibility to reshore. Risk diversification can also drive the decision to keep manufacturing locations at multiple locations.

**Further considerations**

As reshoring practices are quite new and current literature focuses on the act of reshoring and the processes leading to the reshoring decision rather than on the problems inherent to the reshoring, not many barriers that limit reshoring can be derived from the literature consulted for this study. As a consequence, some negative effects of reshoring related to the host country were identified but none that are related to the home country. The reshoring barriers are called ‘bottlenecks’ by Bailey and De Propriis (2014b) and include, but are not limited to, energy and wage costs in the home country and limited access to finance and skills. These and other bottlenecks can severely limit reshoring possibilities. Canham and Hamilton (2013) uniquely find in their research in the New Zealand market that the bottlenecks for reshoring are very similar to the motivation of firms not to offshore and to keep production located in the home market.

Just as different generalizations could be made in the reasons for offshoring when looking at company size, the same seems to hold for reasons for reshoring. In exploring the motivation of firms to reshore Arlbjørn and Mikkelsen (2014) distinguish between different sizes of firms as they claim that medium- and large sized companies look for automation possibilities at the home country when experiencing problem with lead times, but that the same may not apply for small companies since they often cope with limited resources available for automation of production processes. As for the specific drivers of reshoring, small companies are likely to refrain because of a lack of resource allocation while large companies avoid it because of troublesome past decision making processes and unsecure information and communication dynamics (Arlbjørn & Mikkelsen, 2014).

### 3.2.5 Reshoring: When, Where and How Do Firms Reshore?

After discussing the theoretical foundation and available decision models, other aspects to be taken into consideration are *when*, *where* and *how* reshoring does occur. Some authors such as Kinkel (2014), Canham & Hamilton (2013) and Gray et al. (2013) argue that reshoring can only happen in connection to previously failed offshoring activities. For instance, Kinkel (2014) mentions that 15 years of research in Germany have shown a clear reshoring trend (extrapolated it hits 400 to 700 German companies every year). The trend has been slightly decreasing since the late 1990s. Furthermore, time-series analysis indicates that for each fourth to sixth offshoring initiative, reshoring activities can be found within a period of two to five years (Kinkel, 2014) leading to the conclusion that reshoring serves as a short term correction to counter previous misjudgments (Kinkel & Maloca, 2009). Only 20 percent of all reshoring decisions by German companies could be called mid-term or long-term strategic reactions following the dynamics of changes at home and abroad. Martínez-Mora and Merino (2014) oppose this claim as their study of the Spanish shoe manufacturing industry does not indicate that reshoring is connected to an offshoring failure. In all cases examined, the reshoring decision was disconnected from the preceding offshoring decision. Reshoring was primarily triggered by changes which could not possible have been foreseen when the offshoring decision was made. In line with Kinkel, it should be noted that the majority of papers do acknowledge the link to previous offshoring decisions but the reshoring intensity differs between countries (Fratocchi et al., 2014).

In terms of modes of exit from the offshoring destination, Kinkel (2014) distinguishes between “backshoring activities from own foreign production plants of the company (captive backshoring) and backshoring from foreign suppliers of the respective company (outsource backshoring)” (Kinkel, 2014). Whereas it appears that problems with quality and high transportation costs are more important for ‘outsource backshoring’ (evidence not statistically significant), high coordination efforts seems to drive ‘captive backshoring’.

Additionally, distance between the home and host country is considered to influence decision making on off- and reshoring. Kinkel (2014) notes that it seems the further away manufacturing is offshored, the more critical the decision is scrutinized. As evidence he names many reshoring cases within Europe as opposed to the few from China to Europe. The papers under review somewhat contradict each other on the extent to which reshoring occurs. While Kinkel and others researching the reshoring phenomenon in Europe found that reshoring mostly happens on a continental level rather than from China or other far-off locations, Fratocchi’s et al.’s (2014) dataset implies that almost 70 percent of all reshoring cases described reshoring activities from China and the rest of Asia (Fratocchi et al., 2014). They also found that reshoring could be observed in nearly all industries without major differences between capital- and labor-intensive ones. Furthermore, their research indicates that relocations from China go much smoother than those from other countries (timeframe of six years).

### 3.2.6 Reshoring: Consequences, Conclusions and Development

Based on their analysis of reshoring, authors have come to different ‘conclusions’ in regards to the reshoring phenomenon. For instance in regards to the theoretical foundation of reshoring, Martínez-Mora and Morino (2014) point out that the theoretical framework based on International Business literature (TCE, RBV, OLI, etc.) can sufficiently explain the location choices of firms which **includes** the reshoring phenomenon. In order to explain the lack of available data on reshoring, Martínez-Mora and Merino (2014) assume that the reasons are twofold. On the one hand, reshoring is not usually covered by any obligation to

report to official statistics sources; on the other hand, companies might shy away to report on unsuccessful offshoring activities making their misjudgment apparent to the public.

In terms of the consequences of reshoring, Kinkel, Bailey, Tate and others agree that manufacturing will not fully return because high cost countries with a highly skilled labor market cannot compete with low cost economies in manufacturing. According to Bailey and de Propris (2014b), only high value-adding parts can be manufactured in economies such as the UK, Germany or the Scandinavian countries. Other ‘rebalancing’ of economies will only occur if politics becomes involved and will not be sustainable if free market powers reign (Bailey & De Propris, 2014b). Consequently, reshored manufacturing will require fewer but more skilled workers and will not easily occur without major policy changes (Bailey & De Propris, 2014b). There may be countries such as the U.S. which are more suited for reshoring as they have a lower wage differential with China than most Western European countries where wages are still a lot higher and thus not competitive to Chinese wages. In this context, Kinkel (2014) re-emphasizes that reshoring will not restore manufacturing competitiveness in many high labor cost countries – especially as it is not easy (sometimes even impossible) to reinstate product and process competencies lost during outsourcing initiatives in the past. Instead of trying to catch up with the past, Kinkel recommends that firms concentrate their resources on building new capabilities for future product and technology generations (Kinkel, 2014).

Kinkel’s (2014) recent research results see a trend for the further internationalization of firms’ business activities – particularly in emerging markets – while at the same time firms’ focus on their core competences and potentials. This leads him to predict that “we might envisage the beginning of a new strategic imperative of local manufacturing in important markets, with a strong focus on regional concentration and specialization of the necessary engineering and manufacturing competences” (Kinkel, 2014). He continues that in the future complete solution providing capabilities will be present in all relevant markets, thus reducing the number of global, complex and (thus) more vulnerable supply chains to a minimum (Kinkel, 2014). Bailey argues in a similar direction as he sees the factors for offshoring changing from a resource seeking to a market seeking focus, even though his and Kinkel’s claims opposes past location choices of MNCs which were driven by the contribution of places to the overall value creation and the optimal mix of high-cost / high-skilled and low-cost / low-skilled value-adding (Bailey & De Propris, 2014b).

Fine (2013) neither argues for offshoring or reshoring but rather takes a holistic view on the reshoring debate. He indicates that the future lies in what he refers to as ‘intellisourcing’. Intellisourcing means that firms make their sourcing and shoring flexible so that processes can be adjusted easily if need be. He also takes a stance on ethical supply chain issues criticizing for instance the ‘low-bid mentality’ or abuse of cheap labor by firms in their sourcing and shoring agendas (Fine, 2013).

Fratocchi et al. (2014) discuss future research opportunities by dividing possible directions in four areas: motivation for (back-) reshoring, involved value chain activities, location specificities at home and abroad, and the modes of entry and exit to and from the offshoring destination (2014). In addition to Fratocchi’s call for more research, Arlbjørn and Mikkelsen (2014) propose three further areas to extend the knowledge on reshoring: research on practice of globalization strategies over time and differentiated by company size, the use of automation (how and to what extent can it keep manufacturing in the home country) and ambidexterity (the question of companies’ allocation and use of resources in daily operations versus development and supply chain innovation in the organization).

### 3.2.7 Summary and Concluding Thoughts

The main objective of the systematic literature review was to answer the first research question of *what is the academic status quo of published research on reshoring?*

Firstly, the review formally described the articles and found that most were published fairly recently in a quite limited number of journals which indicates that the area of reshoring represents a rather specific interest and has yet to gain wider scientific attention. Consequently, it comes not as a surprise that the research strategies used by authors are either purely conceptual (due to the fact that reshoring is an emerging and unexplored topic) or survey- and case study based. Those allow to explore the reshoring phenomenon and provide empirical evidence.

Secondly, the articles' content was analyzed based on emerging categories and it was found that definitions of the key term 'reshoring' somewhat deviate as each author or group of authors worded their understanding of the topic slightly different, leaving room for inclusions and exclusions. Hence, it was necessary to define the word and its meaning for the purpose of this thesis (see 3.2.1 for definition).

Furthermore, the different possibilities used by authors to describe the reshoring phenomenon with existing scientific theories were outlined. It was found that TCE and RBV were used by many authors, some of which further refined their theorizing by including aspects such as dynamic capabilities theory. This shows that it is possible to theoretically base reshoring on existing theories. However, a real 'Theory of Reshoring' does not exist yet. Additionally, the same holds true for reshoring decision-making models and frameworks. The two frameworks presented can serve as a broad guideline for firms to make a shoring decision but they need to be more specified and backed-up by empirical evidence.

The question on why firms reshore yielded a plethora of answers drawn from all articles. After filtering the 'double nominations', a comprehensive list was extracted and put together in a framework sorting drivers and barriers in global, host country, home country, supply chain and firm-specific dynamics (3.2.4). It was found that current literature is more focused on the drivers of reshoring. The authors assume that this is the case due to researchers' attention to the reshoring processes themselves. Research on barriers is fairly limited. Moreover, it has to be noted that even though global competitive dynamics are very important they cannot be considered as the leading factors for reshoring as firm-specific and supply chain factors also play a significant role. In this regard, it could be observed that labor costs can be easily overestimated as a lever for cost reduction. In regards to the when, where and how reshoring happens, some answers could be found despite supporting evidence for the first two highly depends on the local context and different studies have reached opposing conclusions. Also, in terms of how reshoring happens, available knowledge seems to be based on educated guesses rather than on solid scientific evidence. This is why in regards to *when, where* and *how* further research is necessary.

When it comes to different authors' scientific contributions to the debate regarding consequences, conclusions and assumed future developments on the reshoring front, some authors argue that reshoring can be explained with existing theories taken from literature on International Business. Furthermore, many authors agree that even though reshoring happens, this will not lead to a 're-industrialization' of Western economies. They rather believe in a future of mixed local and international manufacturing with flexible sourcing options. Overall, authors are certain that more research on reshoring will be necessary and some authors outline future research agendas along which the debate could develop.

Finally, it was noticed by the authors of this thesis that Kinkel, Ellram and Tate ignore each other's contributions to the debate which appears odd in such a small research field. Conceptual papers manage to really contribute to the debate globally whereas most empirical papers contribute on a local, national or regional scale. Some papers do not easily compare to the 'main' body of literature due to their slightly different definition of the term 'reshoring'. The articles on macro-economic and game-theoretical modelling contribute to the debate on a different level as they are viewing the topic through another lens. However theoretical their results might be, their overall contribution makes them a valuable source of knowledge.

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## 4 Empirical Findings

*This chapter presents the five cases of this thesis and summarizes the main findings. The chapter begins by evaluating introductory data from Svenskt Näringsliv which was used in the analysis section to supplement the findings. For all cases, off- and reshoring experiences are briefly described. More information on the individual companies can be found in appendix 4.*

### 4.1 Research by Svenskt Näringsliv

Since 2005 the association of Swedish businesses, Svenskt Näringsliv, has quarterly collected data from its members through its 'företagarpanel' (Svenskt Näringsliv, 2013). The online-based survey obtains data from approximately 9,000 companies in Sweden and regularly achieves response rates of 50 percent. In one of the more recent surveys (June 2013), Näringsliv included standardized questions on firms' reshoring experience (Svenskt Näringsliv, 2013). The raw data from the survey was obtained from Näringsliv by the authors of this thesis (Appendix 3<sup>1</sup>) and has been used as an introduction to the more specific case study results by giving insight on the general view of the Swedish industry on reshoring. Out of the companies with international operations, 74 firms indicated to have reshored production activities back to Sweden. As this research is exclusively focused on the reshoring of production to Sweden, the authors of this thesis only considered the answers from manufacturing firms ('varuproduktion / tillverkning') on why they either (a) did reshore operations or (b) plan to move activities home.

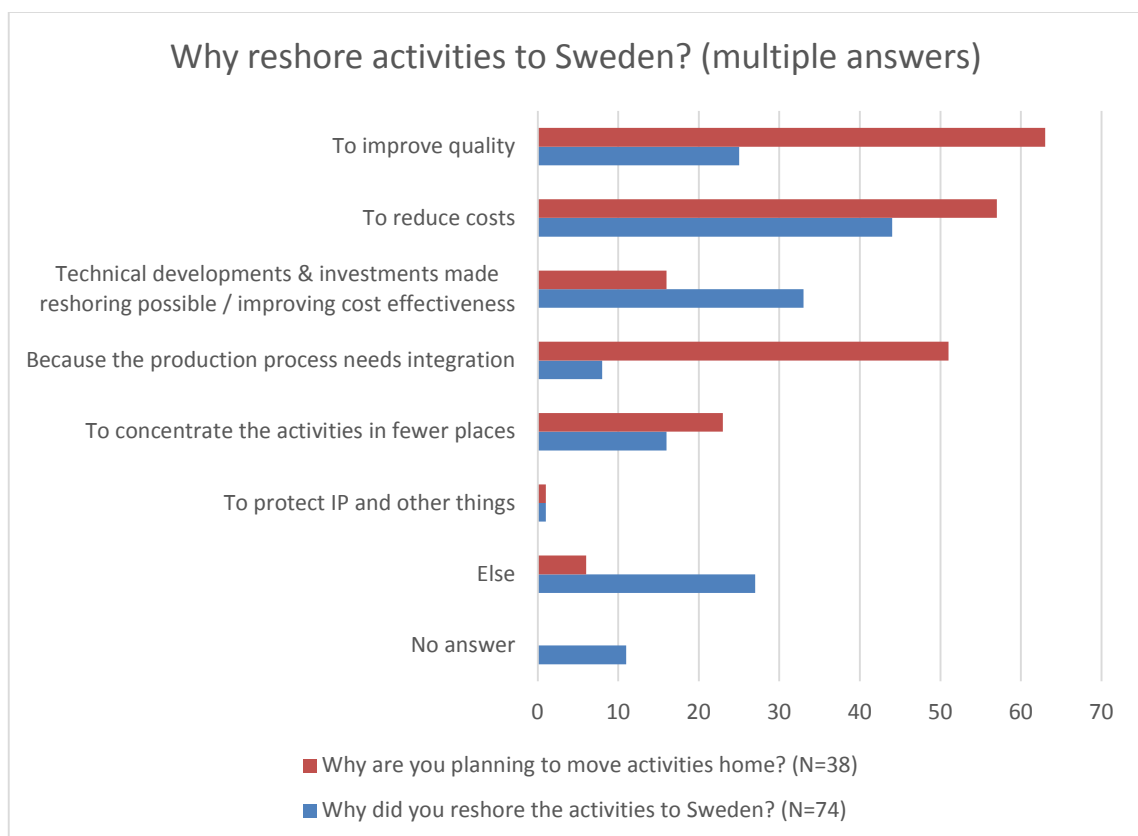


Figure 4.1: Why do Swedish manufacturing firms reshore manufacturing or why do they plan to? (Compiled by authors).

<sup>1</sup> The appendix outlines the questions, answers in absolute numbers by type and company size and gives further details on subcategories

As can be seen in table 4.1, firms' decisions to reshore were motivated by a combination of factors. A main driver for the companies to reshore was to reduce costs. Moreover, quality issues, technical developments and other factors scored high with the survey group.

Within the group of 38 companies which plan to reshore their offshored activities (partly) back to Sweden, the motivational factors slightly differ from the group of respondents that previously reshored. When asked for their motivation on why they plan to reshore, firms primarily emphasized the need to improve quality, reduce costs and concentrate their activities in fewer places.

From the chart, some interesting observations can be made. The reasons why firms that did reshore do deviate substantially from the motivations of firms that plan to reshore. For example, the reason 'integration of production processes' is relatively very important for the firms that plan on reshoring.

### 4.2 Findings Company A

Offshoring experience: In 1998 the first joint venture started in China between Company A and a Chinese partner. Four years later, in 2002, the firm started its own wholly owned manufacturing in the country without Chinese involvement. Since then, a lot of production has been moved from Sweden (Hestra) and other places to Shanghai (company presentation and CEO Company A, personal communication). In China, the depreciated (old) machinery from Europe is often used for production. Products which remained in Sweden are those where quality is essential. As a rule of thumb, products with a lot of "technology" are manufactured or assembled in Sweden whereas high volume and low volume products with a high work intensity are produced in China (Production Manager 1 & 2, personal communication). Even though part of the same economic entity (Group A), production in Shanghai and Hestra are separated legally, i.e. Company A's management in Hestra has no managerial power in China and vice versa (CEO Company A, personal communication).

Before the take-over by Group A in 2010, Company A's owners (a private equity firm) focused its activities on cost reduction which led to major shifts of production to China in 2007. The products were made in China and quality assessed in Sweden before being used for assembly in Hestra. One of Company A's products depending on inputs from China were traditional stapling machines. With Group A's acquisition, the management paradigm changed to reducing capital intensity / lock-up and speeding up inventory turnover (Production Manager 1 & 2, personal communication). Consequently, many decisions taken in the private equity era require a review under the "new rules". The estimated cost savings by producing in China did not materialize as factors other than cheap labor costs were not sufficiently considered (Finance Manager Company A, personal communication). Nowadays, production is meant to occur as close to the market as possible to prevent the unnecessary shipping of parts and products around the globe (Production Manager 1 Company A, personal communication). The new paradigm was seen as a chance to return parts of the production home to Sweden (Production Manager 1 Company A, personal communication).

Reshoring experience: Recently, Company A reshored the production of breechblocks, which are a vital part for the manufacturing of staplers. Breechblocks used to be produced in Hestra before production was transferred to China in 2006 / 2007 (Production Manager 1 Company A, personal communication). The reasons to reshore were manifold. Production in Hestra suffered from delayed deliveries, quality issues, and overall long lead times (Production Manager 1 & 2, personal communication). The plant in China needed orders to be placed ten weeks in advance so that the components could be produced and shipped from

Shanghai to Hestra (which took eight weeks) (Production Manager 1 Company A, personal communication). Consequently, by the time quality problems were discovered two and a half months had passed (Production Manager 1 & 2, personal communication). Deliveries would often have defects such as being too small / big, wrong quantities, etc. Furthermore, problems with packaging occurred as parts were exposed to maritime weather conditions and led them to rust (Production Manager 2 Company A, personal communication). This led to problems in the production process in Hestra as the necessary parts had to be reproduced. To still satisfy demand, the Hestra plant had to run a parallel part production to cover for the faulty components (Production Manager 2 Company A, personal communication). This would have negative effects on their other production lines as everything got out of 'takt'. The system also did not allow for unforeseen extra orders which led to the creation of an unwanted buffer stock at the Swedish plant (Production Manager 2 Company A, personal communication).

When asked if the initial decision to offshore was good and right, both interviewees from production independently from each other answered that "with math you can calculate everything the way you want it to be" (Production Manager 1 & 2, personal communication). The reshored part could be produced in China for roughly one third of production costs in Sweden (Production Manager 1 Company A, personal communication). At order volumes of 450,000 this difference was considered to be significant. With the quality problems of pieces produced in China, categorized as faulty and reproduced in Sweden the actual production often ended up to be 1,34 times of the Swedish cost per unit. Interestingly, logistics and supply chain costs were not considered at all for decision making (Production Manager 1 Company A, personal communication).

The management's condition to reshore breechblock production to Sweden was that production costs should not be higher than in China. "This was the base from where we started", one of the interviewees said (Production Manager 1 Company A, personal communication). Other costs were always in the background but production costs per unit were the main condition (Production Manager 2 Company A, personal communication). By using the same machinery as in China and rationalizing production using lean techniques, the Hestra staff managed to cut unit costs to under "the Chinese price" which led to the reshoring move after six / seven years of production in China (Production Manager 1 Company A, personal communication). In other words, production is now cheaper in Sweden considering that no additional transportation is needed and raw materials are around the same price (Production Manager 1 Company A, personal communication). Asked if it was possible for the firm to look more at total costs, the interviewees from the shop floor units pointed out that it could be an option for the future but that these inclusions depended largely on the management (Production Manager 1 & 2, personal communication). Both interviewees from production had experienced that management decisions were taken based on data which was interpreted according to the management's preferences, e.g. the former owner of Company A was very "China-friendly" (Production Manager 1 & 2, personal communication).

The improvements and rationalization could have been implemented in China as well. "However, this would not have solved our problems", Production Manager 2 mentioned. The reshoring initiative was driven by a small in-house team whose members came from the technical production and product development departments (Production Manager 2 Company A, personal communication). The team examined possible solutions to cut costs and tested each option for feasibility. After picking one of the alternatives as the solution, machinery and tools worth SEK 600,000 had to be purchased before the production roll-out (Production Manager 2 Company A, personal communication). Moreover, staff had to be



retrained according to the improved manufacturing processes (Production Manager 2 Company A, personal communication). The upfront investment paid off quickly as volumes of 450,000 pieces are needed for stapler production (Production Manager 1 Company A, personal communication).

With large amounts of production gone to China, the Hestra plant sits on a lot of capital that is tied up in unused production facilities. The empty buildings are standing idle and there are not too many options to rent out properties due to lacking demand (Production Manager 2 Company A, personal communication). Production Manager 2 identified two further reshoring opportunities. One is an office hole punch which punches four holes and is only sold in Northern Europe. Currently, this type of hole punch production lies with the Chinese plant. The other product is staple pliers and are a low volume product. The management knows about the potential reshoring candidates but with the new group structure there are a lot of heads involved in manufacturing location decisions (Production Manager 2 Company A, personal communication).

Table 4.1: Summary of most important empirical findings for Company A

<b>Summary of findings for Company A</b>	
Global competitive dynamics	Treated as a given beyond the company's control
Host country	Quality of products manufactured in host country somewhat disappointing, communication and coordination problems apparent
Home country	Domestic goodwill partly present (due to the operational problems that appeared and the fact that the component was previously produced in Sweden), improved cost performance and increased automation made reshoring possible, retained manufacturing ability in home country facilitated ease of reshoring, problems with offshored products indirectly endangered good brand image
Supply Chain	Long lead times a root cause for reshoring efforts, production could not be estimated and profitability as well as customer value creation was not optimal, essentially production in China increased risk of SC disruption, spread of operations did not enhance innovation efficiency, customer demand required higher flexibility, distribution became key factor in value creation
Firm-Specific	Cost savings overestimated, around time of offshoring it was also 'trendy' to offshore, reshoring effort went smooth and decision making was well embedded in organization, ownership change led to different people deciding on reshoring than the ones that made the offshoring decision.
Additional	Change of owner, offshoring happened because of trend

### 4.3 Findings Company B

*If not otherwise stated, all information and opinions expressed are taken from an interview with Company B's Vice President Cab and Chassis Production (2015-04-14).*

Offshoring experience: With its global production network Company B is very experienced in regards to offshoring and outsourcing parts of its production. This is typical for a vehicle manufacturer. Depending on the sales volume of the particular markets, Company B aims to produce as closely as possible to its customers in order to understand their specific needs as well as to reduce logistics costs and supply chain risks. Additionally, production costs are reduced and in the case of outsourcing, the capital intensity of the business is decreased as capital lock-up is transferred to suppliers. Local sourcing is essential for profitable local growth but also one of the major challenges when setting up a new plant in a foreign location. Suppliers have to be developed in order to meet Company B's high quality standards because "quality is what motivates customers to buy Company B" (plus the associated profitability).

The firm has begun offshoring production since the 1950s, when production in South America was set up. All of Company B's offshoring is done in a step-by-step approach. Due to a modularized system in its plants, the firm can start from a very small outset in a new market. Assembly can be upscaled flexibly according to local sales / demand. The management of plants is usually done by experienced Company B staff from Europe to secure quality and prevent fraud. Foreign plants are but for a few exceptions wholly owned by Company B.

At Company B, offshoring is primarily used to grow the business. The intention is not to shift production to low cost countries. However, as emerging markets grow quicker than developed markets more business is likely to be transferred East over time, i.e. the European input will shrink. Growth in Europe is expected to be steady but low. Due to legal constraints, the company has no production in China.

Reshoring experience: Due to its step-by-step approach when offshoring or outsourcing, i.e. building a market and ensuring quality stepwise over time, and due to its strong emphasis on selling, sourcing and assembling locally, Company B has not reshored a lot of its production to Sweden. However, there is for instance one case where reshoring was used in a corrective manner. A few years ago, there was a trend to give development and production assignments to suppliers which let Company B experiment with offshoring within Europe.

The fact that the supplier was not based in a low cost but a Western European country is of particular interest. The purpose of the offshoring move was not to save money, it was to get the skills and experience of the supplier and add them to Company B's production system. In this case, offshoring was seen as a test by Company B. Over several years, the supplier's ability to deliver development, experience and production value to Company B was tested. When the supplier could not achieve the hoped for outcomes, even after Company B had put a lot of effort and money into the cooperation, the part production was reshored to Sweden and insourced in the Södertälje plant. It turned out that the scope was too big for the supplier and that consequently quality, cost and delivery targets could not be met. The component's vital importance let the firm to this step. After improving and rationalizing production processes in-house, the part is still produced in Sweden.

The Company B interviewee mentioned that there is a trend in almost every minute where they discuss if something should be let go (offshored) or taken home (reshored). This is an essential question at Company B because the firm is often driven by a combination of quality and profitability. In this regard, Company B's decisions not to reshore are driven by three factors. First, if necessary improvements can be done with or at the supplier, this is favorable

to reshoring or insourcing. Second, if possible, the company tries to prevent binding its own capital as vehicle and engine production is capital intensive due to the high value of the goods. Third, if innovation happens at suppliers, they may be able to share the investment costs among their different customers.

One of the major problems with Company B’s offshoring is to find the right quality locally since the business cases often depend on local sourcing for higher profits and lower logistics costs. “If the quality is low, it won’t work” – “Not the price. That will be low anyways”. If local suppliers cannot meet the quality targets, Company B sources parts and components from Europe. Quality is vitally important in truck and bus production because unlike cars, no truck is the same. Truck buyers are more demanding than car buyers as they have more requirements. Whereas just-in-time and cost saving is key in the car industry, trucks are produced in small numbers and at a high quality which makes them more durable and more profitable for their users long term (interview and company video).

Table 4.2: Summary of most important empirical findings for Company B

<b>Summary of findings for Company B</b>	
Global competitive dynamics	Factors of category not mentioned by interviewee
Host country	Plants often managed by experienced staff from the home base to avoid communication/coordination problems, market access and customer closeness important reasons not to reshore, supplier could not deliver according to specification in contract
Home country	High quality very essential, supplier collaboration encouraged since high quality while keeping cost efficiency very important, over time automation and technology improved, personnel ability and cost performance improved
Supply Chain	Prioritization of closeness to markets thus facilities spread over all continents, smooth SC top priority and local sourcing encouraged when possible, higher risk of SC disruption, profitability and customer value creation
Firm-Specific	Factors of category not mentioned in interview
Additional	Offshoring happened by following trends

#### 4.4 Findings Company C

*If not otherwise stated, all information and opinions expressed are taken from an interview with Company C's Purchasing Director (former Production Manager in Minden, Jönköping and Skillingaryd) (2015-04-29).*

Offshoring experience: Company C production happens mainly in Sweden (6 plants) but the firm also has one plant in Germany (two before reshoring). The German plants were acquired from a Dutch company in 2010. After the take-over of these troubled plants, Company C tried to turn the business around. Since the firm offers a relatively quick delivery by furniture industry standards, offshoring to other (Asian) countries would not be an option.

Reshoring experience: One of the German plants, in Minden, was closed in December and production reshored to Sweden in late 2014. During the time of reshoring, the interviewee was production director for two Swedish plants and the Minden plant. Before starting the reshoring project, he looked into literature and made calls in his personal network to find a project manager with reshoring experience.

When Company C bought the Minden plant in 2010, it was not the company's intention to close it. The idea behind the acquisition was to grow in the German market which is the largest market for office furniture in Europe (19 billion Euros). However, Company C was not able to keep the plant open when the financial crisis hit. To complicate matters, two other office furniture giants, Hayward and Steel Case, were in similar troubles in Germany and all three firms announced plans to move production away from Germany about the same time. Subsequently the phrase 'office furniture industry crisis' was coined in Germany.

The main drivers for Company C to close its Minden plant and reshore production to Småland (Skillingaryd and Jönköping) was to concentrate chair production in fewer places and to reduce total landed costs. All three plants primarily focus(ed) on upholstered office chair production with similar design. Because of a higher degree of automation at the Swedish production plants, these have much lower indirect costs. Prior to reshoring, Company C prioritized streamlining production according to lean principles in Sweden which resulted in available capacity at the Jönköping and Skillingaryd plants. If this capacity had not existed, the business case would not have been feasible. Moreover, as most customers of the company are in the region of 'Norden' (Scandinavia and Finland), the firm decided to move its final assembly closer to its customers.

"We had machinery, knowledge and capacity to shift the Minden production to these two production plants without too much investment" which would save the overhead costs associated with running another plant in addition to the reduction of direct (wage) costs for the German workers. In Germany, around 120 people were made redundant whereas 50 jobs were newly created in Sweden. By investing almost nothing and increasing production volumes in Sweden, the company could easily get a better margin on their office chair sales.

Before the reshoring plans were published, Company C started to explore options to move the plant to Sweden without major disruptions to its supply chain and overall business. With consideration of its German employees, Company C delayed its announcement until after the summer vacation. After more than six months of preparation and careful risk analysis with an experienced project manager and consultants, the final plan was put together. "In hindsight, this long planning period paid off".

Closing the plant and transferring production to Sweden was not an easy task. "To close a production plant in Europe - especially in Germany, Italy or France - is not for free, there

are rules and regulations”. Whereas in Sweden it is quite simple to close a plant according to Company C, in other countries the reshoring firm may have to pay its employees severance packages for their suffering. In this case, social plans had to be negotiated with workers, unions and law firms. “But even with that calculation and also with the longer perspective to run the business in a more efficient way, Company C had a business case”. Another important point was to approach the suppliers of the German plant, of which some turned out to be so small that they had never delivered abroad and in some cases did not even have English speaking staff. This group was to be kept happy in order to continue production in Sweden and to have a seamless transition, while at the same time being told to become faster and more flexible.

The German employees’ reaction to the news was not positive. However, having experienced frequent changes of owners and knowing about the economic difficulties, reshoring came not as a surprise to them. After the reshoring announcement sick leave was slightly higher and staff was less enthusiastic about their work. This had been anticipated and was included in financial models during the planning stage by Company C.

Before and during the move, IT integration was the most difficult challenge as different systems were used and more than 170 different products were moved. With a standard product consisting of at least 50 different parts, the project team had to work hard in this critical area. “We spent most time on IT integration with our suppliers”. The interviewee mentioned that important challenges were to overcome cultural differences, language barriers and dealing with another country’s complicated legislation. Even though transport related costs of products sold in Germany have increased, this could be compensated by the ability to sell the former German products to more markets (such as the UK) in which customers were interested in the continental European design. The interviewee emphasized several times the importance of communication at each step in the reshoring process.

As a family business not driven by the stock markets and quarterly results, Company C has a long term perspective on its profitability. Furthermore, the owners are aware of their social responsibility towards their employees. This ‘human aspect’ led to a delayed reshoring decision. A more profit driven organization would have most likely reshored much earlier due to the bad financial situation. During the reshoring execution phase, Company C had an unexpected surge in ordinary business demand which led to capacity problems. The company had to manage a 30 percent rise in utilization which it achieved by reactivating 45 retirees or employees on leave to support the 240 people normally working in Skillingaryd.

Table 4.3: Summary of most important empirical findings for Company C

<b>Summary of findings for Company C</b>	
Global competitive dynamics	State of the world economy (economic crisis in late 2000s) played a key role
Host country	Factors of category not mentioned as motivators for reshoring
Home country	Production is “leaner” at home due to higher degree of automation, access to qualified personnel and improved cost performance due to automation and overall higher efficiency is given
Supply Chain	Minden production less flexible than production in Jönköping and Skillingaryd, lower performance
Firm-Specific	Owners postponed reshoring move to not lose money, give it production another chance and avoid an uncertain / unstable environment for employees in Minden
Additional	Reshoring delay for social/humane reasons, family business

## 4.5 Findings Company D

*If not otherwise stated, all information and opinions expressed are taken from an interview with Company D's Site Manager in Arvika (2015-05-07).*

Offshoring experience: In 2007, Company D decided to offshore parts of its heat pump production to a plant in Poland. Of the approx. 275 types of heat pumps, 70 with a higher production volume were offshored to the Polish plant. Company D offshored because there was a growing demand for heat pumps in the Swedish and European markets in 2006, and it wanted to increase production capacity accordingly without a substantial increase of production costs. Skilled staff in Poland was employed for one fourth of the hourly Swedish wage equivalent.

Company D used facilities of its parent company, which already operated a growing plant in Poland with free space and employees. Overall, the shared plant was a suitable and flexible setup for different reasons. Firstly, heat pump demand follows a seasonal pattern. This is why production capacity has to be adjustable to accommodate this seasonality. Company D operated at constant production and staff levels in Sweden, whereas the Polish production was steered by demand and staff was flexibly shared between Company D and its parent. Secondly, the two companies could share overhead functions such as human resources, which were run by the parent company, and shared the costs for those.

Even though there were advantages in offshoring production to Poland (such as greater production flexibility), the firm had to deal with a number of challenges. The complexity and costs of running two plants which produce the same or fairly similar products in different countries and increased logistics costs were among those challenges. Another challenge was how to deal with communication issues: when quality problems occurred with products at customers, reports were filed in Swedish and had to be translated into Polish or English to allow process improvement in both countries.

Reshoring experience: In fall 2012, Company D reshored all production back to Sweden which was motivated by a variety of factors. In the period between offshoring and reshoring, the plant in Arvika had undergone an improvement program to increase production efficiency. As a result, the production flow could be substantially improved and unexpected capacity (free space) freed up. This led to the plant utilization dropping to only 50 percent. Moreover, production processes and products in both plants were fairly similar but not identical. This meant that a lot of (double) work and energy went into the management of the two plants which could be avoided by running Arvika at full capacity.

Furthermore, the market growth, anticipated in 2006, did not materialize and the Polish production director was more interested in the success of the Polish plant than the Swedish production site. Also, the engineers from Company D's R&D are located in Arvika which allows quick quality checks and improvements of production without problems, unlike in the Polish plant, where engineers had to be flown in first. Overall, management of the Swedish plant thought that, by centralizing all production in Sweden, control over production could be regained and quality improved.

The reshoring move could be easily organized. At the beginning of 2013, all manufacturing in Poland was stopped. The parent company continued to operate the Polish plant on its own. The offshored heat pumps could still be produced in Sweden and no particular re-training of staff was necessary. All manufacturing equipment was moved to Sweden in January and February 2013, the low season for heat pump production. Beforehand, production in Poland was decreased gradually over several months and increased in Sweden.

When asked why reshoring had not been considered earlier, the interviewee answered that decision making evolves over time with changing priorities. The interviewee started working for Company D in 2009 and the manager of his business unit was replaced in 2010. The new manager was more receptive to look into reshoring options. Based on thorough calculations, the interviewee convinced management to relocate all production to Sweden where a few blue collar jobs could be created.

Generally, high labor costs are not seen as a preventive factor for reshoring production to Sweden as labor only represents a small part in Company D's overall production costs. However, the company wished for more flexible employment regulations. The firm wanted to be close to its main market although offshoring all production to Poland was a viable alternative to reshoring for a while. However, management decided against this option as they were afraid that customers would start asking for price cuts, assuming lower production costs in Poland. Despite the wage differential between Sweden and Poland, calculations showed that the best option was to reshore production to Sweden.

Table 4.4: Summary of most important empirical findings for Company D

<b>Summary of findings for Company D</b>	
Global competitive dynamics	Factors of category not mentioned as motivators for reshoring
Host country	Quality in regards to service improvement based on customer feedback, difficulties with information flow in different languages
Home country	After offshoring automation level in Sweden increased, qualified staff available, performance was improved, domestic goodwill as main market in Sweden
Supply Chain	Long distance between R&D and Polish plant, flexibility problems due to distance, high coordination and transaction cost experienced over time, seasonality of demand
Firm-Specific	Factors of category not mentioned as motivators for reshoring



## 4.6 Findings Company E

*If not otherwise stated, all information and opinions expressed are taken from an interview with Company E CEO (2015-05-05).*

Offshoring experience: In the 1980s, the firm opened its first plant abroad in Canada (company website). This case focuses on the offshoring of production to Serbia in 2004. Initially, Company E offshored the manufacturing of products which (due to smaller production volumes) did not justify the investment in plant automation at that point in time. Thus, offshoring was initially executed to reduce costs.

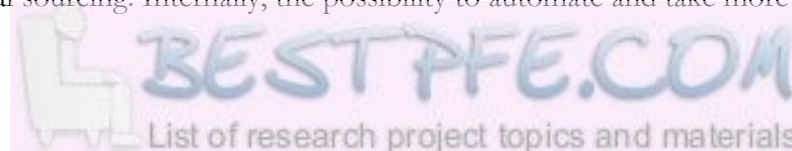
The plant in Serbia was a greenfield investment with collaboration of local partners. Serbia was well-known for its competence and experience in manufacturing springs. Company E had contact with Serbian ‘spring companies’ before the offshoring and some employees in the Bredaryd plant are immigrants from Serbia and Bosnia which made the relocation easier considering language and culture. The new plant employed locals with experience in spring production who needed relatively little training as the plant in Serbia used an older generation of the same machines used in Sweden. Thus, staff had the general competence and only needed to be updated to operate a newer version.

The offshoring move was primarily driven by Company E’ customers. Ten years ago, their global sourcing strategies required a certain number of parts coming from East or South Eastern European countries. Customers wanted to be global and did not consider risks such as longer delivery times or costs involved in offshoring production. According to the interviewee, these requirements have changed from 2004. Customers have matured, are more aware of risks, see the total lifecycle costs of products and prefer to have a single person / point of contact with their suppliers which are expected to be able to deliver globally. The focus has somewhat shifted from asking suppliers to have plants in many locations to demanding global availability of parts instead. This shift was the initial reason to consider reshoring some parts of production from Serbia back to Sweden.

By offshoring, Company E was able to keep its customers which otherwise would have been lost. Additionally, the company experienced advantages in sales as new customers sometimes prefer products from low cost countries in anticipation of cheaper prices than buying parts from countries generally seen as more expensive such as Sweden. Offshoring came at the price of more complex logistics between plants, challenging administration and corruption in Serbia.

Reshoring experience: Seen the challenges of producing in Serbia and acknowledging the changed requirements of customers, Company E decided to reshore some of its activities from Serbia to Sweden in summer 2014. The project finished in February 2015 and one product with many variants and small volumes was reshored to the Swedish plant. In Serbia, the product was produced using manual labor. Manufacturing of the product in Sweden is automated. In 2004, the year the product was offshored, this automation would not have been possible, perhaps technically but also not financially. As a result of automation, the product can be offered at a similar price as before from Serbia.

Automation was enabled by an investment in robots and effected that no new employees were needed in Sweden. However, Swedish employees had to update their knowledge on automation. Externally, the move was driven by maturing customers which realized the complexity of global sourcing. Internally, the possibility to automate and take more control over



manufacturing of the reshored product were drivers. Reshoring reduced the logistics complexity in regards to serving customers in the Northern hemisphere. As a Swedish family business, the owners want to support the local community at the Swedish production site.

“We could not just do it based on gut feelings” the interviewee said when asked about the decision making process. The management first discussed pros and cons of the move. Then all costs were calculated, before a decision was taken rather quickly. Customers were happy about the move and relationships can be easier managed now.

Table 4.5: Summary of most important empirical findings for Company E

<b>Summary of findings for Company E</b>	
Global competitive dynamics	Suppliers requested for supplies from East / South Eastern Europe
Host country	Quality issues at first but was not a major concern; tolls, administrative requirements and corruption were primary drivers for move
Home country	Family business shows of domestic goodwill, access to qualified personnel is a given, automation enabled cost reductions and more efficient production
Supply Chain	Due to distance: high coordination and transaction costs, higher risk of SC disruption, distribution being key factor in global value chains of customers were reasons to reshore
Firm-Specific	Factors of this category not mentioned as motivators for reshoring
Additional	Offshoring initially ‘forced’ by customers, ‘Made in Sweden’ sometimes disadvantageous, administrative challenges in Serbia

## 5 Analysis

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*The analysis chapter combines the theoretical framework with the empirical findings. Following the systematic literature review's structure, cases are first analyzed on an individual basis in comparison to the theory. Second, a cross case analysis presents common factors and differences across all cases to derive a revised, 'Swedish' version of the model from section 3.2.4. Finally, the implications of the revised model are discussed.*

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### 5.1 In Case Comparison of Theory and Empirical Findings

As an introduction to “Swedish” reshoring compared to literature, it is interesting to see how motivations differ from theory according to the data from Näringsliv. Cost reductions, the better integration of production and the concentration of manufacturing in fewer locations seem highly relevant for Swedish firms but are not part of the dynamics framework. Quality improvements and more efficient production techniques at home are points mentioned in both a Swedish context and in the international literature on reshoring. IP protection has a lower importance for Swedish firms. It is important to keep in mind that the Näringsliv data was obtained as part of a quantitative survey, i.e. a very different type of study with standardized answers which influenced results.

In regards to combining theory and empirical results, the authors find that the **O**wnership advantages, **L**ocation advantages, and **I**nternalization advantages model can serve well as the theoretical link between all cases. The model's ‘L’ is the relevant part of this theory in the context of reshoring. Under the heading of ‘locational advantages’, Dunning (1998) summarizes resource, marketing, efficiency and strategic asset seeking advantages.

The influence of resource seeking advantages such as the availability of raw materials, infrastructure and a network of local partners differed between the cases presented in this research. All companies need resources, but in times of globalization, where most places have basic infrastructure to send and receive materials and supplies come from all around the world, some firms depend less on local raw materials input, etc. than others. For instance, Company C was very keen to keep its German suppliers after reshoring production to Sweden whereas Company E was interested in using the cluster and networking opportunities in the Serbian springs’ industry. Without local sourcing, Company B does not even consider entering in a new market whereas for Company A, supplies come from the same suppliers globally.

Marketing seeking advantages (availability and cost of local talent and suppliers, access to domestic markets and government (economic) policies) were drivers for the case companies as is outlined below in the case analysis. Some took production abroad for cost reasons only, whereas others were also hoping to access new markets such as Company C. A third set of locational advantages deals with efficiency seeking advantages which concerns the combination of production and cost-related factors, favorable industry clusters and diminishing trade barriers. In this regard, Company B is very keen to use local sourcing to save on logistics costs and develop the local economy. Other firms such as Company C, Company E and Company A made reshoring decisions based on improved efficiencies in Sweden.

Finally, strategic asset seeking advantages evaluate the knowledge related assets, gathering of marketing intelligence and economies of agglomeration to keep a local presence. Seeking this advantage could be primarily observed in the Company B, Company C and Company E cases as these companies were looking for more than just cheap production facilities as is outlined

in the paragraphs hereafter. The following section combines the findings concerning scientific theories from the global systematic literature review (see 3.2.2 and 3.2.3) with the empirical data collected in Sweden (4.2 to 4.6).

### 5.1.1 Case Analysis Company A

The reshoring effort at Company A consisted of the repatriation of one product from China. Thus, the impact on overall production was relatively small. It seems that the ownership mode of the plant in China affected the ease of reshoring positively. As the Chinese plant is wholly owned by Company A / Group A there were no contractual barriers and it appeared that decision making on reshoring itself and the subsequent execution processes were not impeded in any way.

Looking at the case from a more theoretical perspective, the theory of **T**ransaction **C**ost **E**conomics (TCE) serves well as an underlying context. TCE is widely used for make-or-buy decisions and suggests that individual firms will move from high cost to low cost environments / regions if all else stays equal (Ellram, 2013). This ‘natural flow’ will, for example, be slowed down by cultural differences or limited intellectual property protection rights which creates room for opportunism and makes some low cost countries less attractive (McIvor, 2013). The case experiences from Company A to a large extent match with the claims of TCE. The company offshored and outsourced parts of the production process to a low cost country following the reasoning of TCE. Even though this might have happened for additional reasons, one of the main drivers was always the promise of cost reduction.

After a few general observations from the case, the analysis continues along the dynamics mentioned in the framework introduced in the literature review (3.2.4). The reshoring decision is considered from five angles: global competitive dynamics, host and home country factors as well as supply chain related and firm-specific aspects.

#### Global competitive dynamics

From the interviews at Company A, it appeared that global competitive dynamics are regarded as given, i.e. they are beyond the company’s sphere of influence and cannot be controlled. For example, when asked about the influence of currency fluctuation on manufacturing location decisions at Company A, the finance manager mentioned that this was not considered and was seen as an uncontrollable aspect of international trade (in his words: *“currency fluctuations are always either heaven or hell, you cannot control them”*, Finance Manager Company A, personal communication). Thus, local rather than global factors set the stage for reshoring at this firm.

#### Host country

In most reshoring cases in literature, firms that reshored were not satisfied with the host country’s characteristics compared to the characteristics of the home country. In this regard, the factor ‘time’ also seems to be of relevance; over time small problems tend to become more apparent. The appropriate key performance indicators need to be implemented first, which is not likely to happen directly at an early stage of the offshoring effort. Furthermore, the challenges that can be identified as ‘persistent’ and hard to resolve can often not be identified directly after the start of an offshoring initiative. This was clearly the case at Company A. Only gradually host country related factors began to pose problems downstream the supply chain and it became apparent that the factors causing the problems (quality and communication) could not be resolved in a cost-effective manner in the host country. Initially, these

problems were fixed by parallel production in China and Sweden which the Chinese plant had to pay for. However, this would only cure the symptoms, not the cause.

Issues with intellectual property protection, often referred to as a reshoring driver by literature, was not mentioned by Company A. The interviews revealed that this is partly due to the fact that the company has accepted the basis that products are copied and that this cannot be prevented due to the product category (mass-production, low value, long market presence).

### Home country

Since the component had previously been manufactured in Sweden, domestic goodwill was clearly present in the home country; employees working in the operations department put in extra efforts into researching how the component could be produced in a cost effective way and be returned to Sweden. In addition, in the interval between offshoring and reshoring decision, Company A has introduced lean practices which often implies smaller production batches and smarter production processes. Using automation and improved working procedures, production costs could be reduced in Sweden. In line with (Bailey & De Propris, 2014b, Arlbjørn & Mikkelsen, 2014) who mention that productivity in developed markets improved, the productivity at Company A increased gradually making reshoring an attractive option.

### Supply Chain

The authors derived from literature that supply chain related factors have become more important within the last decade and this is in sync with the Company A case. The demand characteristics for the company's products have changed over time. Demand is more volatile today and the customization of staplers and other office products has become more important. With production offshored to China, Company A often experienced trouble in regards to meeting sudden extra demand as lead times were long. The reshoring decision is deeply rooted in supply chain related problems as delivery performance degraded. Due to long lead times combined with the quality issues mentioned previously, overall profitability from the stapler business decreased. Inventories and safety stock soared which resulted both in much tied up capital and very inflexible production schedules which were more driven by supply than demand. Challenges associated with both mental and physical distance turned out to be hard to overcome and reshoring was the last and most drastic solution.

### Firm specific

Since the firm is relatively small, reshoring efforts could be reasonably governed. The reshoring operation went smooth and did not cause major problems in either the supply chain or at manufacturing locations. The fact that the component reshored was not high-tech and employees were not made redundant eased the process. The willingness for reshoring was catalyzed by the need for a solution for the problems related to production in China. It appears that the offshoring decision was primarily initiated strategically, higher up the hierarchy ladder, whereas the problems that appeared over time were solved by lower level executives, primarily in the operations department.

### Key Learnings

The offshoring decision at Company A was primarily based on labor cost advantages; literature reasons that this should be avoided since the dynamics of markets tend to change quickly and adapting to these changes flexibly is not easy for many firms. To what extent Company A was able to adapt to these changes is not very clear since the reshoring decision was primarily due to lead times and quality issues. However, the Company A case clearly shows that it can be hard to attribute the reshoring decision to one aspect, such as decreasing cost advantages in the host country. Especially at Company A, the reshoring decision is a conjunction of aspects in, but not limited to, both the host & home country.

It has been noted that it is important to regard labor costs in combination with other levers for cost savings as a basis of offshoring decisions (Jonsson et al., 2011). At Company A, the other levers for costs savings, or rather the other drivers of costs, were not sufficiently considered since the problems that appeared and essentially drove the reshoring decision were not expected. It appears that a tunnel vision on cost savings was present.

### 5.1.2 Case Analysis Company B

The case of Company B is the only case in this thesis where reshoring happened in the form of backshored offshore outsourcing as production steps were reshored from a European supplier. Another reason why this case is unique in the context of this study is the company's characteristics such as the size, global presence and strategic principles. Company B can be considered by far the largest and most global firm in this study. It has a global market demand, manufacturing plants all over the world and closeness to customers is of strategic importance. Thus, the company is likely to prevent unnecessary reshoring to its home country due to a better resource endowment in regards to knowledge and manpower for its offshoring and reshoring decisions.

Owing to the modular production system used in its manufacturing plants, Company B is able to offshore production into new markets in a step-by-step approach which is adjustable to the speed at which local suppliers can be developed. Due to this approach, the company can flexibly adjust its activities in each market. Consequently, the firm has not had to deal with large reshoring actions as each step in upscaling production tends to be well thought through and the company does not fall easily over 'false promises'. With 70 percent of value creation coming from its global network of suppliers, Company B puts a lot of emphasis on supplier relationships – in particular with regard to coordination and cooperation. With its focus on 'top quality' it is of great importance to Company B to have a thorough supplier selection process. In the case presented this selection mechanism failed and eventually led to reshoring at Company B.

Due to the global dispersion of activities the term 'home country' bears a different interpretation as compared to the other cases and from Company B's perspective the act of reshoring has more to do with the closeness to demand markets and the development stage of markets themselves rather than the closeness to the parent company. Because operations are so dispersed, global competitive dynamics are expected to play an important role for Company B.

Because of its size and global business, the choices of Company B can be theoretically grounded in the **Resource Based View (RBV)** of the firm and **Dynamic Capabilities (DC)** theory. With its internal focus, the RBV perceives firms as being bundles of resources. All resources are uniquely spread among firms and persist being different over time. DC theory closely links to the RBV as it claims that a firm's invisible assets are essential for creating a sustainable competitive advantage (Itami & Roehl, 1987). Following the argument for the

RBV, firms will invest their capital in areas where they possess key competencies and outsource all other (non-critical) activities (Martínez-Mora & Merino, 2014). DC theory is centered around how the resources are used by firms. The application of both in regards to production and manufacturing location decisions could be observed in the case of Company B as the company has a clear idea about its core business and core competencies and constantly evolves and evaluates the make-or-buy decision. This also has an influence on the motivational factors for reshoring. Once again, reshoring is analyzed along the categories presented in the literature review.

### Global competitive dynamics

Factors from this category were not observable in the case of Company B. As the company runs a global business, these factors might be of a lower importance than for instance in the case of smaller firms.

### Host country

Quality and the associated durability and profitability of products are essential for Company B. This is why it does not come as a surprise that the firm's reshoring was mainly driven by quality reasons. Even after a considerable time period had passed in which Company B invested a lot of time and effort to resolve issues with the supplier, the standards set by the company were not met. This is why the relationship with the supplier was also pestered by contractual problems.

### Home country

Analyzing Company B's reshoring decisions from a home country perspective helps to understand why the firm decided to reshore part of production from its European supplier. The company had easy access to qualified personnel at the Södertälje plant which happened to be familiar with the outsourced production processes. Furthermore, Company B's staff managed to increase production efficiency by using more automated production steps which helped to reduce costs for manpower. The work force was eager to take manufacturing back to Sweden which might have served as an extra boost to make the reshoring decision.

### Supply Chain

Company B has a clear classification map (since mid-2000s) to identify the strategic importance of components. With this classification in place, moves which might cause disruptions to the supply chain and manufacturing of Company B products are prevented. When the offshoring to the part supplier happened, this classification was not as clear as it is today. Moreover, developmental partnerships with suppliers were a certain trend at the time the offshoring decision was taken. Even though offshoring meant a higher supply chain risk with further risks of decreasing profitability and declining customer value creation, this was only recognized at the time of reshoring.

### Firm specific

Firm specific factors could not be observed for Company B as they were not applicable to the case.

### Key Learnings

It is important to recognize that Company B has a long history linked to offshoring and has a well-documented step-by-step approach which carefully evaluates offshoring and leaves plenty of room for quick and inexpensive corrective actions if those are needed. This appears to pay off and prevents costly failures / reshoring initiatives. Offshoring production to foreign suppliers is typical for Company B as it is very important for the firm to decrease tied-up capital. Within Company B, offshored manufacturing is regarded as stimulating creativity and innovation since multiple parties are encouraged to innovate in the (arms-length) relationship and both benefit. In the described case of reshoring, reshoring was applied in a corrective manner and therefore no perceived impediments to the change process itself applied. In fact, since offshoring has become such a usual and important topic of conversation, cost and benefits are calculated on a daily basis.

This case clearly shows that particular cases of reshoring can be regarded as a relatively easy to solve ‘dilemma’. In this case, the choice was very limited when the quality aspect of the specific turned out to be disappointing over time. Since this particular case was initially a ‘test’ it cannot be said that reshoring was a result of an offshoring failure. In softer terms, it may be said that the results were not along expectations, which was said to be a risk anticipated during the offshoring decision making phase.

In this case only few factors seem to have primary importance. If those factors show negative results then other considerations do seem to be relevant. In this case, the produced component that was offshored was of vital importance and quality had to be guaranteed. When that was not the case, reshoring was executed. Furthermore, the case shows that the ownership mode can be of importance for firms’ reshoring. Without owning anything in the supplier’s business, Company B could easily reshore production to Sweden as it could flexibly withdraw without losing vast amounts of money.

### **5.1.3 Case Analysis Company C**

The case of Company C is a very good example for the reshoring of an entire plant. Even though the Minden facilities were acquired and not initially offshored to Germany, the case can be called reshoring as the firm tried to keep production up and running for almost four years after the acquisition. The interviewee worked as the production director for all ‘chair producing’ plants in Germany and Sweden and served as the reshoring project’s sponsor. He was actively involved in all phases of the reshoring effort – including its preparation and communication.

The company is a family business which influences decision-making as can be seen below. Interestingly, the case concerns reshoring from a high cost country to another high cost country with both countries being fairly similar in regards to the general production set-up. Production was eventually reshored to Sweden as the resources in Jönköping and Skillingaryd were better employed than in Germany. These parts also managed the development of their dynamic capabilities better which overall puts this case in the theoretical corner of RBV and DC theory. The following paragraphs relate the findings from Company C to the reshoring model that has been developed in this thesis.

#### Global competitive dynamics

The state of the world economy – particularly the European economic crisis – had a major influence on reshoring decisions. It seems that the entire office furniture industry suffered from similar problems as Company C did: two major competitors in the European market announced their decisions to withdraw plants from Germany in the same time period.



### Host country

The host country, Germany, is fairly comparable to Sweden which makes most of the host-country dynamics inapplicable. There are a number of differences, but for instance the wage level and production quality are very similar. The retail channels in Germany are now supplied from Sweden which required a lot of convincing at first, but runs smoothly nowadays. By reshoring to Sweden, Company C does not only deliver to the German market but is also able to sell the 'Minden' product line better in other markets. The German suppliers, of which many deliver relatively small batches of highly specialized parts, could also be convinced to stay on as suppliers in the Company C network. No customers were lost as a result of reshoring but the company faced contractual challenges before closing the Minden plant as they had vouched for the plant liabilities at the time of acquisition. This meant that bankrupting the German business was not an option and the firm had to go through all the legal, administrative and financial hassle connected to a plant closure in Germany.

### Home country

The reshoring move was feasible due to the similarities between production in Jönköping, Skillingaryd and Minden. Because of these similarities and more efficient production processes in Sweden, integrating the reshored chair assembly was no problem. As a consequence of adopting lean practices and streamlining production, the Swedish plant had capacity to take over the German sister plant's production. These factors, combined with a qualified and eager staff in Sweden made overall cost performance improve.

### Supply Chain

With older production equipment and processes, it could be argued that the Minden plant was less flexible than its Swedish equivalents. Nonetheless, the reshoring resulted in production at a more challenging location when considering the firm's most important markets.

### Firm specific

Since Company C is family owned, decision making processes seem to differ from other cases. The owners were concerned about what would happen to the German employees. Not only were they legally forced to tackle these issues but it was also their wish to find a social / human solution. The interviewees also mentioned that the company tried as hard as possible to make the German plant a feasible business case after the crisis hit in order not to lose the invested money. With the plant originally being bought in a foreign country, one could argue that the "too late to go back"-thought could have influenced delayed decision making / reshoring further.

### Key Learnings

Even though we largely disregard the ownership mode in offshoring and reshoring projects, ownership played a major role in this case as the family owner of Company C delayed the reshoring initiative several times in order to protect the German staff from unemployment or unpleasant news. Whereas in U.S. dominated literature, the maximization of profit is always key, the owners of Company C show a more European way of managing things by taking the social and human factors more into account. In fact, they deliberately take a loss to reduce their employees suffering and try as much as possible to keep the Minden plant open.

The case is also unique in presenting the legal difficulties Company C had to deal with while closing the plant. Strong worker protection rights with negotiated severance packages have

thus far not found an equivalent in literature but could definitely be seen as a barrier to reshoring. As mentioned by the interviewee, it would have been a lot easier and a lot cheaper to close a plant in Sweden due to the differences in legislation. In addition, Company C clearly demonstrates the often discussed implications of reshoring on local job creation in the home country. By far, not all jobs were reshored to Sweden. For the 120 members of staff that were let go in Germany, between 40 to 50 new employees were hired in Sweden. This means that less than 50 percent of the jobs lost in Germany were replaced in Sweden.

#### **5.1.4 Case Analysis Company D**

In this case reshoring was a full retreat from Poland: all production moved back to Sweden. As markets did not grow according to the company's 2006 estimates and processes were 'leaned' at the plant in Sweden over time, production in Poland became redundant. Reshoring at Company D was a relatively easy and smooth affair because products were so similar that they could easily be taken back, and through the common use of facilities with the parent company no severe frictions or repercussions occurred at the Polish plant.

The company experienced transaction costs (TCE) to be too high over time and decided to focus its resources and capabilities at one location (RBV and DC). This helped the business to survive without taking losses. Interestingly, decisions were made 'against' scientific theories which would have demanded to offshore all production to Poland – an alternative also on the table. However, Company D decided against this as they were expecting their customers would demand lower prices after offshoring all production to a low cost country. This would have had a negative impact on the already slim profit margins. Further dynamics of the Company D case are outlined below.

##### Global competitive dynamics

Factors within this category were not observable in the case of Company D.

##### Host country

Quality aspects played a role in Company D's reshoring decision. However, the nature of these problems was different than in all others cases as concerns were based on how quality issues noticed by customers could be fixed in the same way in both the Swedish and Polish plants. This problem primarily entailed communication issues caused by the different languages used in both countries. Quality had consistent standards in both plants, and it was communication which turned out to be challenging.

##### Home country

Similar to other reshoring cases in Sweden, the 'leaning' of production processes after the offshoring of production enabled the reshoring move. It seems that companies realize their full potential by applying proven efficiency improvement techniques after offshoring operations. Improving efficiency at the home base, domestic goodwill and better market access in Sweden made Company D reshore. The reshoring initiative was further driven by access to qualified personnel at home and an improved cost performance.

##### Supply Chain

As the company's R&D department has always been located at the Swedish production plant, it was easier for engineers to walk over and check upcoming issues without delay. In Poland, this easy access was not provided due to the distance to the Swedish home base. Company D's logistics became more complex after the move to Poland as the firm always had to split

up deliveries from the suppliers and decide on which material went to what plant. This led to overall higher coordination and transaction costs in Company D's part of the heat pump supply chain.

#### Firm specific

Factors from this category were not observable in the case of Company D.

#### Key Learnings

Company D is the only firm that considered to offshore more of their production before deciding to reshore. Due to the shared plant in Poland, two-way decision making was simplified as the company was able to use an existing plant in a flexible way. The case also exemplifies the importance of the ability to communicate in single language in business. As improvement suggestions were offered in Swedish, these had to be translated into English or Polish first. The potential of communication getting distorted by information literally getting lost because of translation issues can hardly be imagined in hindsight.

Similar to Company A, this case shows how important management and management support is for reshoring decisions. At first, the plant manager could not get through to his superior with the idea to reshore. Only after unit management changed, he was given a chance to state his case and reshoring was chosen as the preferred option to prepare the business for the future. The firm's experience illustrates again that the reshoring of production does not create the same amount of jobs which were lost when business was offshored.

### **5.1.5 Case Analysis Company E**

In regards to reasons for offshoring, the case of Company E is particular. It was driven by customer requirements: large customers downstream in the supply chain requested for a more global supply chain network forcing the firm to offshore some of its manufacturing or otherwise lose business. Similar to the case of Company A, this case also supports TCE because costs could first be saved by offshoring labor intensive, low volume products to a low cost country. As a response to unfavorable changes in the market conditions, parts of production was reshored as the cost structure had also changed. The following section outlines Company E' reshoring motivation according the usual framework.

#### Global competitive dynamics

With the changed global conditions and advance of technology since the offshoring decision, automation of manufacturing of offshored parts became financially and to some extent technically feasible.

#### Host country

Even though offshoring happened to a low cost country and other firms reported a lot of quality problems, this was not a primary concern for Company E. Due to the long standing history of spring production in Serbia, quality standards seemed to be on a similar level, even though manufacturing used older equipment in Serbia. Opportunistic behavior in the host country in the form of corruption was mentioned as a supportive factor for the reshoring project. This is an important point as more and more companies have to abide to strict anti-corruption regulation, even at their foreign locations.



### Home country

As a traditional family-owned business from Småland, it seems the firm is always looking for opportunities to take manufacturing back to the home base, Bredaryd. Over the years the company has been investing in automating processes in Sweden. Due to the technological developments in the last decade, it has become economically viable for Company E to also automate production for products with lower volumes and high variations. Even though personnel had to be acquainted to the higher degree of automation, staff generally had the adapting abilities that were necessary. Altogether, this improved cost performance in Sweden and resulted in Company E sticking to ‘Serbian sales prices’. Interestingly, the move did not create any new jobs in Sweden. The interviewee explicitly mentioned that the ‘Made in Sweden’ label can be a disadvantage when dealing with international customers as it stands for high quality which too often entails high prices that customers are not willing to pay in the springs business.

### Supply Chain

With production in geographically dispersed countries, logistics complexity did become an issue. As production in different countries partly relies on component deliveries (Serbia to Sweden) the long distance sometimes led to supply problems. This entailed high coordination and transaction costs in regards to communication and information flows. The risky supply chain was a challenge for Company E because changing customer demands made the reliable global distribution of products a potential competitive advantage for the firm. Similar to Company A, Company E reshored labor intensive production with the difference that offshored production was also low volume manufacturing and did not follow the usual low labor cost – high labor input – high volumes scheme.

### Firm specific

As the actual offshoring move to Serbia happened as a consequence of customer requirements, there were no firm-specific factors which prevented reshoring. On the contrary, Company E was quite happy to reshore part of the production back to Sweden. Furthermore, changing global customer sourcing demands were a driver to reshore for Company E. Through the shift in sourcing strategies of its multi-national industrial customers, the requirement to produce the reshored product abroad was dropped

### Key Learnings

Similar to the case of Company C, this case deals with a family business whose decisions are different to those of non-family owned businesses. Company E considers itself to be an active part of the local community in Bredaryd, the Swedish production location. This influenced the reshoring decision. Unlike Company C, the firm was more concerned about their commitment to their activities in Sweden. This may be catalyzed by the degree of cultural difference between home- and host country, i.e. Swedish and German cultures are closer than Swedish and Serbian.

Company E move created no jobs in Sweden but it might have secured existing jobs as employees were still needed after large parts of production were automated. Reshoring at the firm was driven by challenging administrative requirements and corruption in Serbia, two new motivators which have not been explicitly mentioned in literature so far. Furthermore, the case shows that competitive production is possible in Sweden as after the process improvements the costs for production is similar to the former ‘Serbian’ costs.

## 5.2 Revising the Model for Sweden – Cross Case Analysis

After the individual case analysis, this section interprets the empirical findings across all cases and describes the implications of the Swedish firms' reshoring experiences on the model. As a result of this analysis, the model is revised as presented in figure 5.1.

### 5.2.1 General Case Comparison

Based on the five cases, the authors of this thesis can draw from a rich collection of empirical data. After evaluating this data on an individual case basis and before revising the model, general factors such as the size of the firms, decision making processes for off- and reshoring and ownership characteristics are compared and discussed.

Size of firms: Arlbjørn and Mikkelsen (2014) distinguish between different sizes of firms and claim that medium- and large sized companies look for automation possibilities at the home country when experiencing problems with lead times, but that the same may not apply for small companies since they often cope with limited resources available for automation of production processes. The empirical findings carefully confirm this assumption, it has been recognized that automation of whole production processes are easier for larger firms as compared to smaller sized firms. The latter seems to execute automation in taking smaller steps. Altogether, the assumption remains that the financial impact of both offshoring and reshoring decisions tends to be easier carried by large companies like Company B than by small companies. As for the specific drivers of reshoring related to company size, Arlbjørn and Mikkelsen (2014) state that small companies are likely to refrain because of a lack of resource allocation, while large companies avoid it because of troublesome past decision making processes and unsecure information and communication dynamics. These aspects are hard to identify after the reshoring takes place and would be more suitable to measure among a sample of companies that is interested in reshoring but has not made the decision yet.

Offshoring experience and approach: Looking at the time period which passed between offshoring and reshoring, the case companies took around five to six years on average until they reshored products, production lines or entire plants. Company E was an exception since products were reshored after a period of approx. 10 years. As reshoring occurred due to a plethora of reasons, it is difficult to say whether the presented cases represent failed offshoring attempts as various authors (e.g. Kinkel, 2014, Canham & Hamilton, 2013, Gray et al., 2013) suggest, based on the result of this research. For two cases this cannot be determined due to specific characteristics: Company D offshored as a result of customer pressure and Company C started 'offshoring' with an acquisition. Perhaps, the probability of reshoring being a failure can be correlated to the industry these firms are active in. E.g. sectors with 'tangible technology at the very core of operations' that have a technological product as output might be more prone to reshoring as a result of offshoring failure as compared to firms in sectors producing mass-consumption goods.

In general, offshoring has less impact when production segments are not of vital importance to the firm. If products are vital for either or both the internal and /or external value chain then the manufacturing location decision should be made very carefully. In all companies, the manufacturing activities under review were important and decision-making on reshoring was well analyzed and did not create any problems in the short term. Company B executed offshoring of a vital component as a 'test' but made sure results were closely monitored and thus created a very tightly controlled manufacturing environment. It remains uncertain how operational results will be affected on the long term because most of the reshoring cases under review were executed recently.

Decision making: As analyzed in the theoretical part (3.2.3), Kinkel and Maloca (2009) point out that firms often base offshoring decisions on simple models without considering dynamic developments over time. They continue that companies also tend to forget to appropriately consider qualitative factors such as the attitude towards quality at the offshoring destination. Kinkel and Maloca's observations can also be applied in the Swedish context: four out of five cases indicated that foreign operations were troubled by quality problems.

Geography and job creation at the home base: Reviewing reshoring geography, our results cannot clarify if there are more cases of reshoring within Europe (e.g. Kinkel, 2014) or from Asia (Fratocchi et al., 2014). Even though this thesis presents more cases on European off- and reshoring (all apart from Company A), the authors cannot say if this is due to a higher number of reshoring cases happening in Europe or due to the particular choice of case companies in this thesis.

Our empirical findings support the claim of many other authors (Kinkel, 2014, Bailey & De Propris, 2014b, Tate et al., 2014) that reshoring will not fully return manufacturing to high cost economies – in our case Sweden – but that it rather creates a few more jobs with higher skill requirements in the home country. High cost economies cannot compete with low cost countries on basic manual labor. All jobs created by reshoring to Sweden in this study required employees to have the skills to work in a more automated environment. More 're-balancing' of high cost economies might only occur if home states offer financial incentives such as tax breaks.

Ownership: Based on extensive amounts of data, Kinkel (2014) found that both quality and high transportation costs are important for 'outsource backshoring' and that high coordination efforts drive 'captive backshoring'. Our empirical data corresponds with these findings; for Company B quality was a primary reason for outsource backshoring and for Company A, Company C and Company D high coordination efforts (efficient synchronization of supply chain activities) drove the captive backshoring. These considerations may be called 'ownership of operations'.

Another kind of ownership, here framed as 'business ownership', has not been named by literature but empirical findings showed that this may substantially influence reshoring decision dynamics. Firstly, companies with strong ties to the home base (both Company C and Company E) seem to prioritize differently than companies which do not have such ties. Secondly, as exemplified by the Company A and Company D cases, more support for reshoring may be created after a change of management. Thirdly, Company C which is family-owned seemed to be relatively sensitive to 'human factors' in the shoring decision. Also, it is widely perceived that companies that are publicly listed consider a different timeframe in decision-making as compared to firms which are not (long term / short term priorities).

Definition of reshoring: After reviewing all scientific literature available, a definition for this thesis was proposed in the systematic literature review. However, the authors feel that after a careful review of the cases, this definition has to be adjusted based on the empirical findings. Initially the following definition was phrased: 'Reshoring is defined as a strategic reversal of previously offshored manufacturing activities to either the home country or other locations regarded as 'developed' with close proximity to demand markets'. Unlike in literature, some of the obtained empirical data suggest that this definition is too narrow as several cases under review handle reshoring from developed European countries. Due to this observation, the broad definition by Arik that reshoring is "the reversal of the previously offshored business activities" (Arik, 2013, p. 75) seems to be more applicable to the Swedish context. This is also in sync with the interpretation by Fratocchi et al. (2014) that reshoring

describes a generic change of location of previously offshored manufacturing to any other place.

### **5.2.2 Motivational Factor Analysis**

In figure 5.1 the findings derived from literature have been prioritized and expanded based on the data obtained from case studies, which has resulted in a new, 'Swedish' version of the model with motivational dynamics. The numbers behind the various aspects represent the number of cases for which that specific factor was relevant. The next pages compare all the dynamics identified in the model and highlight the details relevant to the Swedish context. The blue factors were added to the model solely based on findings in empirical data and thus were not identified in the reviewed literature. Drawing from the knowledge of all five cases, the authors of this thesis are confident to propose this new model on Swedish firms' reshoring motivation.

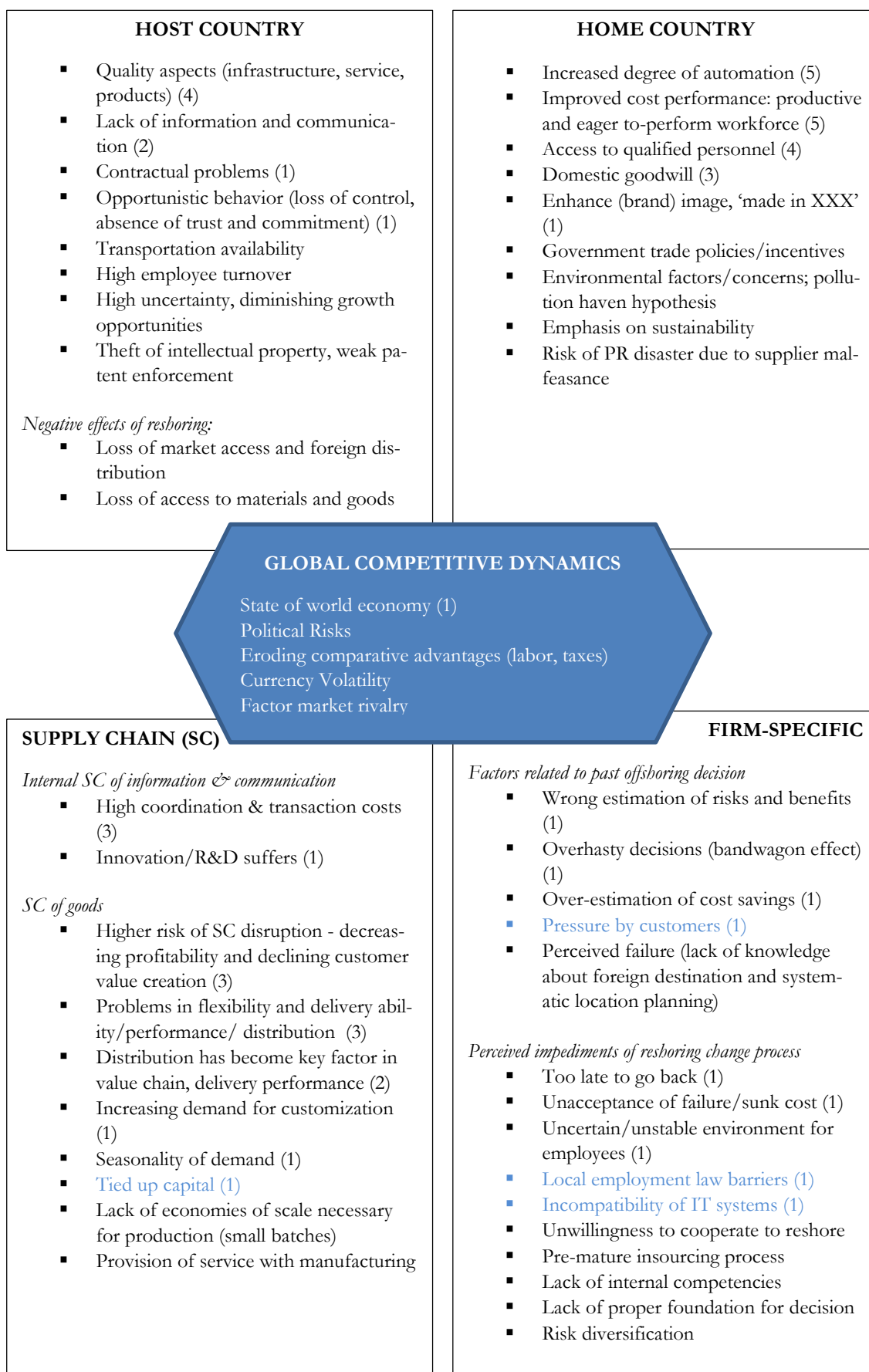


Figure 5.1: Categorized dynamics influencing the reshoring decision based on empirical analysis.



### Global competitive dynamics

Apart from one case (Company C), global competitive dynamics were not directly mentioned as a cause for reshoring. The difficulty to evaluate the global competitive dimensions on a case-by-case basis is acknowledged in section 3.2.4: they function as an ‘umbrella’ for many other factors that are located in the model. Since those factors are understood to play a role in the background and influence the dynamics in all other categories of the proposed model, they will remain at the core of the adjusted model.

### Host country:

For the host country dynamics, quality issues were mentioned as an important aspect in the reshoring decision (4 cases). Furthermore, firms were motivated to reshore due to communication, information flow and contractual problems as well as opportunistic behavior of individuals and groups in the host country. Many factors evolve over time and the severity and monetary impact can remain unnoticed until a later stage of offshoring. The factors of transportation availability, high employee turnover, high uncertainty, diminishing growth opportunities, theft of intellectual property, weak patent enforcement, loss of market access and foreign distribution and loss of access to materials and goods were not stated by any of the five firms and were thus removed from the model for Sweden. Many of these factors were probably of no relevance as most cases under review describe reshoring from European countries.

### Home country:

With 18 ‘hits’ in total, home country related factors were the top category of drivers for the reshoring decision by the five firms. In all cases, production processes were improved after offshoring and led to an increased cost performance at the Swedish plants. In hindsight it seems that in almost all cases the initial offshoring move could have been avoided if the firms had looked into process improvements in the first place. The authors can only speculate why processes were improved only after offshoring. Perhaps, management and employees in Sweden were afraid that more production would be offshored over time (and they would lose their jobs) and started to think more on what would need to happen to keep production where it was. They may also have had more time to explore ‘leaning’ possibilities. Additionally, there may have been subliminal problems between Sweden and the offshore location that only gradually surfaced, leading to a long and unconscious search for solutions (which turned out to be the leaning of processes).

Once the window of opportunity to reshore was opened, domestic goodwill appeared within smaller firms, also because they see themselves as an active part of their local community in Sweden. Since most firms still had the necessary skills and eager-to-perform workforce at their disposal at the home base, the decision to reshore was simplified. Interestingly, only one firm mentioned the label ‘Made in Sweden’ as a factor partly influencing its reshoring initiative. Surprisingly, another firm perceived the label to potentially have negative effects since it would imply not only high quality, but also high prices for customers.

The factors of government trade policies / incentives, environmental factors / concerns, an emphasis on sustainability and the risk of PR disasters due to supplier malfeasance were not mentioned by any of the interviewees. The reasons for this are manifold. Unlike in the U.S., Sweden has not seen any particular policies by the national or local governments to incentivize the reshoring of production. Additionally, (environmental) sustainability does not appear to be an influencing factor during either offshoring or reshoring projects observed. With regards to sustainability factors, it may be that those are more relevant for communication

downstream rather than upstream and those factors might become more important for the reshoring decision in the future.

#### Supply chain:

In the presented model we address ‘physical and mental distances’: these are often mentioned by literature and often apply to our empirical setting. Both issues with the ‘mental distance’ – information and communication – as well as problems with the physical flow times, contributed to driving the reshoring decision. Supply chains were seen to become more vulnerable after offshoring manufacturing operations because of the distance, which led to reduced flexibility and delivery ability, and declining supply chain performance as a whole. This was perceived as a problem in an environment where product distribution has become a key factor in value chains. Other factors mentioned on a single case basis were a suffering R&D, and an increased demand for customization and seasonal demand.

Findings revealed that tied up capital can be interpreted in two ways when related to driving the reshoring decision. On the one hand, tied-up capital does occur because of long lead times between owned manufacturing facilities: this applies to Company A. On the other hand tied-up capital can be pipeline inventory related to a variety of components produced elsewhere that eventually need to be assembled: this applies to Company B. Company B decided to relieve the burden of tied-up capital by outsourcing the supply of many components to external suppliers. The firm does not often consider reshoring or inshoring due to the tied up capital involved in these kind of initiatives. By taking production back from a supplier, more capital is tied in products and machinery which might be used better otherwise. Achieving economies of scale was not relevant in the Swedish context as both high and low volume products were off- and reshored. Additionally, better provision of services with manufacturing turned out to be not a relevant driver to the selected cases.

#### Firm-specific

When reflecting on past offshoring decisions, three companies thought they had made an overhasty decision. This means that pros and cons were not considered thoroughly enough. Additionally, one company felt it had offshored based on a faulty estimation of risks and benefits, including an overconfident estimation of cost savings. Regarding perceived impediments of the reshoring change process, firms mentioned factors such as the feeling that it was ‘too late to go back’, it was ‘too hard to accept failure’ and the related sunk costs, or that only talking about reshoring would create an unstable environment for staff abroad. Other factors in this category, such as a lack of cooperation to reshore in the foreign country or a lack of internal competencies within the company were not identified within the Swedish firms’ reshoring experiences.

Within the ‘firm-specific’ and ‘supply chain’ categories, four factors have been identified that were not mentioned in literature. Firstly, in the case of Company E, offshoring was caused by pressure from customers. As soon as this pressure eased due to the changing procurement strategies of customers, the firm started to consider reshoring. Secondly, it was discovered that offshoring was also partly motivated as ‘following the trend’. Since this applied to quite some cases, this seems to be a general issue which was only scarcely referred to in literature as ‘the bandwagon effect’. During the years when moving production offshore, the general question in the manufacturing industry appeared to be ‘why not offshore?’, nowadays this question may be slowly turning around in ‘why not reshore?’. In practice, this means that in previous decades manufacturing firms staying in Sweden had to explain why they were not

offshoring to low cost countries. Nowadays, firms that offshored may be more often questioned why they are not reshoring. Thirdly, the model has been extended with 'local employment law barriers'. This factor only appeared in one case and seems to be primarily related to reshoring from developed countries that can have extensive legal frameworks in place, therewith posing barriers for firms to make people redundant. The fourth and last factor that has been added to the model is the incompatibility of IT systems between home- and host country. Investments in merging companywide IT systems can run into many digits and can make reshoring very expensive when systems need to be integrated.

### 5.3 Revised Model and Its Implications

This section analyzes the revised model in comparison to the theoretical perspectives presented in the frame of reference (chapter 3). Furthermore, a few potential implications of the revised model on future reshoring to Sweden are outlined.

#### 5.3.1 Theoretical Implications of the Revised Model

The revised model can be connected to some of the theories and decision making frameworks presented in sections 3.2.2 and 3.2.3. For instance, TCE essentially concludes that individual firms will move from high cost to low cost environments / regions, *ceteris paribus* (Ellram, 2013). Our framework shows the consequences if firms only relied on TCE. Although the model holds if all else stays equal, i.e. '*ceteris paribus*', this will never be the case in reality. In reality, markets do change and firms have to deal with the consequences caused by these changes. TCE assumes that firms are 100 percent flexible in their choices, and is a shortcoming since production factors are in reality not. According to TCE, firms would have had to reshore to Sweden right after the costs (total landed costs / life cycle costs) were higher abroad. However, determining those costs is often incredibly hard as, for instance, perfect information on markets is never a realistic state.

The RBV and DC are two more theories which can be connected to our framework. In many cases reshoring was facilitated by firms' refocus on key competencies and dynamic capabilities. The ability to deliver high quality in a cost-efficient manufacturing environment, which relies on a high degree of automation and skilled labor, was often one of these. According to the models, reshoring can be interpreted as a reorganization of the firms' resources and capabilities. Only after offshoring, the firms (re-) discovered their full potential by focusing on their resources and further development of their capabilities.

The revised framework also fits into the context of the two decision making frameworks by Arik (2013) and Fratocchi et al. (2014) since both frameworks emphasize the importance of continuously evaluating shoring decisions on changes in the host and home markets. Since the model shows some of the relevant factors that firms need to consider to analyze these aforementioned changes, it relates well to the frameworks and provides a more detailed overview on what to look out for.

#### 5.3.2 Implications for Further Reshoring Developments

The revised framework can also serve as a guideline to Swedish firms considering reshoring. It can give an indication if reshoring should be considered, outline potential consequences and assist businesses in analyzing relevant factors based on other Swedish firms' experiences. However, the authors believe that the model can help firms considering offshoring as results suggest that some cases of reshoring in Sweden could have been avoided if offshoring decisions were analyzed more thoroughly.

Based on our research, we find that it is of great importance for Swedish firms to consider the factors in our revised model more when deciding on future offshoring and reshoring projects. Particularly, anticipation of quality problems should receive special attention before anything is offshored as it seems that this feature is a competitive advantage for many companies in Sweden. In line with the findings from literature, our research indicates that offshoring decisions based purely on lower costs in the host country tend to backfire in the future. In recent years, we have seen examples of this as production costs in China have been rising and companies have had to either accommodate the higher wage costs or had to off-shore to countries like Vietnam and Cambodia.

Before firms consider offshoring, they should evaluate if there are no viable alternatives such as improving production processes through the application of, for instance, lean production techniques or a higher degree of automation. In a time where technology rapidly develops, we advise Swedish firms to review available automation options for their production plants. Companies should be more aware of technological developments and cost saving potential; in almost all cases in this thesis it has been observed that Swedish firms only realized optimization potentials at the home base after having offshored manufacturing operations. Offshoring should not be the first resort for Swedish companies and other levers for cost saving potential should be reviewed first.

## 6 Conclusion and Suggestions for Further Research

*The final chapter of this thesis presents the answers to the purpose stated in the introduction. Furthermore it provides a few suggestions for further research.*

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### 6.1 Conclusion

For a thorough understanding of the reshoring phenomenon, this thesis aims to clarify the rather blurry concept of reshoring and to advance research on the phenomenon from a Swedish perspective. To achieve this purpose, three research questions were devised and summarized answers are given hereafter.

For the first time since the emergence of the reshoring phenomenon, the status quo of published research on this topic is determined by means of a systematic literature review. The structured search yields 25 peer-reviewed articles whose content is thoroughly analyzed to comprehensively present all publicly available scientific knowledge on the reshoring phenomenon at the time of writing. Based on this knowledge, a model with five categories of motivational factors for reshoring is introduced.

The findings from the case studies suggest that Swedish companies reshored for a plethora of reasons. Among these a number of motivations from the model are identified as well as new drivers and barriers are added. Overall, a comprehensive list of the dynamics of reshoring is presented from a Swedish perspective. Reshoring decisions are often motivated by supply chain related problems and quality related issues with the manufacturing output. Generally, an increased degree of automation and improved cost performance at the home base facilitate the reshoring decision.

Comparing the empirical and theoretical findings, the results from Sweden are to a large extent reflected in the literature. However, there are a few particularities which are used to enrich the theoretical foundation of the reshoring phenomenon and which may be interesting in directing future research. Furthermore, broad advice is given to Swedish firms for future off- and reshoring projects in the form of a revised model based on the empirical results and backed up with findings in literature.

### 6.2 Suggestions for Further Research

Based on the results of this thesis, the authors recommend to undertake further research on the perceived impediments of reshoring in regards to the associated change processes as this research did not identify any. Although hard to identify, the authors believe that these factors are very important and need a deeper and more thorough case research than used for this study. Additionally, the perception that ownership mode should not be taken into consideration should be reconsidered in future research.

Moreover, research on the reversibility of motivations for offshoring and reshoring decisions is necessary, i.e. barriers for reshoring are similar to the drivers of offshoring and vice versa. Further, the specific role of supply chain related developments in regards to the reshoring phenomenon could be explored more in-depth.

Additionally to these specific ideas, the revised model might need further clarification and could be backed-up further by empirically researching more reshoring cases from Sweden. Since reshoring is an emerging topic, this kind of further research is always applicable to reduce scientific limitations.



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## **8 Appendices**

### **8.1 Appendix I: Results Literature Search**

## APPENDIX 1

### Literature review

#### Topic: Reshoring

#### Step 1: Identify search terms (key words)

Concept/Term	Synonyms	Search terms
Reshoring	backshoring	reshoring, reshored
	onshoring	onshoring, onshored
	inshoring	backshoring, backshored
		manufacturing relocation
		reverse offshoring
		inshoring, inshored
		back-shoring
		re-shoring
	insourcing, insourced	

#### Step 2: Select databases

Database	Description
Abi/Inform	Primary Database
Business Source Premier	Secondary Database
Scopus	Secondary Database
Science Direct	Secondary Database
Wiley	Secondary Database
Taylor & Francis	Secondary Database

#### Step 3: Delimitations (inclusion/exclusion criteria)

Delimitations	Explanation
Language	English
Time	1980-Present
Type of publication	Journal

#### Step 4: Combine search terms (BOOLEAN LOGIC)

Combinations	Database search scope
reshoring OR backshoring OR onshoring	keywords = k
reshoring AND onshoring	title = t
onshoring AND backshoring	abstract = a
reshoring AND backshoring	

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reshored OR backshored OR onshored
reshore OR backshore
inshoring OR inshored
re-shoring OR back-shoring OR on-shoring

**Step 5: Sample after database search**

Combinations	Primary Database (ABI/Inform)	Secondary Databases			
		Scopus	Business Source Premier	Science Direct	T&F
reshoring OR backshoring OR onshoring	t=11; a=17; k=67	all terms combined	all terms combined		
reshoring AND onshoring	k=1; t=0; a=0	57	39	0 new	0 new
onshoring AND backshoring	k=1; t=0; a=1				
reshoring AND backshoring	a=1; t=0; k=1				
reshored OR backshored OR onshored	k=8; t=0; a=3				
reshore OR backshore	k=32; t=1; a=6				
inshoring OR inshored	a=5; t=3; k=17				
re-shoring OR back-shoring OR on-shoring	k=50; a=2; t=1				
<b>Sample</b>	0				

**Step 6: Sample after abstract review (screening 1)**

Combinations	Primary Database (ABI/Inform)	Secondary Databases			
		Scopus	Business Source Premier	Science Direct	T&F
reshoring OR backshoring OR onshoring	t=10; a=14; k=20	all terms combined	all terms combined		
reshoring AND onshoring	k=1; t=0; a=0	21	17		
onshoring AND backshoring	0	after cancelling doubles	after cancelling doubles		
reshoring AND backshoring	a=1; t=0; k=1	8	3		
reshored OR backshored OR onshored	k=4; t=0; a=2				
reshore OR backshore	a=2; t=1; k=7				
inshoring OR inshored	a=3; t=2; k=3				
re-shoring OR back-shoring OR on-shoring	k=3; a=2; t=1				
	after cancelling doubles				
<b>Sample</b>	0				

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**Step 7: Sample after paper review (screening 2)**

Combinations	Primary Database (ABI/Inform)	Secondary Databases			
		Scopus	Business Source Premier	Science Direct	T&F
Consolidated articles, doubles cancelled out	25				
<b>Final sample</b>	25				

- Arik JGBM 2013 9 (3)
- Arlbjørn JPSM 2014 20(1)
- Bailey CJRES 2014
- Bailey REI 2014 90 (2)
- Canham 2013 SOIJ 6 (3)
- Desai JCC 2012 (45)
- Ellram JSCM 2013 49(2)
- Ellram JSCM 2013 49(2)
- Fine JSCM 2013 49(2)
- Fratocchi JPSM 2014 20(1)
- Grappi JAMS 2015
- Gray JSCM 2013 49(2)
- Gylling IJPE 2015 (162)
- Kazmer BH 2014 57 (4)
- Kinkel IJOPM 2012 32(6)
- Kinkel JPSM 2009 15(3)
- Kinkel JPSM 2014 20(1)
- Kotlarsky JITTC 2012 2 (2)
- Martínez-Mora JPSM 2014 20(4)
- Moutray 2013 BE 48(2)
- Pearce BH 2014 57(1)
- Tate BH 2014 57(3)
- Tate JPSM 2014 20 (1)
- Verdu IBR 2012 21 (3)
- Wu MS 2014 60(5)

## 8.2 Appendix 2: Interview Guideline

Interviewer: Short introduction and presentation of the thesis project, offer to conduct the interview anonymous

Interviewee: Short introduction to and presentation of the company:

- What is the core business and what are the core competencies?
- How is production organized?
- How big is the total annual production? Revenues?
- Who are the main competitors?
- Is production more capital- or labor-intensive? Which skills are needed?

### Offshoring-specific Questions

#### **What is your company's offshoring experience?**

(ask follow-up/probing questions as necessary)

- To which country -(ies) did you initially offshore your production?
- What parts of production did you offshore?
- In which year did you start production abroad?
- Was it a green field project or did you collaborate with external partners?
- Why did you offshore?
- What advantages did you expect to obtain from offshoring?
- How did you make the offshoring decision (models/consultants etc.)?
- How were the risks for offshoring assessed?
- What repercussions did the offshoring of operations have on your staff in Sweden?
- What nationality are the workers, managers and directors in the country where you outsourced the production to?
- What has been the greatest difficulty in carrying out part of your activity in another country (high transport costs, logistical complexity, difficulty to negotiate due to language barriers, cultural differences, coordination / communication ...)?
- What has been the main advantage in carrying out part of your activity in another country?
- Does your offshored production require skilled personnel?
- Was your domestic and international market position in danger when you decided to outsource/offshore production to other countries?
- Which costs did you consider for your offshoring decision? Both direct and indirect costs?



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Reshoring-specific Questions**What is your company's reshoring experience?**

(ask follow-up/probing questions as necessary)

- From which country (-ies) did you reshore?
- Do you maintain an (outsourced) activity in that country or have you withdrawn your operations completely?
- Which phases/stages of the production process did you reshore?
- In which year did you decide to start reshoring? (In which year after offshoring)
- Why did you not reshore earlier?
- What stopped you from reshoring earlier?
- What were your reasons for reshoring?
- To what extent did changes in the following influence your decision?
  - o Home country
  - o Offshoring location
  - o Supply chain
  - o Internally in your company
- Can you shortly elaborate on which were the most important motives to start reshoring?
- Which was the decisive factor to reshore?
- What were the difficulties to make the decision to reshore?
- How was the decision made?
- How did you organize the reshoring process, any external help?
- Was there any resistance to reshore at home or/and in the foreign location?
- How has reshoring affected your organization? Have there been any positive or negative changes?
- How was your company's ability to innovate affected by offshoring and reshoring?
- What was the approx. amount of sunk costs (% of invested amount) you incurred as a result of reshoring?
- What is easy to re-set up production at home? Had employees to be re-trained?

Additionally:

- General concluding question: How successful were your company's cost-oriented production offshoring decisions in the past?
- If applicable: why were some offshoring decisions successful and why others not?
- With which of the following statements do you most agree with regards your offshoring experience?
  - o It was the wrong decision and was taken without having a full knowledge of what it involved.
  - o It was the right decision but is no longer the right strategy due to changes in the country, the market of the company's strategy.
  - o Other....
- Have you studied literature / reports about reshoring? If yes, do you see discrepancies to your own experiences?

Thanks and Final Comments

Thank you for your time!

- Do you wish to be contacted for proof-reading parts about you or your company before our thesis is published?

### **8.3 Appendix 3: Svenskt Närlingsliv Data**

	-----Antal anställda-----								----Typ av verksamhet----		
	Alla %	0- 9	10- 49	50- 199	200- 199	Ingen anst	Minst 1 anst	Varuprod/ tillverk	Handel	Övrigt	
Sn2. Har Ni, eller har Ni haft, verksamhet utomlands?											
	Antal intervjuer(4545)	(1592)	(1789)	(1138)	(722)	(416)	(57)	(4462)	(1172)	(943)	(2396)
Ja	12%	8%-	13%	38%+	27%+	59%+	13%	12%	22%+	9%-	11%-
Nej	87%	91%+	87%	62%-	73%-	40%-	86%	87%	78%-	90%+	88%+
Ej svar	1%	1%	0%-	1%	0%	1%	1%	1%	0%-	1%	1%

Sn3.  
Har ni under det senaste året...?

Flyttat hem verksamhet från utlandet till Sverige?

	Antal intervjuer(4545)	(1592)	(1789)	(1138)	(722)	(416)	(57)	(4462)	(1172)	(943)	(2396)
Ja	1%	1%	1%	3%+	2%	5%+	2%	1%	1%	0%-	1%
Nej	96%	96%	97%+	94%	96%	91%-	97%	96%	96%	96%	96%
Ej svar	3%	3%	2%-	2%	2%	3%	2%	3%	2%	3%	3%

Sn3.  
BAS Har/haft verksamhet utomlands

Har ni under det senaste året...?

Flyttat hem verksamhet från utlandet till Sverige?

	Antal intervjuer (890)	(126)	(286)	(470)	(225)	(245)	(7)	(875)	(409)	(143)	(333)
Ja	7%	7%	5%	8%	8%	8%	13%	6%	4%	3%	10%
Nej	93%	93%	95%	91%	91%	90%	87%	93%	95%	97%+	90%
Ej svar	0%	0%	1%	1%	0%	1%	0%	0%	1%	0%	0%

Insourcat (dvs börjat producera i egen regi) verksamhet som ni tidigare köpt från utlandet?

	Antal intervjuer(4545)	(1592)	(1789)	(1138)	(722)	(416)	(57)	(4462)	(1172)	(943)	(2396)
Ja	1%	1%	1%	4%+	4%+	5%+	0%-	1%	3%+	1%	1%-
Nej	95%	95%	96%	93%	93%	92%	96%	95%	94%	95%	95%
Ej svar	4%	4%	3%	3%	3%	3%	4%	4%	3%-	4%	4%

	-----Antal anställda-----						----Typ av verksamhet----				
	Alla %	0- 9	10- 49	50- 199	200- 199	Ingen anst	Minst 1 anst	Varuprod/ tillverk	Handel	Övrigt	
Sn4. OM HAR FLYTTAT HEM/INSOURCAT VERKSAMHET Vilken typ av verksamhet har ni flyttat hem från utlandet/insourcat? Har ni flyttat hem...? FLERA SVAR MÖJLIGA!											
	Antal intervjuer (139)	(19)	(43)	(76)	(38)	(38)	(1)	(137)	(74)	(17)	(47)
Produktion	52%	35%	57%	74%+	71%	79%+	0%-	52%	76%+	32%	32%-
Forskning och utveckling	11%	14%	8%	3%	4%	2%	0%-	10%	4%	24%	13%
Huvudkontorverksamhet eller kringtjänster till kärnverksamheten (t ex it)	4%	0%-	1%	14%	10%	19%	0%-	4%	4%	9%	3%
Annat, nämligen	32%	44%	27%	16%	24%	4%-	100%+	30%	10%-	39%	52%+
Ej svar	6%	7%	7%	3%	5%	0%-	0%-	6%	11%	2%	2%

Sn5.  
 OM HAR FLYTTAT HEM/INSOURCAT VERKSAMHET  
 Varför flyttade ni hem verksamhet/insourcade verksamhet från  
 utlandet? FLERA SVAR MÖJLIGA!

	Antal intervjuer (139)	(19)	(43)	(76)	(38)	(38)	(1)	(137)	(74)	(17)	(47)
För att upprätthålla en högre kvalitetsnivå	37%	43%	34%	30%	25%	37%	100%+	36%	25%	90%+	30%
För att sänka kostnaderna	38%	39%	17%-	48%	38%	62%	0%-	38%	44%	42%	31%
För att produktionsprocesserna förutsätter att verksamheterna är integrerade	11%	12%	3%	16%	13%	20%	0%-	12%	8%	4%	18%
För att fokusera verksamheten till färre enheter	20%	19%	9%	30%	19%	45%	0%-	21%	16%	7%	31%
Teknisk utveckling och investeringar har gjort det möjligt, samtidigt har vi kunnat upprätthålla kostnadseffektivitet	25%	22%	37%	18%	21%	14%	0%-	25%	33%	37%	8%-
För att säkerställa skydd av patent och andra säkerhetsfrågor	1%	0%	0%	2%	4%	0%	0%	1%	1%	0%	1%
Annat, nämligen	30%	29%	35%	27%	38%	13%	100%+	28%	27%	41%	24%
Ej svar	5%	7%	6%	2%	4%	0%-	0%-	6%	11%	2%	2%

-----Antal anställda-----  
 Alla 0- 10- 50- 199 200- Ingen Minst  
 % 9 49 50- 199 200- anst 1 anst  
 -----Typ av verksamhet-----  
 Varuprod/ Handel Övrigt  
 tillverk

Sn6.

Planerar ni att under det kommande året ...?

Flytta hem verksamhet från utlandet till Sverige?

	Antal intervjuer(4545)	(1592)	(1789)	(1138)	(722)	(416)	(57)	(4462)	(1172)	(943)	(2396)
Ja	0%	0%	0%-	1%	1%	3%	0%-	0%	1%	0%	0%
Nej	93%	94%	93%	94%	95%	93%	87%	94%	93%	95%+	93%
Ej svar	6%	6%	7%	4%-	4%	4%	13%+	6%	7%	4%-	7%

Sn6.

BAS Har/haft verksamhet utomlands

Planerar ni att under det kommande året ...?

Flytta hem verksamhet från utlandet till Sverige?

	Antal intervjuer (890)	(126)	(286)	(470)	(225)	(245)	(7)	(875)	(409)	(143)	(333)
Ja	3%	3%	1%-	4%	3%	4%	0%-	3%	2%	4%	3%
Nej	95%	94%	96%	95%	96%	94%	100%+	95%	95%	96%	94%
Ej svar	3%	3%	4%	2%	1%	2%	0%-	3%	3%	0%-	3%

Insourca (dvs börja producera i egen regi) verksamhet som ni tidigare köpt från utlandet?

	Antal intervjuer(4545)	(1592)	(1789)	(1138)	(722)	(416)	(57)	(4462)	(1172)	(943)	(2396)
Ja	1%	1%	0%	1%	1%	1%	0%-	1%	1%+	1%	0%
Nej	92%	92%	92%	94%	94%	94%	85%-	92%	92%	94%+	92%
Ej svar	7%	7%	8%	5%-	5%	5%	15%+	7%	7%	6%-	8%

-----Antal anställda-----  
 Alla 0- 10- 50- 50- 200- Ingen Minst  
 % 9 49 50- 199 200- anst 1 anst  
 ----Typ av verksamhet----  
 Varuprod/ Handel Övrigt  
 tillverk

Sn7.

OM PLANERAR FLYTTA HEM/INSOURCAT VERKSAMHET

Vilken typ av verksamhet planerar ni att flytta hem från utlandet/insourca? Planerar ni att flytta hem... ? FLERA SVAR MÖJLIGA!

	Antal intervjuer (68)	(14)	(19)	(34)	(17)	(17)	(0)	(67)	(38)	(12)	(18)
Produktion	61%	59%	86%	60%	66%	54%	.%	63%	91%+	55%	28%-
Forskning och utveckling	13%	12%	10%	7%	0%-	14%	.%	10%	9%	14%	16%
Huvudkontorverksamhet eller kringtjänster till kärnverksamheten (t ex it)	15%	17%	2%	20%	24%	15%	.%	15%	1%-	0%-	46%+
Annat, nämligen	12%	13%	2%	16%	14%	18%	.%	12%	2%	25%	13%
Ej svar	1%	0%	0%	7%	0%	12%	.%	2%	0%	6%	0%

Sn8.

OM PLANERAR FLYTTA HEM/INSOURCAT VERKSAMHET

Varför planerar ni att flytta verksamhet/insourca verksamhet från utlandet till Sverige? FLERA SVAR MÖJLIGA!

	Antal intervjuer (68)	(14)	(19)	(34)	(17)	(17)	(0)	(67)	(38)	(12)	(18)
För att upprätthålla en högre kvalitetsnivå	58%	67%	52%	41%	41%	41%	.%	59%	57%	55%	60%
För att sänka kostnaderna	59%	62%	54%	62%	49%	73%	.%	61%	63%	56%	56%
För att produktionsprocesserna förutsätter att verksamheterna är integrerade	17%	17%	17%	21%	21%	22%	.%	18%	23%	1%-	23%
För att fokusera verksamheten till färre enheter	44%	48%	37%	44%	38%	48%	.%	45%	51%	37%	41%
Teknisk utveckling och investeringar har gjort det möjligt, samtidigt kan vi upprätthålla kostnadseffektivitet	26%	28%	17%	19%	22%	17%	.%	24%	16%	32%	34%
För att säkerställa skydd av patent och andra säkerhetsfrågor	5%	6%	1%	4%	5%	4%	.%	5%	1%	15%	2%
Annat, nämligen	3%	0%	12%	5%	11%	0%	.%	3%	6%	0%	1%
Ej svar	2%	0%	1%	7%	0%	12%	.%	2%	0%	6%	0%

	-----Antal anställda-----							----Typ av verksamhet----			
	Alla %	0- 9	10- 49	50- 199	200- 199	Ingen anst	Minst 1 anst	Varuprod/ tillverk	Handel	Övrigt	
Sn9. Har ni under det senaste året ...? FLERA SVAR MÖJLIGA!											
	Antal intervjuer(4545)	(1592)	(1789)	(1138)	(722)	(416)	(57)	(4462)	(1172)	(943)	(2396)
Flyttat verksamhet från Sverige till befintliga eller nya enheter utomland	1%	1%-	2%	5%+	4%+	9%+	0%-	1%	5%+	0%-	0%-
Outsourcat verksamhet till utlandet, s k offshoring	1%	0%-	3%+	4%+	2%	6%+	0%-	1%	4%+	1%-	1%-
Expanderat verksamheten utomlands i stället för i Sverige	3%	2%-	3%	11%+	8%+	17%+	0%-	3%	7%+	3%	2%-
Nej inget av dessa/ej svar	96%	98%+	95%	85%-	90%-	75%-	100%+	96%	89%-	97%	98%+

Sn10.  
 Planerar ni att under det kommande året ...? FLERA SVAR MÖJLIGA!

	Antal intervjuer(4545)	(1592)	(1789)	(1138)	(722)	(416)	(57)	(4462)	(1172)	(943)	(2396)
Flytta verksamhet från Sverige till befintliga eller nya enheter utomland	1%	1%	1%	5%+	3%	7%+	0%-	1%	3%+	1%	1%
Outsourca verksamhet till utlandet, s k offshoring	1%	0%-	2%	4%+	3%	6%+	0%-	1%	4%+	0%-	1%
Expandera verksamheten utomlands i stället för i Sverige	3%	2%-	3%	10%+	7%+	16%+	0%-	3%	6%+	4%	2%-
Nej inget av dessa/Ej svar	96%	97%+	95%	86%-	90%-	78%-	100%+	95%	90%-	96%	97%+



Alla %	-----Antal anställda-----						----Typ av verksamhet----		
	0- 9	10- 49	50- 199	200- 199	Ingen anst	Minst 1 anst	Varuprod/ tillverk	Handel	Övrigt

SAMMANFATTNING

Antal intervjuer (4545)	(1592)	(1789)	(1138)	(722)	(416)	(57)	(4462)	(1172)	(943)	(2396)	
Flyttat hem verksamhet till Sverige /Insourca (dvs börja producera i egen regi) verksamhet som ni tidigare köpt från utlandet	2.0%	1.4%	1.8%	6.0%+	5.2%+	7.5%+	1.7%	2.0%	4.0%+	1.3%	1.5%
Flyttat verksamhet från Sverige till befintliga eller nya enheter utomlands/Outsourcat verksamhet till utlandet s k offshorsing	2.2%	0.9%-	3.8%+	7.7%+	4.7%+	13.4%+	0.0%-	2.3%	7.2%+	1.0%-	0.9%-
Planerar ni flytta hem verksamhet till Sverige /Insourca (dvs börja producera i egen regi) verksamhet som ni tidigare köpt från utlandet	0.9%	0.8%	0.5%	2.0%	1.5%	3.2%	0.0%-	0.9%	1.8%+	0.9%	0.5%
Planerar flytta verksamhet från Sverige till befintliga eller nya enheter utomlands/Outsourcat verksamhet till utlandet s k offshorsing	2.1%	1.2%-	2.5%	7.6%+	5.7%+	11.2%+	0.0%-	2.2%	5.8%+	0.9%-	1.4%-

## 8.4 Appendix 4: Firm descriptions

### Firm description Company A

Company A is part of Group A, a global stationary / office supplies manufacturer. Group A was founded in 1913 in Sweden and has since become a global enterprise, owning several world renowned brands such as Leitz and Company A apart from its own brand name. The group sells ca. 20,000 different products in 130 countries (company presentation and CEO Company A, personal communication).

Company A is one of the more recent group acquisitions (2010) and its product range covers all kinds of Do-It-Yourself and professional staplers, tackers, nailers, glue guns, garden tools, riveting machines, hot air blowers and stapling systems for photocopiers. The firm was founded in 1936 in Hestra, Sweden, and its basic product – staplers – have never changed. From 1989 Company A started to expand its product range by acquiring other companies (company presentation and CEO Company A, personal communication). Due to these acquisitions over time and by being acquired itself a few times the firm learnt to operate in complicated group structures and maintain production units in different countries.

At the headquarters in Hestra, approx. 220 employees work in the production plant and HQ functions (if not covered on a group level). Generally, production happens in Shanghai and Hestra. At the Shanghai plant products are manufactured and shipped to customers directly or via the global distribution center in France. Production in Hestra depends partly on part supplies from the Chinese plant but has its own suppliers and manufacturing facilities otherwise.

### Firm description Company B

Company B is a global producer of trucks, busses and engines for industrial and maritime use with a sales and service organization in more than 100 countries (company website). The company also provides financial services in many of its markets and was founded in 1891 in Sweden where it still maintains its global headquarters. Company B's production hubs are mainly located in Europe (e.g. Sweden) and Latin America (e.g. Brazil) and the firm employs ca. 42,000 staff worldwide of which approximately 16,000 work with production and R&D, the areas of interest for this research (company website and video).

For the firm, good relationships with its suppliers are essential as 70% of the value added lies with them. All parts needed for production are categorized as either core competence, strategic or non-strategic. Core competence products are so critical to the end product's quality that they are produced in-house. Strategic parts represent the largest group of production parts. In regards to these, Company B needs to have knowledge about how they are produced and shares the risks with its suppliers. Non-strategic parts are for instance screws or articles which are produced by many suppliers. The quality of these is not so critical.

Even though traditionally Company B has had a lot of own production, over the years this was reduced to around 30% as costs had to be cut. These 30% represent what the company calls its core business or core competences such as the final assembly, cabins, important engine parts and parts of the vehicles' frames. Company B decided to perform these tasks in-house because they are essential to ensure a high quality which is one of Company B's unique selling points.

### Firm description Company C:

Company C develops and realizes furniture concepts for offices and public spaces. In fact, the firm is Europe's leading supplier of office furniture. With seven plants in Sweden and Germany, Company C provides its customers with equipment in approx. 40 countries. The company was founded in 1942 and the headquarter is located next to the largest plant in Kinnarp. Currently the family business employs ca. 2,400 employees (company website).

Business at Company C is almost 100 percent order driven and it takes the company about three to five weeks to turnaround an order. The first week is spent on checking the order. Production itself is structured in a way that all products can be produced within six days as stocks for most parts are held at each plant. The rest of the five week period serves as a buffer to efficiently organize transportation. Company C operates its own fleet of trucks and uses a Transport Planning System (TPS) to optimize truck routing for drop of rounds throughout Europe. To avoid empty trucks on the return journey to Sweden, the company collects most of its European supplies directly at their suppliers manufacturing locations. Due to the complicated logistics behind this system, customers receive their products in time windows of three to five weeks and not right after production is finished.

### Firm description Company D:

Company D is located in Arvika, was founded in 1923, and is currently producer of heat pumps (since 1973). The firm belongs to a Danish group and sees itself as a leader in their field of expertise. Within the group, Company D operates as an independent business unit of the Group Heating Division. The company has approx. 200 employees and develops, manufactures as well as sells heat pump systems for heating, warm water and cooling (company website). The main markets are in Finland, Norway and Sweden where the firm and two main competitors have a combined market share of 80 – 90 percent of the overall market. According to the interviewed site manager, the labor costs are relatively small compared to the total cost as heat pumps are generally considered to be expensive products. Company D does not sell directly to its customers but rather uses a network of resellers (company website).

### Firm description Company E:

Company E was founded in 1935 and is active in three business areas: Springs, Environment and Engineering. For this thesis, the 'springs' business unit is of relevance. It produces steel springs for industrial customers. Company E' springs are for instance used in the car, medical equipment and electronics industries (company website). The company serves as a first or second supplier to large customers further downstream in the supply chain (interview 9). Company E has manufacturing in Sweden, China, Serbia and Bosnia. Production at the Swedish plant is more capital intensive as they focus on automating the manufacturing. In the other manufacturing plants the focus has earlier been on more manual manufacturing of springs which with increasing wage costs in low cost countries is now gradually changing. The Company E case is another example of a family owned company deeply rooted in Småland. The interviewee was the firm's CEO and co-owner who has been in charge of running the business even before offshoring to Serbia and until today. This is why he has been involved in all manufacturing location decisions at Company E.