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Drivers and barriers to reshoring: A literature review on offshoring in reverse

Abstract

Purpose: The purpose of this paper is to clarify the rather blurry concept of reshoring and its main drivers and barriers. At the same time the paper seeks to provide a much-needed overview of the scientific theories employed in previous research on reshoring.

Design/methodology/approach: The paper gathers information from previous published research. Data was collected through a systematic literature review on ‘reshoring’ using primarily qualitative research techniques. Through a structured keyword search and subsequent elimination of papers, 22 peer-reviewed journal papers made it into the final review.

Findings: There is currently no consensus on the definition or ‘theory of reshoring’. Drivers and barriers could be grouped into five different sets of dynamics: global competitive dynamics, home country, host country, supply chain, and firm-specific.

Research limitations/implications: Researcher need to consider the future development of the field and work towards an accepted terminology. Models about reshoring decision need to include several decision criteria, which goes beyond financial metrics.

Practical implications: Practitioners need to carefully consider the decision to reshore as to not make rushed decisions. The final decision needs to consider factors such as quality, risk, and brand reputation.

Originality/Value: The paper is, to our knowledge, the first overview of earlier research in a research journal. It provides a much needed overview of an emerging field that can hold great importance for both future research and production. The constructed framework structures the dynamics (drivers and barriers) associated with reshoring.

Key words: Reshoring, Backshoring, Sourcing, Manufacturing location decision, structured literature review

Paper type: Literature review

1 Introduction

In the last decades, globalization has changed the rules of competition in business (Gottfredson et al., 2005; Hilletoft and Jäger, 2011), leading to a major outsourcing trend as the pressure on firms to improve efficiency and competitiveness has grown constantly (Baden-Fuller et al., 2000; Hilletoft and Hilmola, 2010). In addition, 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 two of the most important strategic decisions for firms in today's markets (Holcomb and Hitt, 2007). The importance is reflected in the plethora of scientific papers on the 'manufacturing location decision' (McIvor, 2013).

As all types of companies have started offshoring, it is not just the number of success stories that has increased but also the number of offshoring failures. Within the last decade, it has been recognized by firms, consulting agencies 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 modeling techniques for decision-making are frequently incorrect or oversimplified (Brown, 2010). Global issues have also reduced the economic benefit gained through, for example, capital being tied up in inventories in transport (Economist, 2013) and intellectual property theft (Forbes, 2009), and can at the same time complicate the management of environmental and social issues (Eriksson and Svensson, 2016). There are numerous examples of firms having issues with their offshored operations from the U.S., Canada and Europe, and companies acknowledge that local production is a pressing matter (Finley and Maurer, 2013). These problems and the potential benefits in local production have led to the 'reshoring' of offshored manufacturing and gave rise to what is known as the reshoring phenomenon. Here, reshoring is considered the location decision, regardless of which corporation is performing the activities (Grossman and Rossi-Hansberg, 2006). As such, reshoring can occur simultaneously with outsourcing and insourcing.

A strategic relocation of industrial manufacturing from low-cost to high-cost environments has perhaps not been widely recognized previously. This would explain 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 and Mikkelsen, 2014) unlike its predecessor "offshoring" (e.g., Crinò, 2009; Lewin et al., 2009). This means that although literature on offshoring is widely available, reliable quality coverage on reshoring is in its infancy. Thus, it is necessary to undertake research on reshoring to understand this new occurrence better and increase knowledge on its drivers and barriers.

In order to address the knowledge void surrounding the reshoring phenomenon, it is necessary to analyze the state of academic literature on reshoring, so as to be able to clarify the rather unclear concept and what is known about its main drivers and barriers. Thus, the purpose of this research is to clarify the concept of reshoring and identify the main drivers and barriers in existing academic literature. With this purpose in mind, two research questions guided the research process: (1) 'What is the current state of published research on reshoring?', and (2) 'What are the particular drivers and barriers for reshoring?'. In order to answer these research questions, a content analysis literature review is used (Seuring and Müller, 2008). An important delimitation in this research is that it is focused on reshoring in a product manufacturing context. It should be noted that reshoring is also discussed within the services

industry (e.g. Gopalan and Madjd-Sadjaji, 2012; Xia et al., 2015), which also presents an interesting avenue for research. An important distinction between products and services is that a product can be stored, whereas a service is consumed and delivered at the same time. By focusing on products we hope to capture activities related to the movement and storage of products, which is central to make or buy decisions (Walker and Weber, 1984), where reshoring could be considered a sub section.

The remainder of this paper is structured as follows: To begin with, the research methodology of the study is further explained in Section 2. In this section, all the information regarding the research process and the procedure in which the systematic literature review is conducted, are included. After that, a descriptive analysis is presented in Section 3. Thereafter, the findings of the study are presented and discussed in Section 4, where the framework concerning drivers and barriers of reshoring is presented. Finally, the study is discussed and concluded in Section 5.

2 Research methodology

The research in this paper was conducted as a systematic literature review. A systematic literature review is used to search, select, critically evaluate, and synthesize the existing body of literature (Cook et al., 1997). The aim is to capture a snapshot of the studies being conducted within a specified field of research. As such, a systematic literature review needs a clear definition of boundaries delineating the research (Ashby et al., 2012; Seuring and Müller, 2008). The method uses an explicit algorithm to, within this limitation, “perform a search and critical appraisal” (Crossan and Apaydin, 2010, p. 1156). This strategy was chosen for two reasons. First of all, the concept of reshoring is still rather unclear and by systematically reviewing the material available we aim to encompass the lion’s share of what has been published on reshoring. Second, only results from peer-reviewed journals were to be examined in order to improve the quality of the information included. Through the application of the search algorithm, the quality of the reviewing process and its results are improved because the gathering of documents follows a clearly defined, transparent and repeatable procedure (Seuring and Gold, 2012; Tranfield et al., 2003). In general, the compilation of a review follows three steps which can be described as data collection, data analysis, and data synthesis (material evaluation). According to Crossan and Apaydin (2010) each part has to be conducted with scientific rigor to ensure high quality results.

The subsequent data analysis also follows a stringent approach, which may include either a qualitative or quantitative exploration of the results (e.g. Abbasi and Nilsson, 2012; Giunipero et al., 2008; Hoejmose and Adrien-Kirby, 2012), both of which are important in this field of research (Mangan et al., 2004). In this research, both qualitative and quantitative analyses 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 (2010) model of categorizing and pattern-matching was used. 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.

Please insert Table 1 about here.

2.1 The search for literature and delimitations

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. The

delimitations made in this paper are found in Table 1. The search focused exclusively on peer-reviewed academic journal papers, written in English and from the field of business administration/management. Papers written in other languages or with different foci (such as construction engineering) were excluded.

The data collection was carried out in March, 2015, as a structured keyword search (Table 2) 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. The initial sample consisted of 223 articles.

Please insert Table 2 about here.

In the first screening step, abstracts were read to identify if the paper discussed some form of reshoring and related barriers and drivers. This step excluded 146 papers. The second screening step, a paper review, involved the reading of the entire papers. An initial screening of drivers and barriers was performed. It resulted in the exclusion of an additional 55 papers, as they were not relevant for the topic at hand. Hence, the final sample included 22 relevant papers (Table 3). Each of these papers was categorized by author name, publication year, and methodology. In addition, the papers were clustered based on the drivers and barriers discussed. All papers in the final sample were from ABI/Inform, and the search in the secondary databases did not yield any additional papers.

Please insert Table 3 about here.

2.2 Content 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 papers)
- 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

Analysis and synthesis are closely connected in the selected approach. 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).

2.3 Rigor of the research process

The overall goal of content analysis is to identify and record relatively objective characteristics of messages (Seuring and Gold, 2012). The structured process and systematic approach ensures the objectivity of the research process. The findings of content analysis are contestable if based only on the multiple judgments of a single researcher (Seuring and Gold, 2012). To avoid this researcher triangulation was used (Flick, 2009) as four researchers independently performed all the steps of the formal analysis. Validity was addressed by following the guidelines. Constructs are compared to other research both from within as well as from outside of the particular field (Seuring and Müller, 2008).

To show consideration to size of the final sample it was decided to use a modest language discussing the distribution of papers, for example using words such as ‘half’ and avoiding percentages in favor for numbers. As will be discussed, this is a field that seems to be on the rise and there is no basis to make any predictions on how or if the field will grow. The findings will only present a snapshot of current research, and predictions on future developments are highly tentative.

3 Descriptive analysis

3.1 Distribution across the time period and main journals

The body of literature satisfying the inclusion criteria consisted of 22 scientific journal papers (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. The earliest paper was published in 2009 and the last papers in 2015. The allocation of papers in the period with findings is presented in Figure 1. Almost half of the papers were published in 2014 and a majority 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, but such statements are made in a tentative manner due to the small sample size.

Please insert Figure 1 about here.

The distribution across journals is outlined in Figure 2. With six papers in the Journal of Purchasing and Supply Management, this journal published the most papers from the material collected. Five of those papers 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 papers on reshoring were published in different issues but in the same volume. Hence, these three journals covered more than half of the papers published on reshoring (13 out of 22). The remaining 12 papers appeared in 12 different journals.

Please insert Figure 2 about here.

Please insert Figure 3 about here.

An analysis of the papers’ geographic emphasis showed that most papers had a U.S. or European focus. The geographic distribution of the studied papers can be seen in Figure 3.

3.2 Applied research methodologies

Papers were classified into five groups according to their research methodologies. The different groups were characterized as theoretical/conceptual papers, surveys, cases, modeling papers, or mixed method (survey or modeling and case(s)) papers. In addition to these groups, literature reviews were also searched for and has been treated as a potential group. The distribution of the distribution is presented in Figure 4. Ten papers were found to be purely theoretical/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 and Müller, 2008). There are several surveys, case studies and mixed method papers 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 modeling papers and no literature reviews.

Please insert Figure 4 about here.

4 Content Analysis

As the field of reshoring is still emerging, the authors had to adjust Mayring’s approach according to the particular needs of this review. First, papers were scanned for a definition of the term ‘reshoring’. This step was necessary to ensure that the papers 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. Second, all papers were sorted according to their theoretical argumentation. Through this step, several theories to ground reshoring could be identified, e.g. Transaction Cost Economics (TCE), the Resource Based View (RBV) and the Ownership advantages, Location advantages, and Internalization advantages model (OLI). Third, as drivers and barriers for reshoring are of particular interest for this study, categorization subsequently focused on identifying papers which mentioned either drivers or barriers for the reshoring phenomenon. Papers on reshoring that did not contain any of the former were sorted into a separate group. These would only serve to frame the wider field of reshoring mentioned above. From the primary group of papers, 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 contributions and implications were discussed before the review was concluded.

4.1 Reshoring: A Definition

To define reshoring, a list of definitions from the papers was compiled (Table 4). Since many papers do not directly come to a clear definition of the term, it seems that 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 describing the movement of offshored production back to its previous location.

Before going in to the definitions identified, it is important to understand the terminology otherwise used. Three factors are important to consider: the actor performing the activity, location where the activity is performed, and the movement between actors and locations. ‘Offshore’ can be defined as “the performance of a task in a country different to from where a firm’s headquarters are located”, and ‘outsourcing’ can be defined as “the performance of tasks under some contractual arrangement by an unrelated party” (Grossman and Rossi-Hansberg, 2006, p. 3). That means that to offshore is to move production from the country

where a firm's headquarters are located, and to reshore is to move production to the country where a firm's headquarters are located, that is a location decision. Continuing, to outsource means to move production from the firm to another unrelated party, and to insource is to move production from another unrelated party to the firm, that is a make/buy decision. As is well established in the supply chain field, definitions are a constant source of debate and not all usages are consistent (e.g. social responsibility in Eriksson (2014) and supply chain management in Bechtel and Jayaram (1997)). Based on the definitions presented above it is also possible to distinguish combinations, for example reshore/outsource and offshore/insource.

Returning to the literature review, a few elements stand out in the different definitions used. First, all definitions explicitly or implicitly acknowledge that reshoring refers to the relocation of previously offshored activities. Second, 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 Propris (2014) mention a return to the home economies, Tate et al. (2014) refer to a return to more attractive offshore locations and Arik (2013, p. 75) considers reshoring as "the relocation of the business operation to the U.S. mainly from emerging markets". 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, owned by the company, located in another country. 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.

Please insert Table 4 about here.

In Table 4 the several synonyms of reshoring that have emerged are summarized. Currently, the term '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' and 'inshoring', but when reviewing the scarce number of papers that use those terms, these umbrella terms seem to be less relevant in the main discussion. Figure 5 illustrates the distribution of the different umbrella terms which were used in the papers under review.

Please insert Figure 5 about here.

Altogether, it can be deduced 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 (the final two concern future effects due to environmental regulations and impacts on the job market):

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 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 et al., 2013) and delivered valuable input for further structuration and synchronization of definitions.

Please insert Figure 6 about here.

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. Martinez-Mora and Merino (2014) implicitly confirm that it seems as if reshoring motivation for outsourced manufacturing and offshored greenfield manufacturing reshoring can differ, which may also be industry related. However, this is not empirically confirmed 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.

4.2 Reshoring: Theoretical Perspectives

Even though the evidence for a reshoring trend is limited, the topic has provoked debates in several countries (Bailey & De Propriis, 2014). Perhaps intrigued by the debate, scientists have focused their attention on reshoring. Drawing from different existing theories attempts have been made to present a theoretical foundation. Many approaches refer to TCE, RBV or the OLI model; these are outlined below. Consequently, the academic discussion has developed along different paths aligned within these theories (Bailey & De Propriis, 2014).

Most often reshoring is either described as a location and cost-related choice borrowing from internalization theory (e.g. Ellram et al., 2013), as a phenomenon caused by diminishing cost advantages, volatile demand and smaller/segmented markets (e.g. Wu and Zhang, 2014), or as an occurrence primarily concerned with network management and ownership issues (e.g. Martinez-Mora and Merino, 2014). Additionally, there are other theories from international business literature such as foreign divestment and de-internationalization theory. These concepts appear to not sufficiently describe reshoring. The concepts often either exclude key features of the phenomenon or, in the case of divestment literature, only describe the repatriation of whole plants.

Turning to TCE, Martínez-Mora and Merino (2014) argue that the theory can provide valuable insights into the cost of exercising ownership in distant locations despite being developed to evaluate in-house and 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’ creating high potential for opportunism. Hence, low cost countries where this applies are perceived as less attractive (McIvor, 2013). 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, especially in relation to the make-or-buy decision, where Tate locates the ‘shoring’ decision.

The OLI model shows that companies develop their international activities internally if internalization advantages are present. 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 and Dai, 2010). Three determinants are considered: ownership advantages, location advantages, and internalization advantages. For research on reshoring, the location advantages are of primary importance. Dunning (1998) identifies four similar location advantages. First, resource seeking advantages, which includes the availability of raw materials, infrastructure, and also a network of local partners. Second, marketing seeking advantages address the availability and cost of local talent and suppliers, access to domestic markets and government (economic) policies. Third, locational advantages deal with efficiency seeking advantages pertaining to the combination of production and cost-related factors, favorable industry clusters and diminishing trade barriers. Fourth, 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 regard to, among other, asset specificity and the risk of leakage of intellectual property (Martínez-Mora and Merino, 2014).

Conclusions from TCE can also be combined with the RBV as a base to explain reshoring (McIvor, 2013). TCE and RBV both focus on two different aspects that deal with manufacturing location; 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 and Merino (2014) 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 papers are internalization theory, dynamic capabilities theory and the concept of factor market rivalry. Similar to TCE, internalization theory evaluates the make-or-buy decision. As perfectly summarized by Dunning (1998, p. 5), “...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”. 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 and 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 and 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 and Martin, 2000, p. 1107).

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 (reshoring acc. Tate, 2014) or closer to customers/markets (nearshoring or homeshoring acc. Tate, 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, for example transportation capacity (Tate, 2014).

Despite many pure conceptualizations and empirical based investigations on reshoring, little has been published on modeling approaches. Three papers 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.

Grappi et al. (2015) discuss reshoring from a moral perspective. 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' with regard to a 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, are granted by governments. 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 and Zhang, 2014, p. 1244). 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 and Zhang, 2014, p. 1235). This connects to Tate et al.'s (2013) take 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.

4.3 Reshoring: Decision making frameworks

Following the above theories, there are also frameworks for decision making that are not as theoretical in nature, but still important for the continued progress of the field. Several 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 and Maloca, 2009). Decision-making processes with regard to reshoring generally appear to be under researched.

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 current situation 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 out 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 et al., 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 paper, firms can further revise their shoring strategy.

4.4 Reshoring: Drivers and barriers

The main 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 papers focus on what drives firms to make the reshoring decision despite the locational advantage of having low labor costs at the offshoring location. The categories are discussed in-depth below, and are summarized with detailed references in Table 5.

Insert Table 5 about here.

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; the variables are relatively unpredictable, hard to influence on the 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 encompass 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 regard to the manufacturing location decision as the parameters influencing a region’s attractiveness for businesses constantly change.

The identified global competitive dynamics driving reshoring are as follows: *Changes in the global economy*, a broad term referring to which cycle the world economy currently is in. Second, *political risks* can severely and unexpectedly interfere with trade flows. Third, *eroding comparative advantages*, which have been of primary importance for manufacturing (such as tax rates and labor costs) are decreasing and need to be understood in relation to other levers for cost savings (Jonsson et al., 2011). Fourth, *instability in exchange rates* is of major importance to global trade flows, and unfavorable developments can quickly outweigh factors that were previously perceived to benefit a certain location (Tate et al., 2014). Last, *increased competition on resource assets* pushes production sites away from formerly low-cost manufacturing destinations to either other low-cost countries (reshoring according to Tate et al., 2014) or closer to customers/markets (nearshoring or homeshoring according to Tate et al., 2014). Hence, it 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” (p. 54).

Within this category, three barriers were identified. First, *large economic differences* between different regions is still an important factor. Second, *instability in exchange rates* also can be a barrier making it important to have local production in an offshore location. Third, *large differences in resource availability* might necessitate that operations are not reshored.

Host country

This category contains factors that are specific to the host country, and which appear to positively influence the reshoring decision. These factors often seem overlooked when the offshoring decision is made and thus emerge as a relevant factor over time when reflecting on the manufacturing location decision.

The identified host country factors driving reshoring are as follows: First, *diminishing growth opportunities* have lead companies to try and centralize their operations as to reduce transaction costs. Second, *inadequate quality* seems to be an important factor amongst many cases which have been reported. Third, *theft of intellectual property and patent enforcement* is a result of weak patent enforcement in developing country. If we draw from research in business ethics it is established that non-compliance with agreements is especially troublesome in countries with poor public regulatory systems (Locke et al., 2013; Toffel et al., 2014). Fourth, *high employee turnover* continues to be a problem in several offshore locations. As such, it is hard to get and keep an educated workforce for skilled labor. Fifth, *risk of public relation disaster due to supplier malfeasance* increases as the supply chain grows global, which is especially troublesome for business-2-consumer companies who tend to get more attention for undesirable behavior in the supply chain (Hoejmose et al., 2013).

Looking at the factors above, it should be taken into account that some factors, such as quality, are relatively easy to measure. Potential factors such as *risk of losing supplier knowledge* are hard to quantify but may have a significant impact on day-to-day business operations.

Three barriers to reshoring were identified in this category. First, *risk of losing access to market and foreign distribution channels* is pressing for companies relying on suppliers or customers in the offshored location. Second, *risk of losing access to raw-materials and components that are only available in the host country* is a similar barrier as the first one, and highlights that benefits of being local are not only related to the proximity of the headquarters of the company, but also important supply chain functions. Third, *risk of losing supplier knowledge* is related to the capabilities built up within the supply chain.

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. The specifics of the home country should be considered before the reshoring decisions are made - not once the company moves its operations. 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 and De Propriis, 2014; Arlbjørn and Mikkelsen, 2014).

Eight driving factors for reshoring were identified in the category home country. First, *political incentives* to improve domestic production is a commonly mentioned driver in the literature. Second, *promote community (domestic goodwill)* is a more intangible reason why companies reshore. Third, *access to qualified personnel* can be a driver for reshoring, but as has already been shown, know-how and competence can both be a driver and barrier in both host and home country. Fourth, *increased degree of automation* reduces the importance of labor cost and makes it more viable to produce in a high-cost environment. Fifth, *higher productivity and work morale among staff* can reduce both direct production costs, but also associated costs, such as quality and training. Sixth, *increase awareness of environmental impact* and seventh, *increased focus on sustainability* are similar factors, which show that

there is both a better understanding of how production and the supply chain affect the environment, as well as that sustainability has gained importance among stakeholders both inside and outside of the company. Eighth, *strengthen brand through made in “XX”* has become a differentiating factor in many markets.

Four barriers to reshoring were identified in this category. First, *stricter environmental legislation* can make it hard for companies to produce in their home country, making it hard to move all or some production back. Second, *lack or shortage of raw-materials and components* and third *lack or shortage of qualified staff* are almost counterpoints to some drivers in the home-country category. Fourth, *lack of flexibility in the labor market* can make it hard for the company to adjust labor costs according to demand, but this is highly dependent on the home country.

Supply Chain

Offshoring results in an extended supply chain, where information and goods have to travel longer distances and control generally becomes more difficult. Within the supply chain 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 et al., 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.

Within this category the highest amount of drivers was found and it is also within this category that most research has been conducted. First, *innovation, research and development suffers due to the distance to manufacturing*, which includes both the mental and physical distance. It is hard to innovate without being close to manufacturing. Second, *high coordination costs* occur when working with global supply chains, offsetting potential cost savings from cheap labor. Third, the *risk of disruption* increases as supply chains span across countries and longer distances. Fourth, *importance of and issues with delivery performance (speed and dependability)* necessitates better control and oversight of the supply chain. Fifth, *difficulties to match production (supply) and consumption (demand) volumes* can manifest in several different ways, for example the need to place orders that are too big in comparison to the forecast, which has an impact on several financial metrics and increases the risk of obsolete inventory. Sixth, *growing demand for and shortages of accessible transportation* drive both costs and uncertainty. Seventh, *inability to provide services related to the product* is a result of blurring boundaries between products and services, where value-adding services are becoming a part of the product. These have been hard to produce in an offshore location, and sometimes only part of the final production is reshored for this reason. Eighth, *increased demands on customization* goes hand-in-hand with services, but here is the added value related to the configuration of the physical product. Ninth, the factor *difficulties due to the physical and mental distance* is mentioned by several authors and can be seen as a catalyst for other issues, such as problematic control and lost innovation.

Within this category, no barriers to reshoring was identified. It is clear that the supply chain dimension often has been neglected or even missed in the offshoring decision. Hence, it is not strange that this category includes the highest amount of drivers for reshoring and that the available research focuses on drivers rather than barriers.

Firm-specific

Apart from explicit external factors there are firm-specific factors that can either work in favor of or against reshoring. Firm-specific factors stand out from other categories, as this is the only category in which more barriers than drivers were found.

Four drivers of reshoring were identified in the firm-specific category. First, *wrong estimation of benefits and risks in the offshoring decision*, second *lack of knowledge about the host country during the offshoring decision*, third *overhasty offshoring decisions (bandwagon effect)*, and fourth *over-estimation of cost savings during the offshoring decision*. All these point to the same conclusion. That is, offshoring is a decision that should not be taken lightly and there are multiple ways in which it can backfire.

What is alarming is that reshoring might not be an alternative, as many of the five barriers hint. First, it might be *too late to go back*, as with time away the initial cost for returning home increases. Second, an *immature reshoring process* can lead to over-hasty decisions, continuing a spiral of adverse effects. Third, *lack of capacity, resources and internal competencies* can make it hard to re-establish production in the home country. Fourth, *lack of proper decision support/data* is perhaps a lesson learnt from unsuccessful offshoring and deter companies from moving back. Fifth, *lack of information and communication about reshoring within the business* is a problem for larger companies who have in earlier decisions faced difficulties in this area.

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. Barriers to reshoring are reasonably more prominent in practice than drivers. All companies who have offshored without reshoring could be argued to have faced or perceived barriers. The reason for this not being more present in research could be that it would only be a description of a *status quo*, whereas case research usually focuses at some specific events where the *status quo* was broken.

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 and Mikkelsen, 2014).

4.5 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 and 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 and 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 have been foreseen when the offshoring decision was made. In line with Kinkel (2014), 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, p. 64) distinguishes between “backshoring activities from own foreign production plants of the company (captive backshoring) and backshoring from foreign suppliers of the respective company (outsourced backshoring)”. Whereas it appears that problems with quality and high transportation costs are more important for ‘outsourced backshoring’ (evidence not statistically significant), high coordination efforts seem 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. 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).

4.6 Reshoring: Consequences, Conclusions and Development

Based on their analysis of reshoring, authors have come to different ‘conclusions’ concerning the reshoring phenomenon. For instance, about the theoretical foundation of reshoring, Martínez-Mora and Morino (2014) point out that the theoretical framework based on international business literature (TCE, RBV, OLI) can sufficiently explain the location choices of firms which includes the reshoring phenomenon. 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. Bailey and de Propris (2014) argue that 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.

Consequently, reshored manufacturing will require fewer but more skilled workers and will not easily occur without major policy changes. 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 with 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'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” (p. 65). He further argues that in the future complete solution providing capabilities will be present in all relevant markets, reducing the number of global, complex and (thus) more vulnerable supply chains to a minimum. Bailey and De Propris (2014) argue in a similar direction as they see the factors for offshoring changing from a resource seeking to a market seeking focus, even though their and Kinkel's claims are the contrary of MNC's past location choices, 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.

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. In addition to Fratocchi et al.'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).

5 Concluding remarks

This research aimed to clarify the rather blurry concept of reshoring and its main drivers and barriers based on existing academic literature in the form of a systematic literature review. Even if the collected sample was rather small, it has generated some interesting findings and a number of conclusions can be drawn based on the review conducted. The biggest step towards understanding reshoring was the classification of important factors into five dimensions: global dynamics, host country, home country, supply chain, and firm-specific. Among these, two main themes stand out. The first is that the original offshoring decision was often over

hasty and the second is that the reshoring decision is highly complex. It is therefore important to not make rushed reshoring decisions and to make decisions based on a broad and dynamic decision model.

The literature in the field is published in a quite limited number of journals. This indicates that the area of reshoring represents a rather specific interest and has yet to gain wider scientific attention. Thus, it comes not as a surprise that the research strategies used in this area are either purely conceptual (due to the fact that reshoring is an emerging and unexplored topic) or empirically oriented. As discussed above, there is still uncertainty whether or not reshoring is an actual trend in practice.

There is not a single parameter explaining why firms reshore. Currently the research field is mainly focused on drivers of reshoring, with barriers not receiving as much attention. Barriers do exist and perhaps the skewed focus is a result caused by how researchers gain access to the field. Experience tells us that it is rather easier to gain access to companies describing how they succeeded, not why they failed. If that is the case, reshoring might benefit from a completely different angle. That is, why companies succeed with offshoring. Companies that succeed with offshoring lacks incentives to reshore, which might constitute the most important barrier. 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; 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. The identification of trade-offs is, as such, an important future venue for researchers that can hold value for practitioners. The current research view seems to be that reshoring will not lead to a 're-industrialization' of Western economies. Perhaps the result will be a re-distribution of manufacturing, resulting a mix of local and international manufacturing with flexible sourcing options. This entails that governments that want to support local production should do so with reasonable expectations. Differentiation and postponement strategies, where parts of the value adding is done locally, might yield better return on commitments. Overall, researchers are certain that more research on reshoring will be necessary and some researchers outline future research agendas along which the debate could develop.

5.1 Implications

The main implication for practitioners is that it is important to be careful when considering if to offshore and reshore. The decision to reshore is often a reaction to a hasty offshoring decision, but continuing to make ill-informed decisions does not appear to be a way towards improvement. Reshoring decisions need to consider problems with the current offshored production, and carefully evaluate what problems may be addressed. Many drivers of reshoring are found in the "supply chain" category, and managers need to consider if these problems will be addressed by reshoring production. These findings also hint that managers considering offshoring may take a decision that can have long-term negative effects, which are hard to reduce in the future. It is possible that an aggressive outsourcing strategy causes a "lock-out" situation, where it is hard to reshore, due to a lack in domestic infrastructure, including facilities and know-how. Decision models for reshoring need to account for uncertainty, risk, quality, brand reputation, and several other parameters. As researchers we need to be humble about the current state of knowledge about reshoring decision. We are not yet able to produce specific models, but we can try and contribute with a nuanced picture. Researchers need to stay attentive to development in the field, and perhaps a more solid theory for reshoring can be established in the future.

An important implication for researchers is the need to work towards a clear terminology concerning reshoring. The term is still somewhat unspecific. Each researcher, or group of researchers, state their understanding of the topic slightly differently, leaving room for inclusions and exclusions. While it is important to have a clear terminology, we should not be discouraged by the lack of consensus. If we, once again, turn to SCM, authors such as Lambert et al. (1998) and Croxton et al. (2001) were early to try and suggest consensus definitions for SCM, which is yet to realize. Perhaps the field is even more confused with the introduction of various definitions and names for SCM, including (global) demand/supply/value chain/network management? We can at least hope that the field at an early stage settles for one definition. Alternatively, with more publications, it might be possible to discern different streams encompassed under the reshoring umbrella.

Starting the work of theorizing reshoring, we see that TCE and RBV are used by multiple researchers, some of which further refined their theorizing by including aspects such as dynamic capabilities theory. This implies that it is possible to theoretically base reshoring on existing theories. Although, the creation of such a theory is perhaps not something that should be expected. Looking at the broader SCM field, the field itself lacks an all-encompassing theory (Halldorsson et al. 2007), and is known for borrowing knowledge from other fields (Stock, 1997). The same holds true for reshoring decision-making models and frameworks. The two frameworks presented in this review can serve as a broad guideline for firms to make a reshoring decision but they need to be more specified and backed-up by empirical evidence, as was discussed earlier.

5.2 Limitations and future research

Our research is limited by the fact that a small number of journal papers exist on the reshoring phenomenon. However, the papers examined in this study are well suited to frame the boundaries of reshoring. The recent emergence of the field also stresses the importance of this paper, as an early coherent picture of the field might help to better frame and focus future research. The lack of systematic reviews identified in this review supports the novelty of this paper, as one of the first papers of this type on reshoring. As with all research, the findings are bound to the initial methodology.

Future research must elucidate the drivers and barriers of reshoring. Especially, the connection between offshoring and reshoring motivation needs clarification as it appears that these two might have a reciprocal relationship as drivers for offshoring often seem to be barriers for reshoring and vice versa. Additionally, the long-term developments on reshoring should be covered on a wider scope. For now, only Kinkel (Kinkel, 2012; 2014; Kinkel and Maloca, 2009) regularly evaluated the long-term development. Furthermore, the questions of ‘when’, ‘where’, and ‘how’ reshoring happens were examined. Some findings could be found, even though supporting evidence for ‘when’ and ‘where’ 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, regarding ‘when’, ‘where’ and ‘how’, further research is necessary. Reshoring has a strong link to make/buy decisions and in the future it might be important to clearly position reshoring in the broader spectrum of make/buy research. The area can also benefit from internationalization, as both reshoring and offshoring span across geographical and national borders. As was discussed in the introduction, reshoring is sometimes a reaction to an earlier unsuccessful offshoring effort. Both areas can be placed in the manufacturing-location-decision area of research (McIvor, 2013), and it could therefore be beneficial to compare the two areas in a systematic manner. However, caution should be

raised for how delimitations are made, as 'offshoring' currently gets about 50,000 hits on google scholar.

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TABLE 1 Delimitations

Delimitations	Explanation
Field	Business administration
Time	No time delimitations
Search areas	Title, Abstract, Keywords
Document type	Article
Source type	Peer-reviewed journal
Language	English

TABLE 2 Search strings used for structured keyword search and sample

Keyword combinations	Hits
reshoring OR backshoring OR onshoring	95
reshored OR backshored OR onshored	11
reshore OR backshore	39
inshoring OR inshored	25
re-shoring OR back-shoring OR on-shoring	53
Sample	
Initial sample	223
Sample after abstract review	77
Final sample after paper review	22

Search in Abi/Inform by title, abstract

TABLE 3 Papers included in final sample

Papers included in final sample
Arik, 2013; Arlbjørn and Mikkelsen, 2014; Bailey and De Propriis, 2014; Canham and Hamilton, 2013; Ellram, 2013; Ellram et al., 2013; Fine, 2013; Fracocchi et al., 2014; Grappi et al., 2015; Gray et al., 2013; Gylling et al., 2015; Kazmer, 2014; Kinkel and Maloca, 2009; Kinkel, 2012; Kinkel 2014; Martínez-Mora and Merino, 2014; Moutray and Swift, 2013; Pearce, 2014; Tate, 2014; Tate et al., 2014; Verdu et al., 2012; Wu and Zhang, 2014

TABLE 4 Overview of definitions and synonyms

Concept	Reference	Definition
Reshoring	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. 75)
	Bailey and De Propriis (2014)	“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. 1)
	Ellram (2013)	“Moving manufacturing back to the country of its parent company.” (p. 3)
	Gylling et al. (2015)	“Repatriation of activities or functions from another country to be carried out in-house by a company in its home country.” (p. 92)
	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. 225)
	Tate et al. (2014)	“The relocation of manufacturing facilities from traditional offshore locations to more attractive offshore locations, or even home to the United States.” (p. 381)
Backshoring	Arlbjørn and Mikkelsen (2014)	“Offshoring, however, refers to moving parts of the whole company to a foreign location while maintaining ownership. 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. 60)
	Canham and Hamilton (2013)	“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. 278)
	Kinkel and Maloca (2009)	“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. 155)
Onshoring	Kazmer (2014)	“Some manufacturers are returning part or all of their foreign production to domestic facilities, an action that has been termed onshoring.” (p. 464)
Back-reshoring	Fratocchi et al. (2014)	“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. 56)

TABLE 5 Summary of reshoring dynamics with references

	Factor	Sources
Global competitive dynamics	<i>Drivers</i>	
	Changes in the global economy	Arlbjørn & Mikkelsen, 2014; Canham & Hamilton, 2013; Fratocchi et al., 2014; Kinkel, 2012; Martínez-Mora & Merino, 2014; Moutray & Swift, 2013; Tate, 2014; Tate et al., 2014
	Political risks	Ellram et al., 2013; Kinkel, 2012; Tate et al., 2014
	Eroding comparative advantages (e.g., labor, taxes)	Arlbjørn & Mikkelsen, 2014; Bailey & De Propriis, 2014; Canham & Hamilton, 2013; Ellram et al., 2013; Fine, 2013; Fratocchi et al., 2014; Gray et al., 2013; Kazmer, 2014; Kinkel & Maloca, 2009; Kinkel, 2012, 2014; Martínez-Mora & Merino, 2014; Moutray & Swift, 2013; Pearce, 2014; Tate, 2014; Tate et al., 2014; Wu & Zhang, 2014
	Instability in exchange rates	Bailey and De Propriis, 2014; Ellram et al., 2013; Fine, 2013; Tate et al., 2014
	Increased competition on resource assets	Ellram et al., 2013; Kinkel & Maloca, 2009; Tate, 2014; Tate et al., 2014
	<i>Barriers</i>	
	Large economic differences	Bailey and De Propriis, 2014
	Instability in exchange rates	Ellram et al., 2013; Tate et al., 2014
	Large differences in resource availability	Bailey & De Propriis, 2014
Host country	<i>Drivers</i>	
	Diminishing growth opportunities	Kinkel, 2012
	Inadequate quality	Arlbjørn & Mikkelsen, 2014; Bailey & De Propriis, 2014; Canham & Hamilton, 2013; Fratocchi et al., 2014; Martínez-Mora & Merino, 2014; Kinkel & Maloca, 2009; Kinkel, 2012, 2014; Kotlarsky & Bognar, 2012; Tate et al., 2014
	Theft of intellectual property and weak patent enforcement	Ellram et al., 2013; Kazmer, 2014; Pearce, 2014; Tate, 2014; Tate et al., 2014
	High employee turnover	Canham & Hamilton, 2013; Kinkel, 2012
	Lack of trust and commitment among staff or suppliers	Fine, 2013; Kinkel and Maloca, 2009
	Risk of public relation disaster due to supplier malfeasance	Fine, 2013; Tate et al., 2014
	<i>Barriers</i>	

	Risk of losing access to market and foreign distribution channels	Ellram et al., 2013; Kinkel & Maloca, 2009
	Risk of losing access to raw-materials and components that are only available in the host country	Ellram et al., 2013; Kinkel & Maloca, 2009
	Risk of losing supplier knowledge	Ellram et al., 2013
Home country	<i>Drivers</i>	
	Political incentives	Bailey & De Propriis, 2014; Ellram et al., 2013; Fratocchi et al., 2014; Kazmer, 2014; Moutray & Swift, 2013; Pearce, 2014; Tate et al., 2014
	Promote community (domestic goodwill)	Canham & Hamilton, 2013; Kazmer, 2014
	Access to qualified personnel	Canham & Hamilton, 2013; Ellram et al., 2013; Kinkel & Maloca, 2009; Kinkel, 2012, 2014; Tate et al., 2014
	Increased degree of automation	Arlbjørn & Mikkelsen, 2014; Bailey & De Propriis, 2014; Tate, 2014
	Higher productivity and work morale among staff	Bailey & De Propriis, 2014; Moutray & Swift, 2013; Pearce, 2014; Tate et al., 2014
	Increased awareness of environmental impact	Ellram et al., 2013; Gray et al., 2013; Tate et al., 2014
	Increased focus on sustainability	Fine, 2013; Tate, 2014; Tate et al., 2014
	Strengthen brand through made in "XX"	Canham & Hamilton, 2013; Pearce, 2014
	<i>Barriers</i>	
	Stricter environmental legislation	Ellram et al., 2013; Gray et al., 2013
	Lack or shortage of raw-materials and components	Canham & Hamilton, 2013
	Lack or shortage of qualified staff	Bailey & De Propriis, 2014; Moutray & Swift, 2013
	Lack of flexibility in the labor market	Canham & Hamilton, 2013
Supply chain	<i>Drivers</i>	
	Innovation, research and development suffers due to the distance to manufacturing	Arlbjørn & Mikkelsen, 2014; Bailey & De Propriis, 2014; Kinkel & Maloca, 2009; Pearce, 2014; Tate, 2014

	High coordination costs	Canham & Hamilton, 2013; Kinkel & Maloca, 2009; Kinkel, 2012, 2014
	Risk of disruption	Bailey & De Propriis, 2014; Ellram et al., 2013; Fine, 2013; Tate et al., 2014
	Importance of and issues with delivery performance (speed and dependability)	Arlbjørn & Mikkelsen, 2014; Bailey & De Propriis, 2014; Canham & Hamilton, 2013; Ellram et al., 2013; Fine, 2013; Fratocchi et al., 2014; Kinkel & Maloca, 2009; Kinkel, 2012; Marínez-Mora & Merino, 2014; Pearce, 2014; Tate et al., 2014
	Difficulties to match production (supply) and consumption (demand) volumes	Martínez-Mora & Merino, 2014
	Growing demand for and shortages of accessible transportation	Ellram et al., 2013; Tate et al., 2014
	Inability to provide services related to the product	Bailey and De Propriis, 2014
	Increased demands on customization	Pearce, 2014
	Difficulties due to the physical and mental distance	Gray et al., 2013; Kinkel & Maloca, 2009; Kinkel, 2014; Tate, 2014; Tate et al., 2014
Firm-specific	<i>Drivers</i>	
	Wrong estimation of benefits and risks in the offshoring decision	Kinkel and Maloca, 2009
	Lack of knowledge about the host country during the offshoring decision	Kinkel and Maloca, 2009; Kinkel, 2014
	Overhasty offshoring decisions (bandwagon effect)	Gray et al, 2013; Kinkel and Maloca, 2009
	Over-estimation of cost savings during the offshoring decision	Canham and Hamilton, 2013
	<i>Barriers</i>	
	Too late to go back	Canham and Hamilton, 2013; Bailey and De Propriis, 2014
	Immature reshoring process	Arlbjørn and Mikkelsen, 2014
	Lack of capacity, resources and internal competencies	Arlbjørn and Mikkelsen, 2014; Bailey and De Propriis, 2014; Canham & Hamilton, 2013
	Lack of proper decision support/ data	Arlbjørn and Mikkelsen, 2014

	Lack of information and communication about reshoring within the business	Arlbjørn and Mikkelsen, 2014
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FIGURE 1 Distribution of publications per year across the time period studied (n=22). 2015 in not a full year, sample collected in March, 2015.

FIGURE 2 Main journals of the studied papers

FIGURE 3 Geographic distribution of the studied papers (n=22).

FIGURE 4 Categorization of papers under review based on methodology (n=22).

FIGURE 5 Distribution of umbrella terms.

		To: Onshore	
		In-House	Outsourced
From: Offshore	In-House	In-House Reshoring	Reshoring for Outsourcing
	Outsourced	Reshoring for Insourcing	Outsourced Reshoring

FIGURE 6 Categorization of reshoring options (Gray et al. 2013).