Doctoral Program in Economics and Management of Technology (DREAMT)

XXXII Cohort

Doctoral dissertation

EXPLORING THE RESHORING PROCESS: ADVANCING KNOWLEDGE THROUGH PRIMARY AND SECONDARY CASE STUDIES

Ph.D. Candidate: Albachiara Boffelli

Supervisors: Prof. Matteo Kalchschmidt; Prof. Ruggero Golini

Chair of the Doctoral Program: Prof. Gianmaria Martini

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CONTENTS

TABLES AND FIGURES

1 EXECUTIVE SUMMARY

Over the last decade, reshoring has increasingly attracted the attention of practitioners, policymakers and scholars. Case studies have been popular in this research stream, given its still exploratory stage. Although no accumulation effort has been made, thus missing the opportunity to build new theory from the insights gained in previous disconnected research. Moreover, while a significant number of articles have analysed drivers, locations and activities involved in reshoring decisions, the *decision-making* and *implementation* process (i.e., "how to reshore") still lack empirical analyses. In addition, the few existing frameworks do not include the behavioural aspects characterizing human decision-making, that have proved to be relevant in the case of offshoring and reshoring decisions.

Therefore, the main goal that represent the red thread connecting the three essays presented in this dissertation is *overcoming the frontier reached in previous literature, as well as generating relevant practical advice, by offering new insights into the reshoring process; taking into account all its characterizing elements and phases, their connections, the previous offshoring process and by shedding light on the most obscure ones, namely decision-making and implementation*. Accordingly, the dissertation develops along three essays, each one taking the research one step further towards the goal achievement, by answering the research questions outlined in the introduction.

This first essay "What do we want to know about reshoring: developing a framework through a meta-synthesis" reports an analysis of existing research adopting case studies about reshoring and the previous offshoring events, with the aim to advance the knowledge within the field, through an accumulation process. The selected methodology to achieve this purpose is meta-synthesis, a type of meta-analysis applied to the analysis of qualitative data. The analyzed data are retrieved from a sample of 14 articles including cases of offshoring and subsequent reshoring processes. The sample represents the total population of articles published, until November 2018, in peer-reviewed sources and retrieved from Scopus and Web of Science. By focusing on the findings generated by the original authors, the study allowed to build a comprehensive framework to lead future case study research, as well as to demonstrate the suitability of the meta-synthesis methodology in achieving knowledge accumulation, even if the articles have different characteristics in terms of theoretical perspectives, unit of analysis, number of cases and context. In doing so, this study contributes to the field of reshoring and more widely to the operations and supply chain management field. Furthermore, this research generates many practical implications, by condensing all the evidence about reshoring so far collected in one single study, thus providing insights of challenges and best practices.

The second essay "A meta-analysis of reshoring case studies: the influence of contingency factors on the relocation decision" is built on a meta-analysis of already existing reshoring case studies. They usually provide rich insights through qualitative data, but in this study, they have been codified into quantitative data, thus allowing to make statistical inferences. In total, the 36 cases coming from the same 14 research papers retrieved for the first essay were analysed. The purpose of this study is to investigate the influence of contingency factors on the offshoring and reshoring drivers. The results show that many factors become contingencies for reshoring, namely company size, industry, market, home country, host country, as well as the previous offshoring decision. The research lays the foundation for the accumulation of results achieved from case studies. It highlights the importance for researchers to build on each other's efforts to make empirical evidence comparable and advance the knowledge within this emerging field.

Finally, the third essay "Reshoring decision-making and implementation: a behavioural perspective", through a multiple case study approach, seeks to gain a deeper knowledge into the "how" question by shedding light on the phases of the reshoring decision-making and implementation, the information collected, the stakeholders involved, and the criticalities faced. Based on the empirical analyses and the use of the behavioural perspective, four original propositions are developed to guide both future research and management practice in this field. In addition, the results from the cases provide a reference for companies willing to implement a reshoring decision and in search of past experiences on which to build on.

2 INTRODUCTION

2.1 Purpose

With the rise of globalization, companies have started to include manufacturing location decisions among their most delicate strategic decisions, since they have an impact both on short- and long-term performance (Porter, 1986). Starting from the 80s, many companies, attracted by the promise of lower costs, decided to move to a foreign country not only low value-added activities, such as production but also high-value company functions (Contractor et al., 2010). This phenomenon, known as offshoring, has been defined as "the assignment of business activities to locations outside a firm's national borders in order to support existing business operations" (Mihalache and Mihalache, 2016; p. 1105). As a consequence, offshoring entails the geographical dispersion of a firm's value chain activities, thus giving rise to global value chains (Mudambi, 2008) that might expose companies to higher risks (Manuj and Mentzer, 2008), as well as transforming the manufacturing landscape in developed countries (Hallward-Driemeier and Nayyar, 2017).

In the last decade, companies have started to include other factors, besides costs, in their manufacturing location decisions. Particularly, supply chain considerations have proved to be increasingly relevant (Wiesmann et al., 2017) and companies that had previously moved their activities offshore started considering to move them back. A new trend was rising, identified in literature as reshoring (alternatively as backshoring or back-reshoring)[1] and defined as "a voluntary corporate strategy regarding the home country's partial or total re-location of (in-sourced or out-sourced) production to serve the local, regional or global demands" (Fratocchi et al., 2014).

Contrarily to what one may think, moving back is not an easy journey. In fact, depending on the specific choices made by the firm over the previous offshoring period (Johansson and Olhager,

[1] Reshoring, backshoring and back-reshoring are often used as synonyms, as in this dissertation. Different scholars have been using different terms to describe similar or related concepts:

- Reshoring: repatriation of previously offshored business activities to the country of origin (i.e. the country of the parent company) (e.g., Ellram et al., 2013; Gray et al., 2013; Gylling et al., 2015; Martínez-Mora and Merino, 2014)
- Backshoring: re-concentration of parts of production from own foreign locations as well as from foreign suppliers to the domestic production site of the company (e.g., Arlbjørn and Mikkelsen, 2014; Canham and Hamilton, 2013; Johansson and Olhager, 2018b; Kinkel and Maloca, 2009)
- Back-reshoring: a voluntary corporate strategy regarding the home country's partial or total re-location of (in-sourced or out-sourced) production to serve the local, regional or global demands (e.g. Fratocchi et al., 2014, 2015)
- Onshoring: returning part or all of the company's foreign production to domestic facilities (Kazmer, 2014)
- Relocation to home country (RHC): a company moves its production activities from the first host country back to the home country (Barbieri et al., 2019).

Section 2.2. will provide a clear description of these and other similar terms.

2018a), many things might be changed in the home country over time and the company's readiness might not be appropriate to undertake such a journey (Nujen et al., 2018b). To add difficulty, even if researchers have dug into the reasons that drive a company to reshore, little is known about how companies take such decision and the difficulty they face over its implementation (Barbieri et al., 2018).

To fill this gap, the purpose of this dissertation is to gain a better understanding over the reshoring process and how it develops, which elements can exert an influence on it and, more importantly, which are the key factors companies must consider before undergoing this process. The depth required by these inquiries naturally pointed to the case study methodology. In fact, case study methodology allows studying a phenomenon in its natural setting, thus gaining a complete understanding of the phenomenon nature and complexity. As a consequence, it is considered as particularly useful to answer to "What", "How" and "Why" questions that naturally emerge when a phenomenon is not fully understood (Meredith, 1998; Voss et al., 2016). This research project leveraged on both primary cases and secondary cases in order to build on previous knowledge, while generating new insights on those elements that were not deepened enough by previous researches. Coherently with what prescribed as methodological standard, the research questions addressed in this dissertation are "What" and "How" questions (see Section 2.3 for details).

Before presenting the three essays core of this dissertation, the next section will present the background and a summary of previous scientific contributions on reshoring as well as the overview of the research objectives and design.

2.2 Background and literature

The interest in the reshoring phenomenon started to spread among practitioners, policymakers and academia during the global financial crisis. The return of manufacturing was considered as a means for the re-industrialization of developed countries (Pisano and Shih, 2009). In fact, besides the impact on companies, this phenomenon has a social implication by restoring lost competences (Nujen and Halse, 2017) as well as creating jobs opportunities. According to the most recent reports, the acknowledged reshoring cases only, increasing in numbers over time, have contributed to the creation of over 12,000 jobs in Europe between 2014 and 2018 (see Figure 2.1) and about 350,000 jobs in the U.S. (see Figure 2.2) between 2010 and 2018.

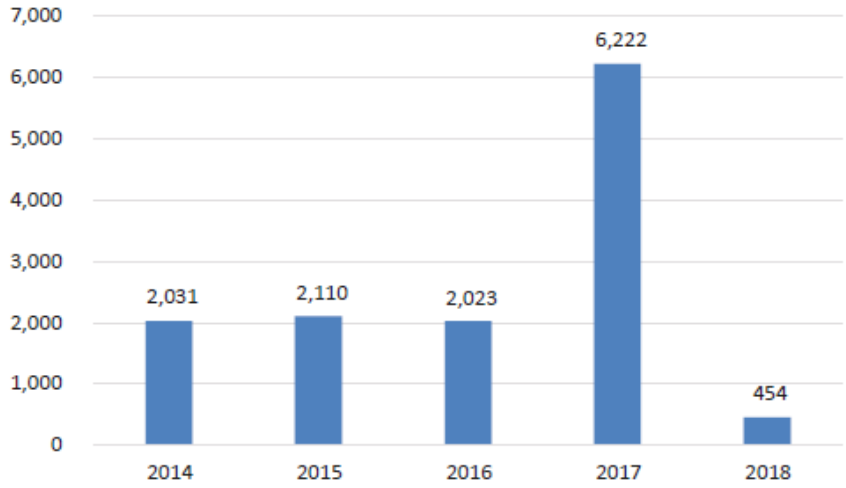

Figure 2.1 − Number of jobs created in Europe according to the European Reshoring Monitor

Source: Eurofund (2019)

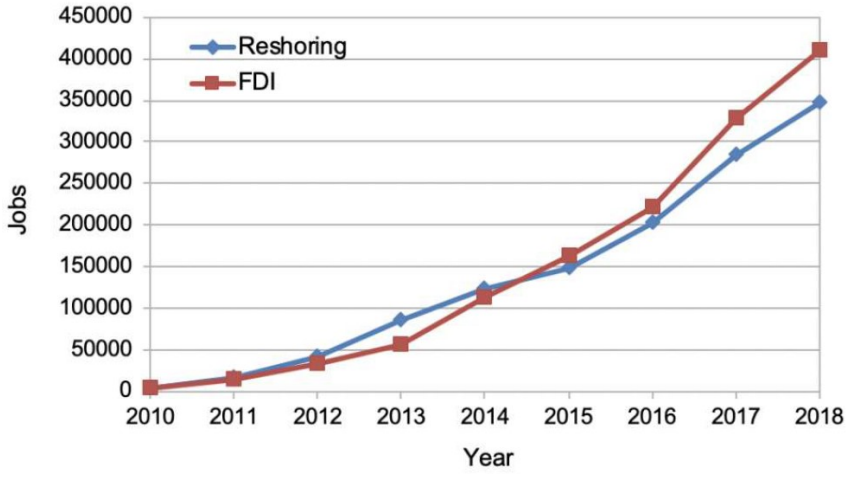

Figure 2.2 − Number of jobs created in the U.S. according to Reshoring Initiative

Source: Reshoring Initiative, 2019

Of course, the data reported in these figures represent only a partial picture, because very few companies publicly communicate this information, especially in the European context (Eurofund, 2019). However, even if these numbers reflect only cases collected from secondary sources, they highlight the relevance of the phenomenon and its increasing trend.

As reshoring was increasing in relevance, also academic publications have been increasing over the last years. Figure 2.3 reports the number of publications per year, retrieved in Scopus with "Reshoring", or synonyms, as keywords. Except for a small drop in 2015, the publication rate has always increased in the last 12 years. Concerning the characteristics of the 116 studies considered,

they do not belong to a single subject area, thus proving the multidisciplinary approach and interest towards this topic. Finally, by looking at the authors' country, the most active research groups are based in the US, Italy, Sweden, UK and Germany.

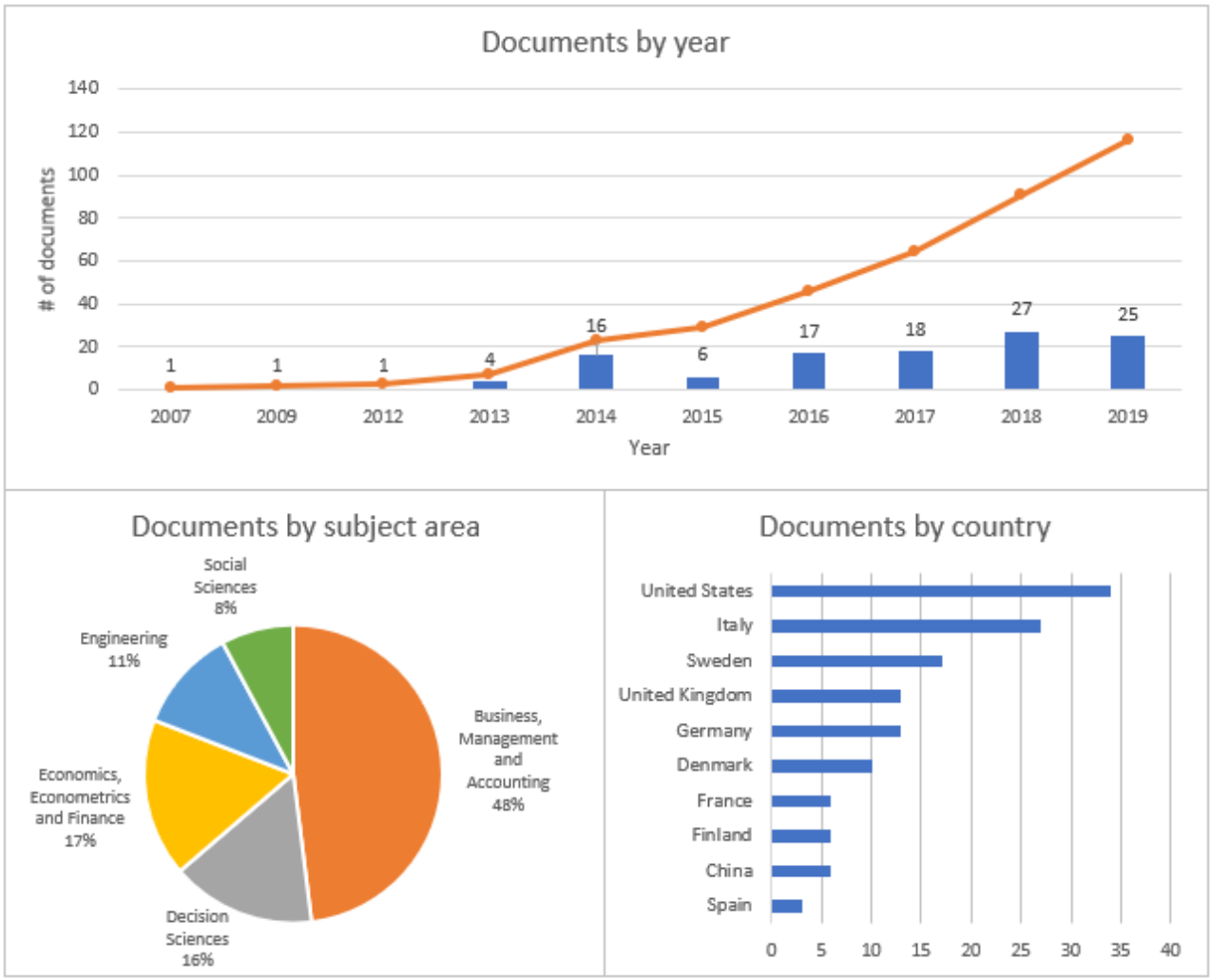

Figure 2.3 − Number of documents about reshoring by year, by subject area and by country

Source: Data elaboration from Scopus

According to Barbieri et al. (2018), reshoring research can be classified according to 6 questions (the 5W and 1H), and this approach revealed helpful to identify gaps in the literature:

1. *What*: Definition and characterization of the phenomenon by identifying its fundamental features. Being a quite recent phenomenon, the connected literature used many different terms in its infancy (e.g. "reshoring", "backshoring", "inshoring", "homeshoring", "back-reshoring"), thus lacking a proper conceptualization. First of all, to understand the newness of the phenomenon, the similarity with previous concepts, such as "international divestment" (Boddewyn, 1979) and "de-

internationalization" (Benito and Welch, 1997), can be assessed. However, these concepts lack some key features of the new phenomenon, such as the possibility to outsource production and the relocation of the previously offshored activities to the home country (Fratocchi et al., 2014, 2015). In literature, the terms "backshoring", "reshoring", and "back-reshoring" are the most widespread (Barbieri et al., 2018). "Backshoring" has been defined as "a re-concentration of parts of production from own foreign locations as well as from foreign suppliers to the domestic production site of a company" (Kinkel and Maloca, 2009). The definition of the term "reshoring", as "fundamentally concerned with where manufacturing activities are to be performed, independent of who is performing the manufacturing activities in question — a location decision only as opposed to a decision regarding location and ownership" (Gray et al., 2013), add the separation between the location and ownership decisions. As a consequence, it becomes possible to distinguish different options depending on the combination of the two decisions (i.e., "In-house reshoring", "Reshoring for outsourcing", "Reshoring for insourcing", "Outsourced reshoring") (Gray et al., 2013). Later on, Bals et al. (2016) and Foerstl et al. (2016) added also hybrid sourcing (e.g. joint ventures, strategic partnerships, long-term contracts) and location (e.g. nearshoring) changes. Finally, "back-reshoring" has been defined as "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" (Fratocchi et al., 2014). This last definition includes an element of voluntariness of the decision, considering it as a step in a multi-step nonlinear internationalization process (Fratocchi et al., 2014, 2015). Moreover, location decisions alternative to back-reshoring are taken into account, namely the already cited "near-shoring" (the relocation to a foreign country in the same home region of the firm's home country) and "further offshoring" (the relocation to a second foreign country, different from the host country chosen) (Fratocchi et al., 2014), thus widening the relocation options. Figure 2.4 outline all the different relocation options that have been outlined in the literature, to the best of my knowledge. Being offshoring the precursor of reshoring, the starting point to read the graph is the offshore country. From there, a company can choose among further offshoring (red arrows), nearshoring (blue arrows), and reshoring (green arrows). Moreover, in Figure 2.4 for each location decision, the different options connected to the ownership both in the starting and final country are highlighted and named in analogy with Gray et al. (2013). Nowadays, scholars have reached a common understanding on what reshoring is, and the "What" question can be considered as answered. In this dissertation the term reshoring is used, being the most widespread in the literature (Barbieri et al., 2018), but the adopted definition is more similar to the back-reshoring one given by Fratocchi et al. (2014).

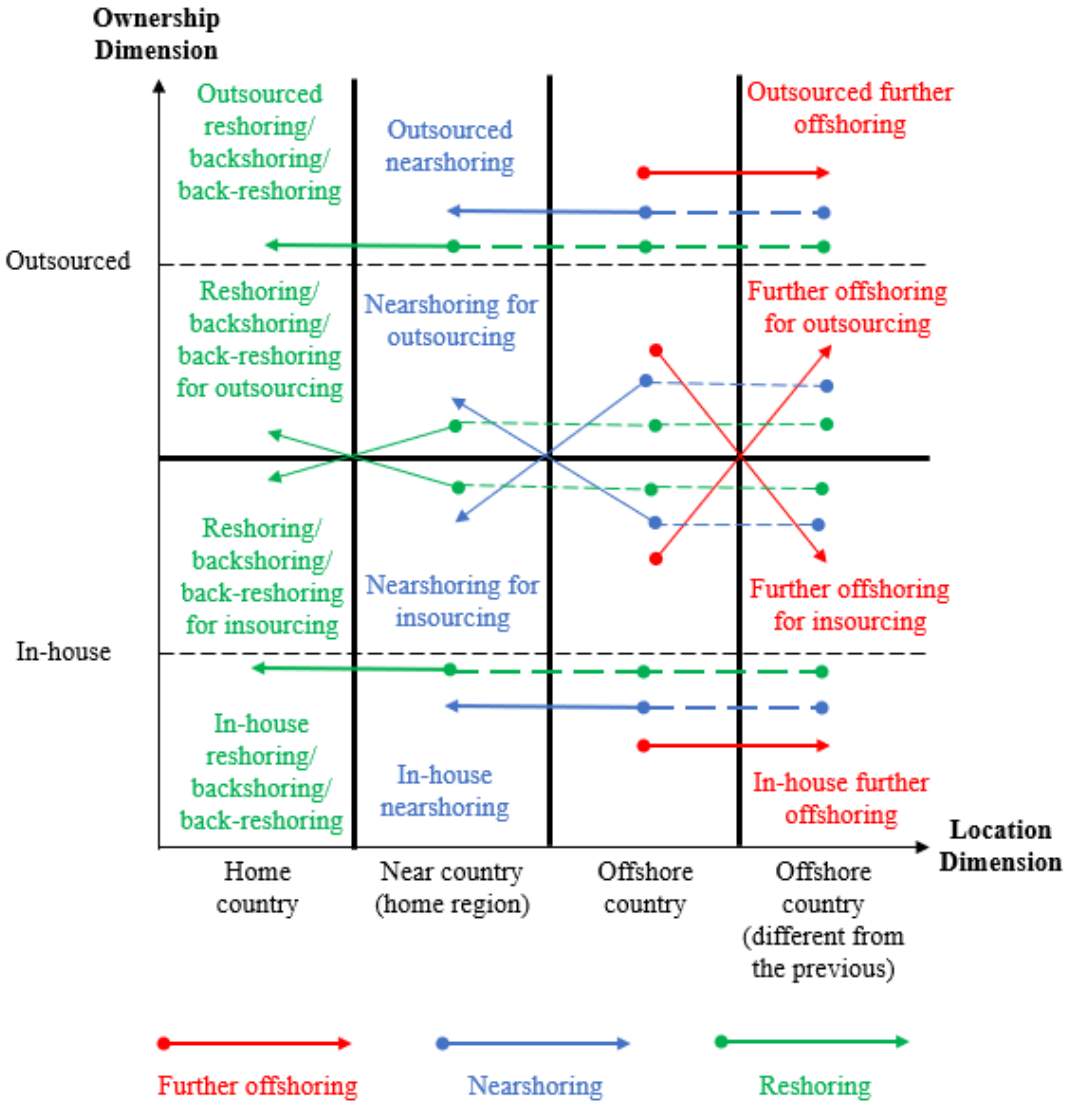

Figure 2.4 − Relocation options

Source: Adapted from Gray et al. (2013), Fratocchi et al. (2014), Bals et al. (2016) and Foerstl et al. (2016)

2. *Why*: Motivations that drive companies to reshore towards their home countries. The so-called reshoring drivers are among the most researched topics in reshoring literature and a vast set of reasons have been identified (Bals et al., 2016; Barbieri et al., 2018; Fratocchi et al., 2016; Srai and Ané, 2016; Stentoft et al., 2016a; Wiesmann et al., 2017). Barbieri et al. (2018) identify 66 drivers from previous literature, thus supporting the great heterogeneity of factors driving the reshoring decision (Di Mauro et al., 2018). Interestingly, consensus has not been reached on how to categorize drivers, with each study proposing its way: some more oriented towards logically group homogeneous set of drivers (e.g., Stentoft et al., 2016c; Wiesmann et al., 2017), some more

theory-driven and based on the assumption from Dunning's eclectic paradigm, transaction cost economics, organizational buying behaviour, and other theories from strategic management, and international business (e.g. Bals et al., 2016; Fratocchi et al., 2016; Ancarani et al., 2015). Given that reshoring involves a location decision potentially driving a change in the ownership (i.e. insourcing vs. outsourcing), an interesting perspective is the one proposed by Wiesmann et al. (2017) who, in their literature review, categorize drivers according to their source (i.e. internally within the firm, from the home country, from the host country, in the supply chain, global trends). A similar approach is proposed also by Barbieri et al. (2018) and Fratocchi et al. (2018) that distinguish between internal and external drivers. In the end, two perspectives can be considered to identify the source of the decision drivers: the firm perspective, namely if the driver originates internally to the firm, externally or across firms; and the country perspective, namely if the driver originates in the home country, in the offshore country or across countries (Figure 2.5). This categorization allows to avoid constraining a driver to a specific category: for example, the production cost might both rise in the host country (offshore internal driver) and decrease in the home country (domestic internal driver). Moreover, it does not limit the elements to be drivers of a reshoring decision; the same factors may be applied to the classification of potential barriers as well, as proposed by Wiesmann et al. (2017).

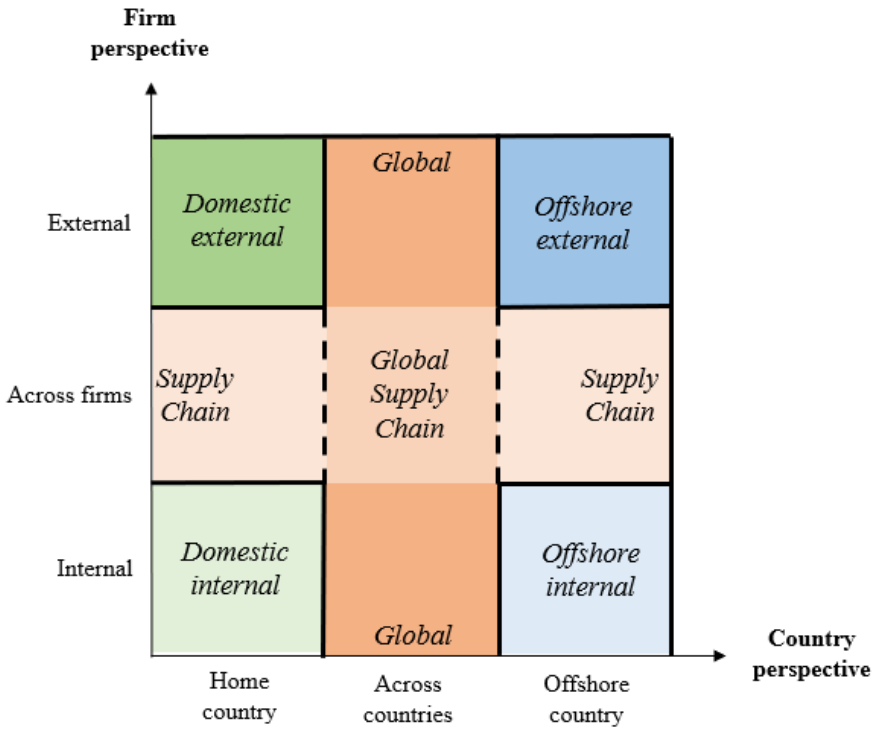

Figure 2.5 − Elements to be considered in a reshoring decision

Source: Elaboration from Fratocchi et al. (2016), Wiesmann et al. (2017), Barbieri et al. (2018)

3. *Where*: The geographical aspect and the analysis of the trends concerning the home and host countries. This topic has been mainly addressed with surveys (e.g., (Canham and Hamilton, 2013a; Dachs et al., 2019) and secondary data analysis (e.g., data from the European Reshoring Monitor or the US-based reshoring initiative). Table 2.1 reports the main results from previous studies.

Table 2.1 − Evidences about home and host countries from previous studies

Study	**Data source**	**Sample size**	**Period**	**% of reshoring**	**% of offshoring**	**Home countries**	**Host countries**
Kinkel and Maloca (2009)	Survey	1011	2003-2005	3%	19%	Germany	Mainly New EU members (39%), Old European Union Member States EU 15 (30%), Czech Republic (19%)
Kinkel (2012)	Survey	1484	2004-2006	2.4%	15%	Germany	Mainly New Eastern European Community (39%), Old European Union Member States EU 15 (30%), Asia besides China (13%)
			2007-2009	2.8%	9%		Mainly New Eastern European Community (51%), China (16%) and North America (14%)
Canham and Hamilton (2013)	Survey	151	2001-2011	7%	44%	New Zealand	Mainly China
Fratocchi et al., (2016)	Secondary data	377	/	100%	/	Western Europe (51%), North America (47%), Asia other than China (2%)	Mainly China (59%), Asia other than China (13%), Western Europe (12%), Central and South America (5%)
Heikkilä et al. (2018a)	Survey	229	2010-2015	13%	26%	Finland	Mainly Eastern Europe (27%), China (23%), and another Nordic country (20%)
Heikkilä et al. (2018b)	Survey	847	2010-2015	18.9%	23.3%	Denmark (29%), Finland (27%), Sweden (44%)	Mainly Western Europe (31%), another Nordic country (26%), and Eastern Europe (17%)

Johansson and Olhager (2018a)	Survey	373	2010-2015	26.5%	35.7%	Sweden	Mainly Western Europe (38.4%), another Nordic country (28.3%), and China (11.1%)
Moore et al. (2018)[2]	Secondary data	140	2010-2016	100%	/	US	Mainly Asia (62%), Americas (21%), and Western Europe (17%)
Reshoring Initiative (2019)[2]	Secondary data	1127	2010-2018	100%	/	US	Mainly China (59%), Mexico (18%), Japan (6%), Canada (5%)
Eurofund (2019)	Secondary data	253	2014-2018	100%	/	Mainly UK (17%), Italy (15%), and France (14%)	Mainly China (30%), India (6%), Poland (6%), Germany (6%)

4. *When*: Time-related aspects, as the offshoring duration and the effect of specific contingent events (i.e. the global financial crisis). Even if the time dimension has proven to be particularly relevant, for example, to distinguish between strategic decisions from managerial mistakes (Kinkel and Maloca, 2009), not many studies consider it. This is reflected also by the paucity of longitudinal studies in the reshoring field, with some exceptions represented by in-depth single case studies (e.g. Ashby, 2016; Baraldi et al., 2018; Gylling et al., 2015). Ancarani et al. (2015) proposed several testable propositions regarding factors that affect the duration of the offshore operations, such as firm size and industry, governance mode, reshoring motive and firm strategy, and host country. Particularly, they propose that SMEs, companies belonging to electronics and automotive, companies implementing outsource offshoring, companies driven by quality or "made in" reasons and that offshored in Asia generally return earlier (Ancarani et al., 2015).

5. *Who*: Characteristics of the reshoring firms (e.g., firm size, industry, strategy, export intensity). This question is strongly connected to contingency theory, since characteristics of the reshoring firms, as well as many other contextual factors, need to be acknowledged to answer to the last question: how reshoring happens? In general, the contingency theory is considered to be highly relevant in the Supply Chain and Operations Management fields (Demeter, 2017; Sousa and Voss, 2008). In fact, it is one of the main theoretical lens used to view organizations, assuming that organizations adapt in order to maintain fit with changing contextual factors (Donaldson, 2014). For reshoring in particular, (Bals et al., 2016) strongly encouraged the adoption of contingency

[2] Both Moore et al. (2018) and Reshoring Initiative (2019) data were based on the secondary cases collected by Reshoring Initiative. Moore et al. (2018) focus only on cases from the textile and apparel industry. Some concerns may be raised about how cases were selected and classified (e.g. also cases of "Kept from offshoring" are considered).

theory. They identified three relevant levels of contingency factors; (i) country-level factors (e.g. labour market, regulation, cultural distance), (ii) firm-level factors (e.g. size, countries of operation, supply chain complexity), and (iii) group/individual-level factors (e.g. managers' perceptions, magnitude of the decision, task/activity characteristics). Building on this seminal work, other researchers adopted a contingency-based perspective for empirical studies on reshoring. First, Benstead et al. (2017) identified relevant contingency factors through a single case study. They identified three categories of factors; (i) company (and industry) factors (e.g. size, ownership mode, government policy, capital intensiveness, and bandwagon effect), (ii) product-related factors (e.g. market segment, price point, bulkiness of product, customization), and (iii) behavioral (or individual) related factors (e.g. management perception of costs, emotional factors). In addition, most survey studies in this field report some information about contingency factors, often considered as control variables. Commonly used control variables are firm size, industry, and geography (e.g. home country, host country, market) (Ancarani et al., 2015; Canham and Hamilton, 2013; Johansson and Olhager, 2018a; Kinkel, 2012).

6. *How*: The reshoring process, made of decision-making and implementation stages. This is the most under-researched area of reshoring (Barbieri et al., 2018; Wiesmann et al., 2017). Fratocchi et al. (2014) made a first attempt to conceptualize the manufacturing internationalization as a multi-step process, which considers the dynamic continuum between offshoring and reshoring. According to the authors, manufacturing location decisions can be revised/modified several times, thus indicating a dynamic nature of the internationalization strategy (Fratocchi et al., 2014). More recently, Joubioux and Vanpoucke (2016) developed a conceptual framework to guide location decision-making. This framework encompasses the initial offshoring decision, the reconsideration of this decision and the "new" decision. While the initial offshoring decision is analysed in detail within the framework (by considering the firm's strategy, the analysis of risk, opportunity and constraints, and the entry mode), the reconsideration and "new" decision – i.e., reshoring – is viewed as a change in the decision factors without any further in-depth analysis. Both Fratocchi et al. (2014) and Joubioux and Vanpoucke (2016) support the existence of a strong linkage between reshoring and the previous offshoring. Bals et al. (2016) were the only authors proposing a reshoring decision-making and implementation process framework, with the main objective to frame future research avenues. The framework encompasses a linear process consisting of eight phases. Reasonably, what separates the decision-making from the implementation is the decision. To the best of my knowledge, this article is the only one considering both decision-making and implementation, thus suggesting their very strong

interplay. Following Bals et al. (2016), other frameworks have been proposed in the literature: Benstead et al. (2017) developed a framework including reshoring drivers, implementation considerations and contingency factors; while Oshri et al. (2019) assumed the "inclination to backsource" being influenced by dissatisfaction with the offshoring experience (Bettiol et al., 2019). Finally, Gray et al. (2017) developed a model of offshoring-reshoring decisions based on empirical evidence from several SMEs. The authors suggested that the complete analysis of all costs and benefits of offshoring versus reshoring would not help companies in their decision-making since it would just slow down the process (given the uncertainty characterizing the location decisions and the difficulty in developing accurate forecasts). They rather strived for the "ecological rationality" concept (Gigerenzer, 2008) and advise using tools whose analysis level would consider the complexity and uncertainty of the decisions, thus implying bounded rational decision-making. Connected to this, many authors have recognized the presence of an emotional component among the reshoring drivers. As an example, Di Mauro et al. (2018) in their multiple case study found evidence of an "emotional and not fully deliberate offshoring decision", as well as the presence of a "sense of belonging" that guided the reshoring decision (Di Mauro et al., 2018). Instead, Gylling et al. (2015) discuss the limited rationality of decision-makers that base their decision on the information in their possess (March and Simon, 1958; Simon, 1955). These topics need to be further explored in connection to the reshoring decision-making (Barbieri et al., 2018).

Acknowledging what previous literature accomplished in the field of reshoring is the first step towards the identification of the main gaps in the literature. Among the previously mentioned questions, the "*how*" question appears to be the least researched. Consequently, gaining a better understanding of the reshoring process, and particularly of decision-making and implementation, seems to be the most natural gap to fill. In fact, little is known about how companies make the reshoring decision and then implement it. Particularly important would be to understand who is in charge of the decision (i.e. the decision-maker) and whether s/he is subjected to any kind of biases that can influence the rationality of the decision. Moreover, the linkages among the different questions should be considered as possible gaps, that, if filled, might generate new interesting and unexpected insights. For example, understanding whether the reshoring process ("how") is different depending to the specific context ("who") would provide a much better understanding of how to face reshoring, increasing its success likelihood, thus generating important managerial implications. Finally, from the review of the literature, it was evident that different studies gained only a few (some more than others) details of the overall reshoring picture. Previous literature on reshoring is highly fragmented

both in terms of fields and theoretical perspectives and in terms of contribution, with each article providing insights about a specific snippet of the overall process and sometimes reporting contradicting results, being reshoring highly context-dependent. In addition, few studies (Johansson et al., 2019; Johansson and Olhager, 2018b; Kinkel and Maloca, 2009; Lampón and González-Benito, 2019; Di Mauro et al., 2018) discussed the connection between reshoring and previous location decisions (i.e. offshoring), even though these kinds of strategic decisions have been found to be highly path-dependent (Wan et al., 2019). Therefore, the most urgent gaps concern the accumulation of previous knowledge into a comprehensive reshoring framework taking into account also the antecedent offshoring process.

2.3 Research objectives

Being the advancement of the literature of a specific field the general aim of any research project, the gaps identified after reviewing the reshoring literature, were the basis to define the research main objectives.

The main goal that represents the red thread connecting the three essays presented in this dissertation is *overcoming the frontier reached in previous literature, as well as generating relevant practical advice, by offering new insights into the reshoring process; taking into account all its characterizing elements and phases, their connections, the previous offshoring process and by shedding light on the most obscure ones, namely decision-making and implementation*. Accordingly, the dissertation develops along three essays, each one taking the research one step further towards the goal achievement.

In particular, the above-mentioned overall goal can be divided into two research objectives, namely i) increasing the knowledge about the structure of the reshoring process; and ii) understanding how different factors may influence the reshoring process. Figure 2.6 depicts the research structure in terms of objectives, connected research questions and the chapters in which each of them are discussed.

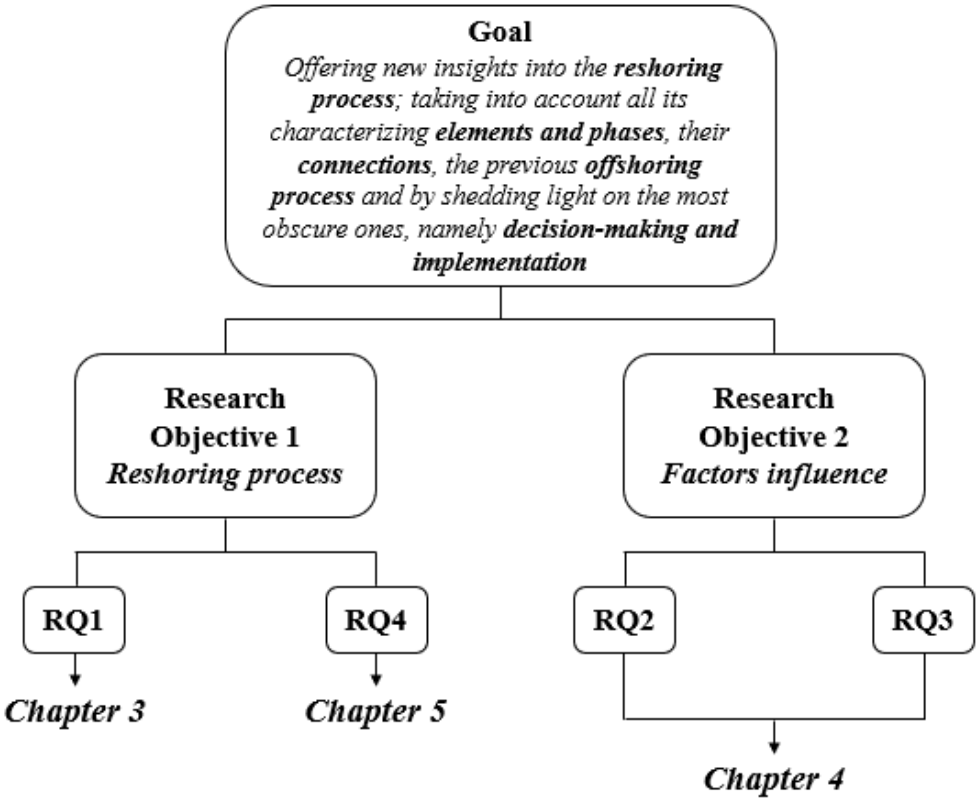

Figure 2.6 − Research breakdown structure

Starting from the most urgent gap, namely accumulating previous knowledge into a comprehensive reshoring framework, the first essay answers to the following research questions:

> ***RQ1**: What can be learned about reshoring process by accumulating knowledge from previous case research into a comprehensive framework?*

Accordingly, *Chapter 3* reports an analysis of existing research reporting cases about reshoring and the previous offshoring events, with the aim to advance the knowledge within the field, through an accumulation process. The study output is a comprehensive framework, encompassing all the elements and phases characterizing the reshoring process and the antecedent offshoring process, aiming to lead future reshoring empirical research, specifying the aspects encompassing a full case description. The elements included in the framework are the two offshoring and reshoring processes − including decision-making, implementation and outcomes − and the contingencies that might affect both.

Taking the framework as a foundation, the second essay explores the relation between contingencies and decision-making, and the drivers in particular. The purpose of this study, reported in *Chapter 4*,

is to investigate how contingency factors influence the offshoring and reshoring decision processes. Particularly, the contingency factors most commonly addressed (and reported) in reshoring literature are considered, namely firm size, type of industry, main market, home region and host region (Ancarani et al., 2015; Canham and Hamilton, 2013; Kinkel, 2012; Moore et al., 2018). The second research question is, therefore:

RQ2: *How are contingency factors influencing offshoring and reshoring decisions?*

Moreover, since reshoring cannot be pursued unless there has been previous offshoring, researchers have called for studies on reshoring in relation to offshoring (Gray et al., 2013; Barbieri et al., 2018). In fact, the previous offshoring decision could even be considered a contingency factor, influencing how the reshoring decision is managed (Benstead et al., 2017). Hence, the third research question is:

***RQ3**: How is the previous offshoring decision affecting the reshoring decision?*

Finally, being the how question the less researched in reshoring literature, the third essay (*Chapter 5*) aims to fill this gap and shed light on how companies take reshoring decisions and implement them, by highlighting the main phases, the information collected, the actors/stakeholders involved, and the main criticalities faced in each phase. Accordingly, the fourth research question addressed in this research is the following:

***RQ4**: How are the decision-making and implementation stages of the reshoring process structured?*

Figure 2.7 report the research overall conceptual framework, detailing on what each chapter of the dissertation focuses and which research questions each of them addresses. The figure will be used in each chapter to recall the overall structure of the research project.

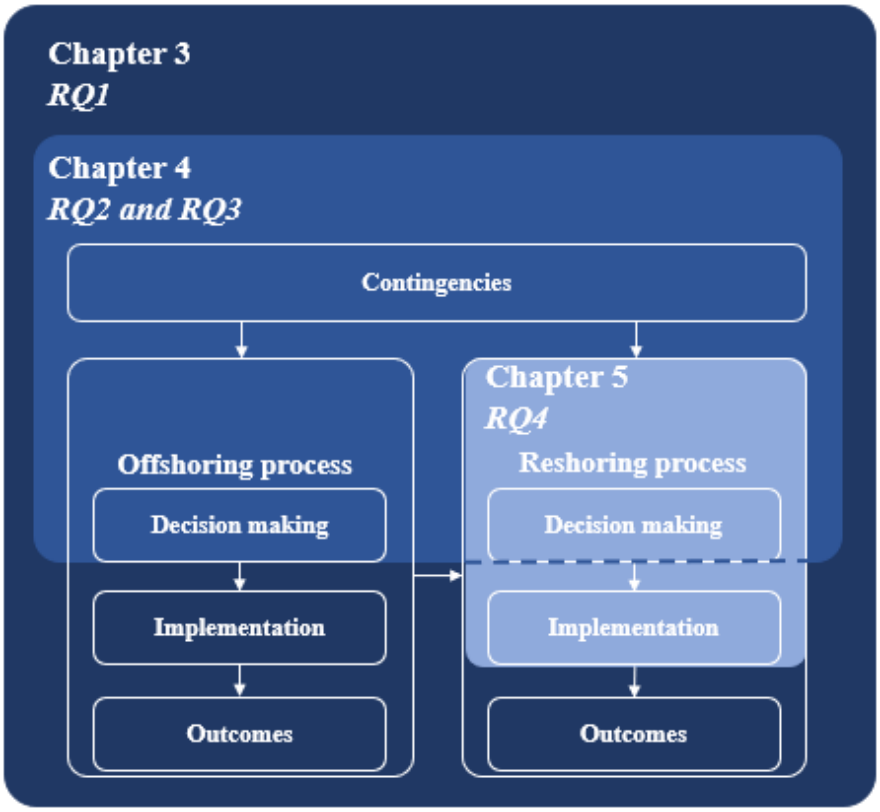

Figure 2.7 – Overall conceptual framework and positioning of the dissertation chapters

2.4 Research design

The first step of the research was a literature review aimed to identify the main gaps, as previously presented. This allowed defining the general purpose and the specific research questions. The prevalence of "how" questions, as reported in the previous section, has as natural consequence the selection of case studies as the empirical method, that allows gaining in-depth knowledge about the phenomenon under investigation, thus answering to "how" and "why" questions (Voss et al., 2016). Therefore, this dissertation is grounded both on secondary case studies retrieved from the scientific literature and primary case studies.

Starting from the first question, in order to accumulate knowledge from previous case studies, the meta-synthesis methodology has been selected. The methodology is an exploratory, inductive methodology aimed to make contributions beyond those presented in original primary qualitative case studies (Hoon, 2013). The meta-synthesis has been described as an "analysis of the analyses", as it focuses on the insights and interpretations of the original authors, rather than on the firsthand data about the specific cases as obtained from interviews or observations. More specifically, it aims at "extracting, analyzing, and synthesizing qualitative evidence to build theory" (Hoon 2013; p. 523).

As the first step of this methodology, locating the relevant research allowed to identify articles discussing reshoring cases. The sample that constitutes the basis for both *Chapter 3* and *Chapter 4* includes 14 articles and a total of 36 usable cases. While *Chapter 3* leverage on the original authors' discussions and conclusions by conducting an analysis at the paper-level (Hoon, 2013; Lewis, 1998), *Chapter 4* uses the 36 cases to perform simple statistical analyses that allow retrieving additional insights with respect to the sample studies (Larsson, 1993). The steps of the methods used are described widely in *Chapters 3 and 4*.

While *Chapters 3 and 4* leverage on secondary reshoring cases, *Chapter 5* develops original primary cases, by adopting a multiple case study method. In fact, this chapter digs deeper into the reshoring decision-making and implementation. As recommended by Barbieri et al. (2018), relying on case studies allows gaining an in-depth understanding of reshoring decision-making and implementation. Four cases were carried out in the textile-clothing-leather-footwear (TCLF) industry in Italy. This industry was selected since it has been one of the most affected by globalization in the last decades and, consequently, by the reshoring phenomenon in more recent years (Fratocchi et al., 2014; Fratocchi and Di Stefano, 2019; Di Mauro et al., 2018). Moreover, this choice has been strategic, given that it allowed us to leverage on the results provided by Di Mauro et al. (2018), who studied motivations, governance modes and location choices of companies from the same industry and country. To develop the study, the methodological advice to assure reliability, construct validity, internal and external validity provided by Eisenhardt (1989), Miles and Huberman (1994), Nickerson, 1998, Patton (2002), Saunders et al. (2003), and Voss et al. (2016) have been followed, as reported in detail in *Chapter 5.*

After this introduction, the dissertation is structured as follows. *Chapter 3* reports the first essay entitled "What do we want to know about reshoring: developing a framework through a meta-synthesis", that answers to the first research question and develops a comprehensive framework for reshoring empirical research. *Chapter 4* includes the second essay "A meta-analysis of reshoring case studies: the influence of contingency factors on the relocation decision", that explores the interplay between contingencies and offshoring and reshoring drivers. *Chapter 5* comprises the third essay entitled "Reshoring decision-making and implementation: a behavioural perspective", answers to the fourth and fifth research questions shedding light on the reshoring decision-making and implementation. Finally, *Chapter 6* close the dissertation drawing the main conclusions, discussing limitations and possible future developments.

3 WHAT DO WE WANT TO KNOW ABOUT RESHORING: DEVELOPING A FRAMEWORK THROUGH A META-SYNTHESIS

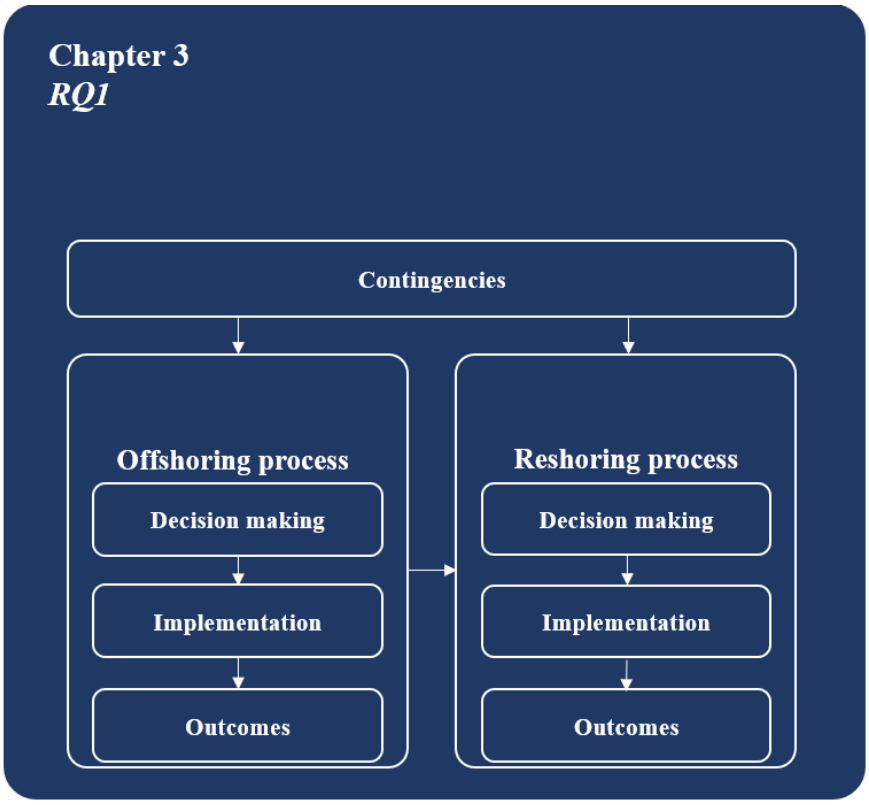

Figure 3.1 – Positioning of Chapter 3 in the overall research project

Acknowledgement: *This chapter is derived from the article "Boffelli, A., Johansson, M. (2019). What do we want to know about reshoring: a conceptual framework for case study research" presented at the 26th EurOMA Conference in Helsinki (Finland) in June 2019, at the 30th RSA of the AiIG (Italian Association of Management Engineering) in Turin (Italy) in October 2019, and submitted to Operations Management Research. I am personally responsible for any changes made from the last version.*

I am really grateful for the opportunity to work with my coauthor Malin Johansson from Lund University, always available for brainstorming and ideas sharing. I would like to thank also the Department of Industrial Management and Logistics at Lund University for accepting me and letting me feel as if I was one of their colleagues during my visiting period. I am especially grateful to Professor Jan Olhager and to Professor Matteo Kalchschmidt, who have always been available to provide guidance and support.

I recognize the value that this chapter gained from the reviews by the two autonomous reviewers selected for the track "Challenging the future of global production networks: the role of political changes, digital technologies and migrations" of the 30th RSA of the AiIG, I must thank the organizing committee for this. Furthermore, I appreciated the many suggestions received from the participants to the EurOMA Conference and the IJOPM, EurOMA Developmental Paper Workshop and the 30th RSA of the AiIG, that helped me in improving the article. Finally, I am grateful for the opportunity to present the article to my peers Ph.D. students and to the Professors of the Doctoral Committee at the 2019 AEM & DREAMT Doctoral Workshop held in Bergamo in June 2019, particularly I thank the reviewer Dr Giovanna Magnani.

3.1 Introduction

Reshoring of manufacturing as a means for international firms to optimize their global manufacturing footprints has gained increasing attention in academia. Being quite a recent phenomenon, its magnitude and relevance have been questioned and it has mainly been studied in isolation. However, previous research has recognized a strong path dependency of decisions connected to manufacturing location decisions (Wan et al., 2019), and it is now widely acknowledged that reshoring cannot be pursued unless there has been previous offshoring (Gray et al., 2013). It has even been argued that the reshoring decision can be based on the previous offshoring outcomes, in the sense that less successful offshoring operations may lead to repatriation (Kinkel and Maloca, 2009; Di Mauro et al., 2018; Oshri et al., 2019). One question that has received quite a lot of attention is whether reshoring is reflecting a strategy change or if it is a correction of a previous offshoring mistake, i.e. if reshoring is a reaction to an offshoring failure (Fratocchi et al., 2016). Accordingly, researchers have suggested to take a broader perspective and study reshoring in relation to the previous offshoring decision, aiming to understand the complex dynamics behind the interrelated processes forming firms' global manufacturing footprints (Barbieri et al., 2018; Kinkel and Maloca, 2009). As explained in the most recent literature reviews on the topic (Barbieri et al., 2018; Stentoft et al., 2016c; Wiesmann et al., 2017), reshoring is a relatively new research stream, bringing together scholars from different research fields; with supply chain management, international business and operations management being the most relevant. What unites these fields is that reshoring has primarily been studied conceptually. In fact, a number of frameworks aiming to describe manufacturing relocation have been presented in previous literature. However, these typically only cover relocation in one direction, i.e. offshoring (Mihalache and Mihalache, 2016) or reshoring (Bals et al., 2016; Benstead et al., 2017; Foerstl et al., 2016), or consider reshoring as one of several possible subsequent relocation

alternatives to offshoring (Bettiol et al., 2019; Joubioux and Vanpoucke, 2016). Given that none of the existing frameworks considers the two location decisions together, this study is moving research forward by adding the connection between offshoring and reshoring.

The emerging empirical evidence on reshoring mainly comes from surveys and case studies (Wiesmann et al., 2017). In particular, several case studies have been conducted to gain a deeper understanding of why and how location decisions are made (e.g., Ashby, 2016; Gylling et al., 2015; Martínez-Mora and Merino, 2014; Di Mauro et al., 2018). Indeed, case studies have made substantial contributions in a number of fields, but in general, there has been little accumulation of the understanding gained from primary case studies within Supply Chain and Operations Management (Hoon, 2013). This is also true for reshoring, serving as the second major opportunity to move reshoring literature forward, and it has important implications for knowledge development. The rich findings from case studies can reach disparate conclusions, and the knowledge produced tends to stand-alone, while the potential to create cumulative knowledge is being neglected, according to Hoon (2013). Thus, the meta-synthesis (alternatively called qualitative meta-analysis or iterative triangulation) has become essential for the evolution of knowledge in management studies (Combs et al., 2019). Revisiting the findings of other researchers can accelerate the progress of the field by discovering rich complexities and insightful nuances that cannot be obtained from individual case studies (Goldsby and Autry, 2011). Starting from there, developing a comprehensive framework encompassing both offshoring and subsequent reshoring, providing guidance on how to study reshoring, can be helpful in setting a common path and reach a full understanding of the phenomenon. The advantage of such a framework, developed by collecting cases from multiple fields, is its general applicability to study the reshoring phenomenon in a multidisciplinary context.

The purpose of this study is thus twofold. Following the suggestion by Benstead et al. (2017), we first aim to develop a framework for reshoring case study research, specifying the elements characterizing a full case description. Second, we will use the meta-synthesis methodology to analyze existing reshoring case research, advancing the knowledge about this phenomenon by gathering insights coming from multiple fields, as suggested by Goldsby and Autry (2011) and Hoon (2013). The collected evidence will set the basis to refine the framework. Thus, the research question this paper aims to answer is the following:

RQ: What can be learned about reshoring process by accumulating knowledge from previous case research into a comprehensive framework? (RQ1 in Chapters 2 and 6)

In this research, we review 14 articles describing offshoring and subsequent reshoring events. Instead of analyzing the primary data derived from the specific cases, we focus our analysis on the article level and the findings generated by the original authors, in line with the meta-synthesis methodology described by Hoon (2013). The main contribution of this study is a framework that can lead empirical research on reshoring in terms of how to provide a full case description.

The paper is structured as follows. First, we discuss the relevant literature, with a focus on previously developed frameworks. Second, we describe the research design and methodology. In the main section, we present the final framework and describe it by using illustrations from existing cases, thus synthesizing and discussing the main findings of the original authors. Finally, based on the gaps in previous literature in relation to the framework, we give suggestions on further research and provide implications for managers and researches.

3.2 Related literature

Manufacturing location decisions have a long history of publications in the Operations and Supply Chain Management fields (Barbieri et al., 2018; Jain et al., 2016). In particular, starting from the 1980s, many researchers have focused on the offshoring phenomenon that has been the dominant trend for decades (Mihalache and Mihalache, 2016). In their literature review, Mihalache and Mihalache (2016) define offshoring as "the assignment of business activities to locations outside a firm's national borders in order to support existing business operations" (Mihalache and Mihalache, 2016), thus highlighting that the offshoring decision is considered to be a rational choice, based on the assumption that a host country provides a comparative advantage with respect to the home country. As such, the offshoring decision is far from being irreversible (Antelo and Bru, 2010; Kotabe et al., 2008). As a consequence, a new phenomenon, which entails the reverse movement from the offshore location to the home country, has started to spread in the last decades. Interestingly, both academia and practice have struggled to find the right terminology, as well as to set the boundaries for this phenomenon (Barbieri et al., 2018; Foerstl et al., 2016; Stentoft et al., 2016c; Wiesmann et al., 2017). In this paper, we will use the term "reshoring", given that it is the most widespread among recent studies. We adopt the definition of back-reshoring proposed by Fratocchi et al. (2014), defining reshoring as "a voluntary corporate strategy regarding the home country's partial or total re-location of (in-sourced or out-sourced) production to serve the local, regional or global demands"(Fratocchi et al., 2014, p. 56). Moreover, we will specifically focus on the relocation of manufacturing activities, given that service companies have proven to follow a different pattern, being more flexible towards relocations (Albertoni et al., 2017).

According to Barbieri et al. (2018), previous research in this field strongly focused on the "Why?" (44 articles over the 57 analyzed in their literature review), "What?" (35 articles) and "Who?" (28 articles) questions. The "Why?" question deals with the motivations (or drivers) that induce a company to bring production back to its home country (Barbieri et al., 2018). It has been so widely studied, that there are systematic literature reviews specifically focused on the categorization of drivers (Srai and Ané, 2016; Stentoft et al., 2016c; Wiesmann et al., 2017). The "What?" question concerns the definition and characterization of the phenomenon. As stated before, this has been a big concern within academia, even if consensus about what reshoring is has been reached nowadays (Barbieri et al., 2018). The "Who?" question deals with the characteristics of firms embarking in the reshoring journey. Here, contingency theory could play an important role, as pointed out by Benstead et al. (2017). Interestingly, the "Where?" – connected to the geographical aspect – "When?" – that entails the duration of the offshoring experience – and "How?" – about the decision-making and implementation – questions appeared to be much more under-researched (Barbieri et al., 2018). Despite the fact that offshoring research is being more developed than the relatively recent reshoring-focused literature, scholars have acknowledged a shallow understanding of the phenomenon (Bunyaratavej et al., 2007; Mol et al., 2005). Mihalache and Mihalache (2016) recognize that the underlying reason is "the fragmentation of existing research due to limited cross-fertilization between the many research fields studying the phenomenon" (Mihalache and Mihalache, 2016, p. 1104) that, in turn, has prevented the accumulation of knowledge. Particularly, it has been claimed that the insights from case study research are difficult to accumulate in the field of Operations Management (Barratt et al., 2011). We believe that research on reshoring can still avoid this trap, given its early stage.

As a starting point for this study, we reviewed frameworks from existing literature in order to build on, and consolidate, the knowledge already produced in previous studies. In particular, we searched for frameworks of the reshoring process, since this is the main focus of our study. Thus, frameworks only describing the offshoring process were discarded. In the end, five frameworks describing the reshoring process have been found, extending and complementing the set already provided by Bettiol et al. (2019). We noticed that the frameworks developed in the reshoring field are relatively recent, given that they started to appear in 2016. Interestingly, they all focused on different but concurrent aspects of reshoring. Bals et al. (2016) and Foerstl et al. (2016) firstly provided a characterization of the phenomenon in terms of location and ownership, based on the matrix by Jahns et al. (2006),

aiming to provide a holistic picture of possible relocation alternatives[3]. Then, Bals et al. (2016) developed a framework focusing on the reshoring decision-making and implementation process, while Foerstl et al. (2016) presented a framework pinpointing the relationship between drivers and outcomes and the moderating role of contingencies. However, none of them provided empirical support for their frameworks. Fratocchi et al. (2016) developed a theory-based framework of reshoring drivers dividing them into four quadrants depending on two elements, namely if they are either internal or external and oriented either towards cost efficiency or customer perceived value. This framework has later been applied to four Italian cases in the textile-clothing-leather-footwear industry to study both offshoring and reshoring drivers (Di Mauro et al. 2018). Joubioux and Vanpoucke (2016) developed and empirically refined the only framework encompassing both offshoring and reshoring, thus supporting the relevance of studying the two phenomena together. Although, they consider reshoring only as one of the possible decisions consequent to reshoring. Finally, Benstead et al. (2017) highlight the relevance of contingencies in their framework, by assuming that both drivers and implementation considerations change according to multiple contingent factors (i.e. related to company and industry, product, and behavioral or individual aspects). They developed and empirically refined a framework that start to show comprehensiveness towards the main aspects that need to be considered by a company when reshoring. The same framework has been adapted and used as basis for quantitative analyses of secondary data (Moore et al., 2018). Table 3.1 summarizes the frameworks retrieved from previous literature that will serve as the starting point for the meta-synthesis.

[3] A more recent and comprehensive framework of post-offshoring options has been developed by Bettiol et al. (2019). The framework is not considered in this section since it is not providing a characterization of the reshoring process and its phases.

Table 3.1 – Overview of reshoring frameworks

Source	Framework	Elements included	Relocation directions considered	Applied in empirical research?
Bals et al., 2016	Reshoring and insourcing decision-making and implementation process	Decision-making; Implementation	Reshoring	No
Foerstl et al., 2016	Reshoring/insourcing drivers-outcome relationship	Drivers; Contingencies; Outcomes	Reshoring	No
Fratocchi et al., 2016	Motivation for reshoring strategies	Drivers	Reshoring	Di Mauro et al., 2018
Joubioux and Vanpoucke, 2016	Conceptual model for location decision-making	Decision-making; Drivers	Offshoring; Reshoring	Joubioux and Vanpoucke, 2016
Benstead et al., 2017	Conceptual framework for the reshoring process	Drivers; Implementation; Contingencies	Reshoring	Benstead et al., 2017; Moore et al., 2018

3.3 The meta-synthesis methodology

This study follows the meta-synthesis methodology developed by Hoon (2013), which is an exploratory, inductive methodology aimed to make contributions beyond those presented in original primary qualitative case studies (Hoon, 2013). Supply Chain Management (SCM) researches have been encouraged to use meta-analytic techniques to accumulate the evidence from different studies "such that findings can be more confidently extolled to both academic and practitioner constituencies" (Goldsby and Autry, 2011, p. 324). But meta-analysis has rarely been used by OM and SCM scholars, and thus the few exceptions provide valuable contributions and have been highly cited (Cao and Lumineau, 2015; Habersang et al., 2019; Lewis, 1998; MacKelprang and Nair, 2010; Nair, 2006; White, 1996). The meta-synthesis has been described as an "analysis of the analyses", as it focuses on the insights and interpretations of the original authors, rather than on the firsthand data about the specific cases as obtained from interviews or observations. More specifically, it aims at "extracting, analyzing, and synthesizing qualitative evidence to build theory" (Hoon, 2013, p. 523). In this study, we aim to refine theory by developing a comprehensive framework based on existing reshoring case studies. We will use the aggregation synthesis, which refers to the generation of interpretative explanations and accumulation of knowledge by identifying categories and patterns from the studies

in focus (Hoon, 2013). In this research, we relied on the seven-steps research design proposed by Hoon (2013). The most relevant steps are described in the following sections.

3.3.1 Conceptual framework development

In order to guide the research process, we developed an initial conceptual framework by integrating the elements considered by the previous frameworks found in reshoring literature. Previous frameworks include a number of different elements of the reshoring process (see Table 3.1), primarily focusing on decision-making and drivers. In addition, the implementation process (Bals et al., 2016; Benstead et al., 2017), contingencies (Benstead et al., 2017; Foerstl et al., 2016) and outcomes (Foerstl et al., 2016) have also been acknowledged as important aspects. Thus, we incorporate all the identified aspects to provide a complete framework. Joubioux and Vanpoucke (2016) provide the only framework considering both offshoring and reshoring. However, they mainly focus on offshoring activities while reshoring is given minor attention. Even if our purpose is to build a framework for reshoring, we model both offshoring and reshoring with similar processes, in order to understand their relationship and thereby fully understand the reshoring decision. The framework is depicted in Figure 3.2 and is comprised of the following key elements: decision-making, implementation and outcome of the offshoring and reshoring processes, and contingency factors.

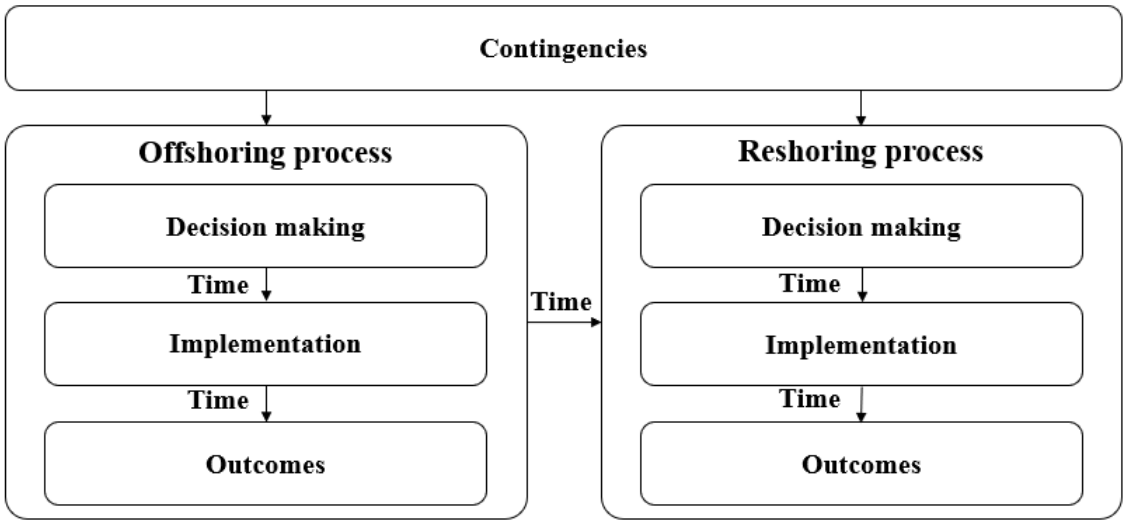

Figure 3.2 – Initial conceptual framework

As a starting point, we used the framework developed by Benstead et al. (2017), which we consider is the most complete and intuitively accessible framework for the reshoring process in the existing literature. However, in our proposed framework we also include the offshoring process, structured identically to reshoring. Reshoring is consequent to offshoring, in line with previous scholars stating

that reshoring can only occur if offshoring has occurred previously (Gray et al., 2013). Moreover, in contrast to Benstead et al. (2017), we add an element named decision-making, including trigger or tipping point (recently identified by for example Benstead et al. (2017), Hartman et al. (2017), and Boffelli et al. (2018)), drivers and barriers, and other aspects related to the specific decision such as product characteristics, type of activities, etc. Drivers have been investigated in a considerable part of the literature (Barbieri et al., 2018), while barriers were pointed out for the first time by Wiesmann et al. (2017) and further explored by Engström et al. (2018a,b). In addition, being barriers not well settled in reshoring literature, similar and connected concepts have been developed almost at the same time; an example is the concept of reshoring readiness, intended as a state of contemplation and preparation for the reshoring decision implementation in which the company needs to check all the factors that might represent an obstacle at the home location (Nujen et al., 2018b). The implementation element includes all considerations related to the execution rather than the decision, such as ownership mode, process or phases, and the impact on the home country (in case of offshoring) or host country (in case of reshoring) (Bals et al., 2016; Benstead et al., 2017). Following Foerstl et al. (2016), we also add an element related to the outcomes of the operations, in terms of benefits and/or problems (Johansson and Olhager, 2018a). In terms of contingencies, we consider all the elements that may have influenced the offshoring and reshoring processes, but without being considered specifically, either in the decision-making or in the implementation stage. In addition, we consider the time to be an important element. Time has been identified by a number of studies as a relevant factor, since the conditions that made the offshoring decision rational might change over time in favour of domestic production and thus making reshoring a rational decision (Benstead et al., 2017; Ellram et al., 2013; Mihalache and Mihalache, 2016). Moreover, the time passed between the offshoring and reshoring decisions may shed some light on the question whether reshoring is a result of an offshoring failure or of a strategy change (Ancarani et al., 2015; Kinkel, 2014; Di Mauro et al., 2018). Ancarani et al (2015) proposed a number of testable propositions regarding factors that affect the duration of the offshore operations, such as firm size and industry, reshoring motive and firm strategy. In Germany for example, the majority of firms reshored production within two to five years after the offshoring operations (Kinkel, 2014; Kinkel and Maloca, 2009). This implies that reshoring could be a correction of a prior offshoring miscalculation rather than a reaction to slowly emerging developments. In addition, time is relevant to consider in the implementation stage, as ramp-up times were significantly longer than expected for the surveyed firms (Kinkel and Maloca, 2009). Time is intrinsically part of the conceptual framework, with offshoring preceding reshoring and with the different elements of the two processes being represented as sequential.

3.3.2 Locating relevant research

In this study, we aimed to analyze the two connected events, i.e. reshoring and previous offshoring, with offshoring being considered as an antecedent to reshoring. Thus, in order to identify all relevant literature for our study, we developed a search strategy aimed at finding case study researches on the reshoring phenomenon, including descriptions of the preceding offshoring process. We retrieved the sample of potentially pertinent literature, up to November 2018, from Scopus and Web of Science as we focused on peer-reviewed sources with strong academic contributions that are relevant to synthesize, and not merely providing illustrative examples of manufacturing relocation. The chosen databases had also been used in previous literature reviews on reshoring (Barbieri et al., 2018; Stentoft et al., 2016c; Wiesmann et al., 2017). We discarded unpublished works in order to increase the scientific rigour, generated through a peer-reviewed publication process (Hoon, 2013), and we avoided publication bias (Kepes et al., 2012) with a comprehensive and transparent search process (Hoon, 2013). We used the search terms "reshoring" and "case study", as well as related terms (i.e. "backshoring", "nearshoring", "onshoring", "back-reshoring", "backsourcing", "homeshoring", "inshoring", "reinsourcing"), as identified in previous literature. These were applied in the fields *title/abstract/keywords* in Scopus and *topic* in Web of Science. The initial sample consisted of 363 articles. Here, we applied a set of clearly specified selection criteria (complete list in Table 3.2) in order to ensure a high validity of the synthesis, which strongly depends on the quality of the primary studies on which it is based (Dalton and Dalton, 2008). Particularly, we only included articles from peer-reviewed sources that used case-based methodologies, including both offshoring and subsequent reshoring decisions of manufacturing activities in specific. Thus, conference papers, articles focusing on other activities than manufacturing (e.g. services, IT, building techniques) and studies not using case-based methodologies were excluded.

Table 3.2 – Selection criteria for identified articles

Characteristic	Selection criteria
Relocation direction	Both offshoring and subsequent reshoring
Constructs	All definitions of reshoring/backshoring/etc.
Governance mode	All governance modes
Type of activity	Only manufacturing
Methodology	Only case-based research
Content	Provide sufficient information to be analyzed
Time	No time delimitations[4]
Research field	Business management and accounting; Decision Science; Economics econometrics and finance; Engineering (only industrial and manufacturing); Social science.
Source type	Peer-reviewed sources
Document type	Article, Book chapters
Language	English

After an initial screening of titles and abstracts and applying the selection criteria, the sample consisted of 18 articles. This result was triangulated with available systematic literature reviews on the topic (Barbieri et al., 2018; Stentoft et al., 2016c; Wiesmann et al., 2017), and we found an additional 2 articles (namely, Gray et al. (2017) and Martínez-Mora and Merino (2014)). Further, we added 3 articles that we were knowledgeable about from previous studies (namely, Moradlou et al. (2017), Nujen and Halse (2017) and Nujen et al. (2018a)), and we reached a baseline sample consisting of 23 articles. In order to make sure that we had identified all the available reshoring cases in peer-reviewed literature, we also run the same search without the keyword "case study" but no further articles were identified, proving the robustness of the search strategy. Individually, both researchers read all the articles and made a preliminary coding based on the initial framework. This process resulted in another round of exclusions, as nine articles did not report enough information to be analyzed. Thus, the final synthesis sample includes 14 articles. All the articles were checked in terms of quality: all of them are based on the methodological standards widely accepted in OM and SCM fields (e.g. the ones provided by Eisenhardt (1989), Voss et al. (2002) and Yin (2009).

[4] The search has been conducted in November 2018; as a consequence, all the articles published after November 2018 have not been included in the final sample.

3.3.3 Coding and analysis

We followed the suggestions by Durach et al. (2017) and developed a coding scheme in two levels; (i) first according to the articles' characteristics, and then (ii) following the main elements in our framework. In particular, for the first level coding, the information was retrieved mainly from the introduction and methodology sections of the original articles. For the second level, we specifically focused on the findings, discussion and conclusion sections (Hoon, 2013). The coding and analysis were done iteratively in two phases, following the recommendations by Hoon (2013). First, we made an initial coding scheme based on the initial framework, aiming to retrieve information about contingencies, decision-making, implementation, outcomes and time. After the first round of coding, we refined the framework based on the evidence in the articles by adding details and new elements that we assessed as relevant. Then, we conducted a second round of coding using an updated coding scheme following the final framework. To keep track of the coding process and to support the data analysis we used the software NVivo Plus 12. In order to avoid any potential bias along the process, two researchers were involved in all the phases and results were discussed after each phase with experienced researchers knowledgeable about the field of study. The two researchers coded the primary studies independently, reaching an interrater agreement of 83%. Then, the two databases were merged and contrasting coding results were discussed with a consensus resolution approach (Larsson, 1993). When necessary, experienced researchers were involved as devil's advocates. Involving two coders has been proved to be beneficial for the reduction of mistakes and to avoid the omission of relevant information, as well as to contribute to achieving a better final coding scheme (i.e. the final framework) (Hoon 2013; Miles and Huberman 1994).

Concerning the data analysis, for the first level coding (i.e. characteristics of the articles) we analyzed the characteristics in terms of frequencies. For example, we counted the number of articles adopting different theoretical perspectives (e.g. Transaction Cost Economics, Resource-Based-View). Analysis of the second level coding was made first through the development of mind-maps for each article (Seuring and Gold, 2012), that favoured discussion among the researchers, as well as identification of patterns. The mind-maps were used to recall examples and illustrations described in section 5. Secondly, we evaluated the single article coverage of each code, as well as the presence of cross-coding (namely codes appearing together), with the software NVivo 12 Plus. Finally, as a result of the coding process, we were able to develop the final framework.

3.4 Meta-synthesis of case-based reshoring research

The studied articles are presented in Table 3.3. Case study research on reshoring is in its early stages. All studies found with the literature search could be considered to be recent, with the first publication in 2014 and an increasing number of publications each year. The articles are mainly published in OM or SCM journals. Operations Management Research had a special issue in 2016, in which three of the studied articles were published. Only one book chapter was included, namely Nujen and Halse (2017), given that the study has been considered to have high quality. In addition, it has been conducted by authors contributing to other articles in our sample (Nujen et al., 2018a,b). In terms of geography, the studied articles are mainly conducted from a European perspective, with only one study conducted outside of Europe (i.e. in the US) (Gray et al., 2017). There is a strong contribution from the Scandinavian countries, where seven of the 14 studies are performed (completely or partially) (Engström et al., 2018b; Nujen et al., 2018a,b; Nujen and Halse, 2017; Sayem et al., 2018; Stentoft et al., 2016b). In terms of host countries, many studies include firms that have moved activities to multiple locations (Engström et al., 2018b; Di Mauro et al., 2018; Gylling et al. (2015); Nujen et al., 2018a,b; Nujen and Halse, 2017; Sayem et al., 2018), mainly to China or India but also Eastern European countries. Interestingly, in one study activities had been relocated from Denmark to Germany (Stentoft et al., 2016b). This study provides a unique study context as activities are moved from developed to a developed country. All remaining studies are made in the context of developed to a developing country. In terms of authors, the three Norwegian studies are performed by the same research team, and the Italian studies have one author in common. The remaining studies are performed by different authors. Of course, we are aware of the biases that authors characteristics and backgrounds might introduce. They are discussed further in section 3.7.

Table 3.3 – Articles included in the study

ID	Authors	Journal/Book	No. of cases	Home country	Host country
A	Baraldi et al. (2018)	Industrial Marketing Management	1	Italy	Romania
B	Benstead et al. (2017)	Operations Management Research	1	UK	China
C	Di Mauro et al. (2018)	Journal of Purchasing and Supply Management	4	Italy	Multiple
D	Engström et al. (2018)	Journal of Global Operations and Strategic Sourcing	4	Sweden	Multiple
E	Gray et al. (2017)	Journal of Operations Management	6	US	Asia
F	Gylling et al. (2015)	International Journal of Production Economics	1	Finland	Taiwan
G	Joubioux and Vanpoucke (2016)	Operations Management Research	6	Netherlands and Belgium	Asia
H	Martínez-Mora and Merino (2014)	Journal of Purchasing and Supply Management	14	Spain	China
I	Nujen and Halse (2017)	Breaking up the Global Value Chain	1	Norway	Multiple
J	Nujen et al. (2018a)	Journal of Manufacturing Technology Management	5	Norway	Multiple
K	Nujen et al. (2018b)	Journal of Global Operations and Strategic Sourcing	2	Norway	Multiple
L	Robinson and Hsieh (2016)	Operations Management Research	1	UK	Asia
M	Sayem et al. (2018)	BRQ Business Research Quarterly	3	Sweden and Spain	Multiple
N	Stentoft et al. (2016b)	Operations Management Research	2	Denmark	Germany

3.4.1 Characteristics of the articles

According to Durach et al. (2017), studies within SCM normally reflect different characteristics (e.g. theoretical perspectives, unit of analysis, research methods). This is true also for studies on reshoring, as demonstrated by Barbieri et al. (2018). This challenges the possibilities to compare studies and thus synthesize the empirical evidence within the field, without a structured method. Accordingly, we analyzed the sample articles to understand if we needed to apply a specific contextual lens when comparing results. Table 3.4 details the characteristics of the articles investigated in this study.

Table 3.4 – Characteristics of articles

Characteristics	No. of articles
Theoretical perspective	
Multiple	5
None mentioned	3
Resource-Based-View	1
Contingency Theory	1
Heuristic Decision-Making	1
Industrial Marketing and Purchasing	1
Organizational Readiness	1
Supply Chain Strategy	1
Unit of analysis	
None mentioned	7
Firm	3
Decision	2
External network	1
Internal network	1
Research methods	
Multiple case study	7
Single case study	3
Mixed method	2
Action research	1
Longitudinal case study	1

The studied articles do indeed use a plethora of theoretical perspectives. Five studies mention several theories related to reshoring or manufacturing relocation in general (for example Transaction Cost Economy (TCE), Resource-Based-View (RBV), the eclectic paradigm and/or Internalization theory), but they do not explicitly take a stand and use either of these theories in their analyses (Joubioux and Vanpoucke, 2016; Martínez-Mora and Merino, 2014; Di Mauro et al., 2018; Nujen et al., 2018a; Nujen and Halse, 2017). Three studies do not mention any theoretical perspective at all, but only discuss previous offshoring and reshoring studies (Engström et al., 2018b; Gylling et al., 2015; Stentoft et al., 2016b). Interestingly, the remaining studies use different theoretical perspectives. This indicates that there is no dominant or generally accepted theory for reshoring, which leads the authors to use innovative viewpoints in order to understand the phenomenon. Further, the unit of analysis was not clearly mentioned in as much as 50% of the articles. However, the perceived unit of analysis in these cases was the firm (Benstead et al., 2017; Engström et al., 2018b; Joubioux and Vanpoucke, 2016; Martínez-Mora and Merino, 2014; Di Mauro et al., 2018; Nujen et al., 2018b; Robinson and Hsieh, 2016; Stentoft et al., 2016b). The decision was used as the unit of analysis in two articles (Gray et al., 2017; Nujen and Halse, 2017), and intra-firm network (Sayem et al., 2018) and external network (Baraldi et al., 2018) were studied in one article respectively. Most studies are multiple case studies,

with number of cases varying between two and 14 (the average number of cases is 5.1) (Engström et al., 2018b; Joubioux and Vanpoucke, 2016; Martínez-Mora and Merino, 2014; Di Mauro et al., 2018; Nujen et al., 2018a,b; Sayem et al., 2018). Five studies only use one case firm. Of these, three are single case studies (Benstead et al., 2017; Nujen and Halse, 2017; Robinson and Hsieh, 2016), one is a longitudinal study (Baraldi et al., 2018), and one is based on action research (Gylling et al., 2015). Two studies are mixed-method studies, using both case study methodology and either survey data (Stentoft et al., 2016b) or simulation (Gray et al., 2017). Investigating the offshoring and reshoring time span, it is clear that firms that have operated offshore for more than ten years represent the majority of studies. Only one study reports a shorter time span, where the offshoring was made during 2007 and 2008 and activities were repatriated in 2010 (Gylling et al., 2015). Quite surprisingly, four out of fourteen studies did not mention the time span between offshoring and reshoring at all (Engström et al., 2018b; Gray et al., 2017; Sayem et al., 2018; Stentoft et al., 2016b).

3.4.2 Analysis of the analyses and framework refinement

The second level coding scheme was applied to the analyses of the original authors, i.e. the results, discussion and conclusions sections of the studied articles. The elements included in the final framework are displayed in Table 3.5, together with the number of articles that provided information about each element as well as the contribution of each article, in terms of number of codes in the article. The elements added to the coding scheme during the iterative coding process are reported in italics.

First, we added the plant operations to code the information about what happens either at the home country plant or at the host country plant during the course of time. In fact, many studies have indicated that changes at the plants in terms of manufacturing technologies, availability of skilled workers or capacity utilization etc. may have an influence on the location decision (see e.g. Gylling et al. (2015), Nujen et al. (2018b)). Within offshoring and reshoring decision-making we highlighted the drivers and barriers and the tipping point as separate codes, identified as relevant in the considered articles. Additionally, within offshoring and reshoring implementation, we highlighted the preparation activities that were reported in some of the articles as an initial phase of the implementation process. Finally, we acknowledged, during the coding process, that contingencies, drivers and barriers for offshoring and reshoring included similar items. Therefore, we recognized as useful to identify a set of factors that during time can shift between being contingencies versus being drivers or barriers for the offshoring and reshoring decisions. Each time we identified a contingency, driver or barrier, it was also coded with any of the factor categories, thus specified in more detail.

The categorization of factors is inspired by Wiesmann et al. (2017), but the terms are adapted to fit our framework. As an example, we added a category related to firm-specific factors at the offshore site, named offshore internal factors. In fact, we used the differentiation between internal and external factors, as suggested by Fratocchi et al. (2016). In the end, the factors categorization reflects the country (i.e., domestic or offshore), the level (i.e., global, supply chain or firm) and the orientation (i.e. internal or external). An example of how the information was coded in provided in the Appendix.

Table 3.5 – Results of coding in terms of number of sentences coded per element, in each article

Elements coded		No. of articles	No. of coded texts	Contribution per article (number of coded texts)													
				A	B	C	D	E	F	G	H	I	J	K	L	M	N
Contingencies		14	129	26	9	10	6	1	7	5	35	1	2	3	19	1	4
Time-Dynamics		14	68	12	8	2	2	1	6	1	9	2	13	4	5	1	2
Plants operations	*Domestic operations*	10	44	10	5	5	4	0	0	4	10	0	2	0	2	1	1
	Offshore operations	9	44	5	11	4	0	0	2	1	14	2	0	1	0	4	0
Offshoring	Decision-making (excl. drivers, tipping point and barriers)	12	57	1	2	10	3	10	4	11	7	4	0	2	0	2	1
	Drivers	9	34	2	0	10	3	0	1	6	6	3	0	0	0	2	1
	Tipping point	2	3	2	0	0	0	0	1	0	0	0	0	0	0	0	0
	Barriers	2	2	0	0	1	0	0	0	0	1	0	0	0	0	0	0
	Implementation (excl. preparation)	8	37	0	4	7	0	2	3	10	5	0	0	2	0	4	0
	Preparation	6	12	0	0	2	0	1	1	6	1	0	0	0	0	1	0
	Outcome	10	39	0	0	6	1	3	0	7	11	1	1	0	2	6	1
Reshoring	Decision-making (excl. drivers, tipping point and barriers)	13	73	13	3	4	3	6	2	4	12	6	2	9	5	0	4
	Drivers	13	119	4	20	17	12	2	7	5	21	0	3	3	6	7	12
	Tipping point	7	12	1	1	0	0	2	2	0	0	0	2	3	1	0	0
	Barriers	7	19	0	0	1	9	0	0	0	0	2	1	4	1	0	1
	Implementation (excl. preparation)	8	55	14	10	9	0	5	1	0	0	0	3	10	3	0	0
	Preparation	6	66	1	1	0	1	0	0	0	0	7	30	26	0	0	0
	Outcome	7	35	2	4	5	0	2	0	0	0	0	6	13	3	0	0
Factors	*Domestic external*	9	63	17	5	9	6	0	0	0	10	3	0	3	3	0	7
	Domestic internal	13	124	8	7	14	9	0	7	7	20	6	4	9	16	11	6
	Offshore external	13	109	5	15	11	1	2	6	1	26	7	16	8	0	8	3
	Offshore internal	11	53	1	6	2	7	2	7	3	17	0	0	1	6	0	1
	Supply chain	13	104	19	13	10	9	1	7	7	17	0	1	2	12	4	2
	Global	10	37	0	2	2	5	0	2	4	6	0	1	0	2	11	2
Total		14	1338	143	126	141	81	40	66	82	228	44	87	103	86	63	48

Note: The letters reported as column headings refer to the article ID numbers reported in Table 3.3.

While no article discusses all the coded elements, the results show that all the elements in the framework have been discussed by at least two articles in our sample. Time and contingencies were widely discussed in all articles. The drivers for reshoring were also discussed by almost all the articles, which is not surprising since this was the focus of most articles. Interestingly, both the operations at the domestic and at the offshore locations were almost equally discussed. Preparation, implementation and outcome were only moderately discussed for both offshoring and reshoring. The least discussed element was the offshoring tipping point, while a reshoring tipping point was identified in half of the articles. The factors, reflecting either the contingencies or the relocation drivers and barriers were widely discussed. The most commonly cited factor was domestic internal, mentioned in almost all the articles. During the coding, we did not find anything that could not be categorized with the coding scheme. Thus, we concluded that the coding scheme is complete, and the framework sufficiently covers everything that is reported in our studied articles.

We also assessed the cross-coding (i.e. how often two codes appeared together), which was possible since we allowed to code the same sentence in a specific article with multiple codes. Table 3.6 shows the percentage of cross-coding for each couple of codes, assessed as the ratio between the number of shared codes and the total number of codes for the least coded element of the two (i.e. the maximum number of shared codes possible to achieve). As an example, the percentage of cross-coding between contingencies and time-dynamics is equal to 13, i.e. the number of sentences coded both as contingencies and time-dynamics, divided by 68 which is the total number of references coded as time-dynamics (as reported in Table 3.5), the lowest number compared with contingencies (68 compared with 129).

Table 3.6 – Cross-coding percentage per codes couples

				Plant op.		Offshoring							Reshoring							*Factors*					
Elements coded		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
	1: Contingencies	*100%*																							
	2: Time-Dynamics	19%	*100%*																						
Plants operations	*3: Domestic operations*	9%	25%	*100%*																					
	4: Offshore operations	14%	5%	34%	*100%*																				
Offshoring	5: Decision-making	2%	5%	16%	5%	*100%*																			
	6: Drivers	9%	6%	3%	0%	0%	*100%*																		
	7: Tipping point	0%	0%	0%	0%	0%	33%	*100%*																	
	8: Barriers	0%	0%	0%	50%	0%	50%	0%	*100%*																
	9: Implementation	8%	8%	5%	14%	8%	0%	0%	0%	*100%*															
	10: Preparation	0%	0%	0%	8%	17%	0%	0%	50%	50%	*100%*														
	11: Outcome	5%	5%	8%	0%	5%	3%	0%	0%	0%	0%	*100%*													
Reshoring	12: Decision-making	0%	9%	16%	9%	23%	0%	0%	0%	5%	0%	3%	*100%*												
	13: Drivers	5%	4%	2%	2%	0%	21%	0%	0%	0%	0%	10%	0%	*100%*											
	14: Tipping point	0%	8%	0%	0%	0%	0%	33%	0%	0%	0%	17%	0%	0%	*100%*										
	15: Barriers	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	16%	0%	*100%*									
	16: Implementation	2%	5%	14%	5%	0%	0%	0%	0%	11%	0%	3%	9%	0%	0%	0%	*100%*								
	17: Preparation	0%	11%	30%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	0%	11%	9%	*100%*							
	18: Outcome	3%	0%	17%	0%	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	0%	6%	23%	*100%*						
Factors	*19: Domestic external*	52%	5%	2%	5%	0%	18%	0%	0%	0%	0%	3%	0%	32%	0%	42%	2%	0%	3%	*100%*					
	20: Domestic internal	27%	16%	9%	2%	0%	47%	100%	0%	0%	0%	13%	0%	50%	33%	47%	0%	3%	3%	17%	*100%*				
	21: Offshore external	19%	1%	0%	9%	0%	18%	0%	0%	5%	0%	3%	0%	15%	8%	16%	0%	0%	3%	16%	6%	*100%*			
	22: Offshore internal	8%	4%	0%	2%	0%	32%	0%	50%	0%	8%	10%	0%	34%	8%	5%	0%	0%	0%	0%	26%	23%	*100%*		
	23: Supply Chain	49%	9%	9%	7%	0%	35%	67%	50%	0%	0%	5%	0%	38%	0%	21%	2%	0%	3%	21%	19%	12%	19%	*100%*	
	24: Global	92%	16%	3%	3%	0%	9%	0%	0%	3%	0%	3%	0%	46%	0%	0%	0%	0%	0%	0%	5%	5%	0%	24%	*100%*

The results of the cross-coding provide many insights into the relationships between the elements of the offshoring and reshoring processes. To begin with, contingency factors seem to be very much related to the global environment, and then primarily to the global financial crisis, to the entrance of China in the World Trade Organization or generally to global trends (e.g. fast fashion). Other contingencies are found in the characteristics of the domestic location, such as the presence of an industrial district, the industrial landscape (influencing the type of companies and workforce), and in the supply chain context, i.e. the type of relationships with suppliers and customers, the length of the supply chain or the position in the supply chain. Concerning drivers, the results show that offshoring is driven mainly by domestic internal factors (e.g. firm strategy, efficiency, cost reduction), offshore internal factors (primarily low production cost) and supply chain factors (e.g. relationship with suppliers or commercial agreements). Instead, reshoring is driven by a much wider set of factors, given that the percentage is high with almost all the factors. Domestic internal factors have the highest percentage of cross-coding, indicating that something at the home plant has been prominent in driving the reshoring decision. This could be for example a change in the strategy, the need for higher quality or improved brand image, as well as behavioural elements. Domestic external (e.g. take advantage of the made-in effect, the presence of an industrial district or the government incentives), offshore internal (e.g. problems faced in the offshore plant in terms of low quality, insufficient skills or rising production costs), supply chain (e.g. supply chain risks and disruptions, high transport costs, long lead times) and global factors (e.g. the global financial crisis and general changes in the cost differentials) have also been highly important for the decision. Concerning the barriers, they were seldom mentioned for offshoring, while for reshoring they were mainly domestic internal (e.g. lack of competences, difficulties in operations re-integration) or domestic external (e.g. lack of political incentives, rigidity and higher costs of the labour market). The results of the cross-coding also reveal that domestic and offshore operations are strongly connected, indicating either the prevalence of insourcing as governance mode or strong control over the offshore operations. Generally, offshoring and reshoring elements prove to be strongly connected when considering the same element (e.g. offshoring decision-making and reshoring decision-making). This means that specific phases of offshoring and reshoring are usually discussed together and compared in the studied articles. Instead, the different steps of each process (offshoring or reshoring) result to be only partially connected with each other, indicating that the articles usually do not achieve a complete understanding of the overall process. Concerning the time element, it appears to be the most connected code, since it is coded together with all the elements except for offshoring tipping point, offshoring preparation and reshoring outcome. Although, with many elements the connection is quite weak, meaning that even if there are some dynamic features, they are not prevalent. The most dynamic (i.e. changing over

time) elements, according to the cross-coding table, are the domestic operations, the contingencies and, among the factors, domestic internal, supply chain and global factors.

3.5 Comprehensive framework with illustrations

Based on the results of the coding, we refined the framework as depicted in Figure 3.3. The framework is structured in a graphical way that makes it intuitively easy to follow, so to guide the data collection for a full case description in empirical research. Time, and the dynamic nature of manufacturing relocations, emerged as an important factor in the analysis. Therefore, the offshoring and reshoring processes are illustrated as timelines, with the horizontal axis in the framework being the time, while the domestic and offshore operations are depicted on the vertical axis. Influencing factors (i.e. drivers and barriers and contingencies) can be found in the middle. Below the framework, the connections with the elements included in the initial framework are outlined. Each element is better detailed with the information derived from the coding results by analyzing the content of the code. In the following, each aspect of the framework is discussed together with illustrations from the studied papers. The section is organized around the headings from the initial framework, aiming at transparently showing how we turned the initial framework into the final one.

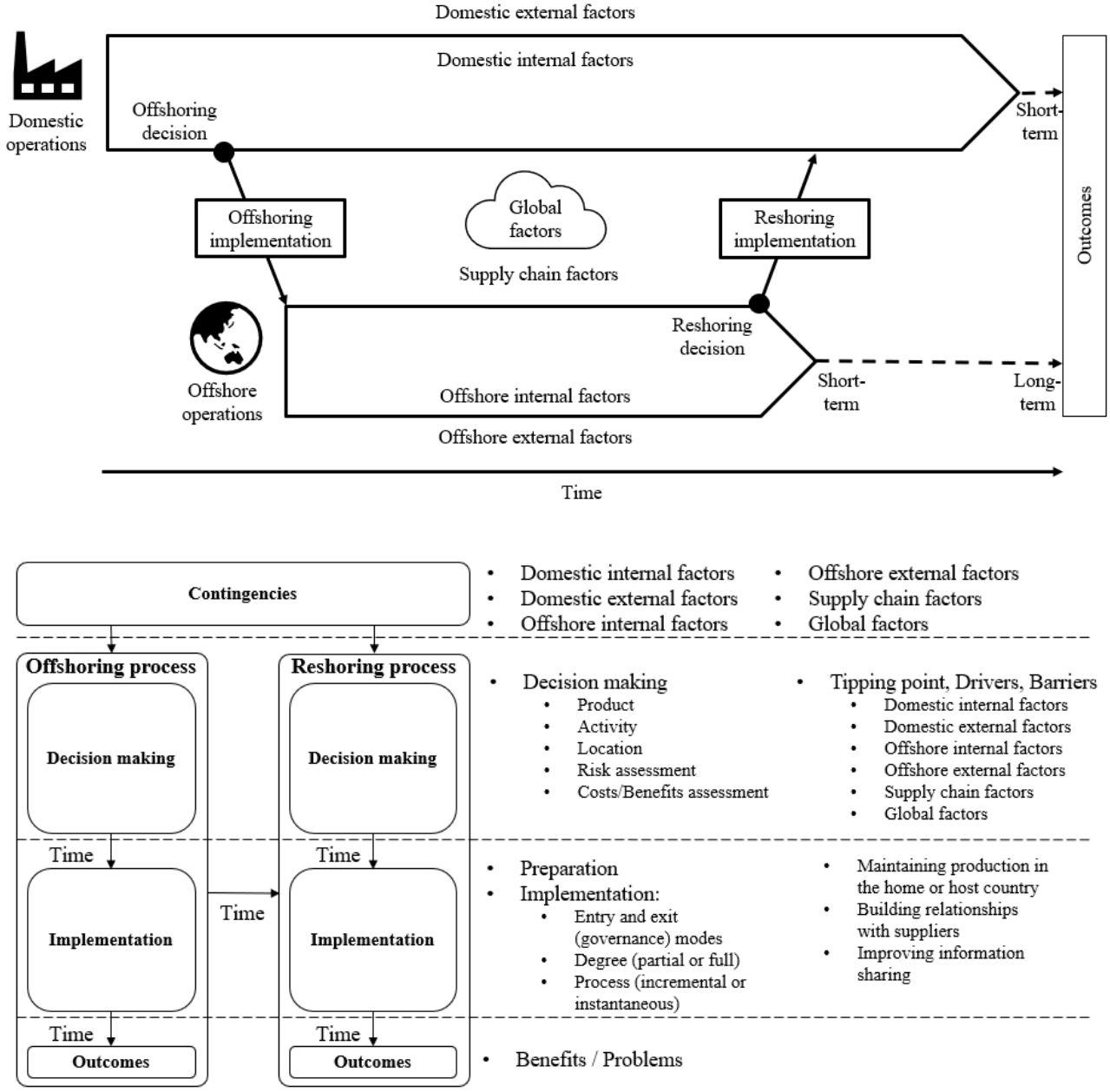

Figure 3.3 – Refined conceptual framework of the offshoring and reshoring processes

3.5.1 Decision-making

Decision-making is related to aspects included in the decision, such as the specific product and activities to be relocated, the location decision, and the decision-making process in terms of phases and people involved. It also includes the motivations of the offshoring or reshoring, i.e. the drivers and barriers placed in the centre of Figure 3.3. In the final framework, we avoided referring to these elements as drivers or barriers. Instead, we prefer to use the term factor, thereby acknowledging that

they can change over time and turn from drivers to barriers and vice versa. Several of our reviewed papers specifically focused on the reshoring decision-making, and the drivers and barriers in particular (Benstead et al., 2017; Engström et al., 2018b; Gray et al., 2017; Gylling et al., 2015; Joubioux and Vanpoucke, 2016; Martínez-Mora and Merino, 2014; Di Mauro et al., 2018). Only Gray et al. (2017) studied the actual decision-making process, from a heuristic decision-making perspective. They concluded that decisions usually are based on overly simplified heuristics, including experience and biases, rather than on a rational evaluation of a complete set of information. This view is strengthened by for example Gylling et al. (2015) who state that decisions are based on bounded rationality. Also, emotional factors such as the experience of a "threat to the existence" (Di Mauro et al., 2018) or sense of belonging in the region (Benstead et al., 2017) were relevant drivers of the offshoring and reshoring decisions respectively. As part of the decision-making, firms need to make a risk assessment related to the new location. For offshoring, financial risk and quality issues are considered the main threats (Joubioux and Vanpoucke, 2016). For reshoring, the risk of lost know-how and access to knowledge needs to be assessed (both within the firm and in the local network), as this could possibly reduce the possibilities to repatriate manufacturing and thus act as a major barrier for reshoring (Baraldi et al., 2018; Joubioux and Vanpoucke, 2016; Nujen and Halse, 2017). In general, we find evidence that firms find it hard to make correct calculations to base the offshoring or reshoring decision on (Engström et al., 2018b; Gray et al., 2017). However, experience from previous offshoring improves the assessment of cost and performance implications, thus implying that there is a positive learning effect. As part of the drivers, we specifically distinguish the tipping point, as it emerged as relevant in several of the studied articles. For offshoring, the tipping points mentioned were requirement from a key customer (Baraldi et al., 2018) and bad profitability at the domestic site (Gylling et al., 2015). For reshoring, negative events at the offshore site (e.g. quality issues or IP violation) (Benstead et al., 2017; Gray et al., 2017), diminished cost differentials (Benstead et al., 2017; Gylling et al., 2015), free capacity at the domestic site (Nujen et al., 2018b), and a new business model (Robinson and Hsieh, 2016) triggered the decision. In all of these cases, the firms had more than one reason to relocate manufacturing. But each of these reasons was not important enough to drive the decision. Instead, the issues were building up and the firms had to reach a tipping point when one driver made the current situation unsustainable, leading to the decision to repatriate. Our study shows that there is an interplay by several factors, determining the optimal location of manufacturing activities. Things or events can happen in several locations, i.e. at the domestic manufacturing plant, at the offshore plant, in the external environments in both locations (for example in the supplier or partner network, on national level, etc.), in the supply chain and/or in the global environment that influence the macroeconomic conditions. These events could happen one

at a time or simultaneously. They are not static but change over time, and the longer the offshoring period, the less likely it is that these conditions have remained stable (Baraldi et al., 2018; Nujen and Halse, 2017). Thus, drivers and barriers are dynamic and need to be reevaluated on a regular basis, as already pointed out by for example Ellram et al. (2013) and Tate et al. (2014). As part of the decision-making, we also include the product as well as the specific activities to be relocated. Interestingly, Di Mauro et al. (2018) find that the product seems to be interrelated with the location for the offshore activities. The reason is that firms are searching for specific skills and competencies related to the product, usually embedded in a region or industry cluster. The activities that are offshored are mainly considered as non-core (Joubioux and Vanpoucke, 2016; Martínez-Mora and Merino, 2014; Nujen and Halse, 2017; Sayem et al., 2018), even though recent literature claims that also core competencies are offshored (Jensen and Pedersen, 2012). For reshoring, activities are finely sliced, which means that firms are reshoring very specific activities that fit within the current activities at home. In fact, reshoring was in many cases made partially, by keeping some production activities offshore. Baraldi et al. (2018) are referring to "selective reshoring", indicating that the firm specifically selects the activities to repatriate, depending on how well they fit within the local operations.

3.5.2 Implementation

The implementation process of reshoring is highly unexplored, according to Bals et al. (2016). Among our reviewed articles, only Benstead et al. (2017) explicitly studied how the reshoring decision can be operationalized. We have followed their aspects of the implementation stage, with the only difference that we believe the tipping point is part of the decision-making. Thus, we included aspects such as governance mode, degree of relocation, incremental or instantaneous process, maintaining production at the domestic site, information sharing, and preparation activities. Even though they did not explicitly study the implementation process, several studies briefly reported on related aspects. For example, in the studied papers offshoring is implemented gradually, starting with outsourcing, purchasing small batches, and then increasing the magnitude of offshore operations, maybe leading to a partnership or captive operations (Gylling et al., 2015; Di Mauro et al., 2018). It could even be hard to distinguish the boundaries between the decisions (Benstead et al., 2017). On the other hand, some firms are being flexible in terms of "degree of reshoring" (Benstead et al., 2017; Gylling et al., 2015; Joubioux and Vanpoucke, 2016), thus still producing the same products they offshored at home but in smaller volumes. This strategy provides flexibility and the possibility to shift volumes between locations. In terms of governance mode, offshoring is made in all forms (from outsourcing to joint

ventures and fully owned factories). However, Joubioux and Vanpoucke (2016) found that the preferred governance mode for offshoring was outsourcing. Even though it requires extensive control mechanisms, outsourcing reduces the risks and provides flexibility as well as facilitates repatriation since it is considered relatively easy to end the relationship with a supplier. Ending a supplier relationship could be sensitive, though. Re-outsourcing activities to the same supplier in the future could be problematic because of the damaged trust between partners (Engström et al., 2018b; Nujen et al., 2018b). Interestingly, three papers out of fourteen were specifically studying the organizational readiness for reshoring, concerning for example how to deal with the shortage of skills and competences. Thus, as part of the implementation process, a preparation phase has been identified. This is a new aspect compared to existing frameworks. As part of the preparation, the assessment of the organizational readiness for reshoring is of a crucial importance (Nujen et al., 2018b). In fact, over time, the previous knowledge base in the home country might be diminished and neglecting to evaluate the access to skills and knowledge can turn out to be a fatal error for reshoring implementation (Nujen and Halse, 2017). In such a context, the management role in identifying existing competences and developing dynamic capabilities becomes fundamental (Nujen et al., 2018b). Surprisingly, also articles with a focus far away from the preparation phase mention details that help in structuring its characteristics. Among others, some of the mentioned elements are the development of in-house training programs (Gylling et al., 2015), improving efficiency and freeing space (Engström et al., 2018b), and of course organizational readiness (Nujen et al., 2018a,b; Nujen and Halse, 2017). Naturally, after having found evidence of the reshoring preparation phase, we expected to find information also about the offshoring preparation. Even if this aspect was not widely discussed in the sample articles some details were mentioned, as the transfer of knowledge, competences and technology from the home to the host country (Gylling et al., 2015; Joubioux and Vanpoucke, 2016; Di Mauro et al., 2018), the assessment of knowledge availability in the host country (Di Mauro et al., 2018), the preparation of managers to face offshoring challenges (Gray et al., 2017), and the management of the relationship setup with suppliers in case of outsourcing (Joubioux and Vanpoucke, 2016; Martínez-Mora and Merino, 2014). The offshoring preparation phase is an absolute novelty of our framework with respect to previous reshoring frameworks.

3.5.3 Outcomes

The offshoring and reshoring outcomes were included as new aspects compared to previous frameworks. The outcomes, categorized as problems or benefits, are highly interesting from a managerial perspective, as they could be used to derive the success factors of manufacturing

relocation. But they are also relevant from a decision-making perspective since the offshoring outcome in many cases acts as a driver of reshoring. For example, insufficient quality at the offshore site is an offshoring outcome, but it is also one of the main drivers of reshoring (Johansson and Olhager, 2018a; Kinkel and Maloca, 2009). This is true in survey studies as well as in several of the studied papers (Baraldi et al., 2018; Engström, Sollander, et al., 2018; Gray et al., 2017; Joubioux and Vanpoucke, 2016; Di Mauro et al., 2018; Sayem et al., 2018). Concerning the dichotomic nature of reshoring as either strategy change or correction of a previous offshoring mistake (Fratocchi et al., 2016), from the studied papers, it is evident that reshoring could be both. For example, Gray et al. (2017) concluded that the reshoring decisions could not be completely explained by changes in relative costs between locations. Instead, they say that offshoring was made without completely evaluating risks and performance challenges, and that reshoring thus was a correction of a prior offshoring mistake. Similarly, Joubioux and Vanpoucke (2016) found that reshoring was implemented after continuous problems with quality at the host country site. On the other hand, in some studies the firms had explicitly stated that offshoring was not a failure (Martínez-Mora and Merino, 2014; Di Mauro et al., 2018). Di Mauro et al. (2018) argue that the offshore duration (over ten years) in combination with the strategy change driving the reshoring decision, indicate that offshoring was not a failure, but that reshoring is done as a consequence of changing conditions. Similarly, in most of the studied papers the firms have had offshore operations for over ten years before the reshoring decision was taken. Thus, it is hard to argue that reshoring was made as a reaction to an offshoring mistake. However, it should be noted that the offshore duration also clearly affects the possibilities to repatriate manufacturing since the availability of skills and knowledge might have diminished over time (Nujen et al., 2018a; Nujen and Halse, 2017). Interestingly, the outcomes of reshoring were not discussed widely in the studied articles. However, similarly to offshoring, reshoring success or failure could possibly influence the location strategy of a firm, thus influencing the trajectory of its global operations.

3.5.4 Contingency factors

Concerning the contingency factors, from the analyzed articles it was clear that many contingency factors play a role in influencing the offshoring and reshoring processes. Generally, the contingencies were categorized among the six factors. Domestic internal factors include contingencies like industry, size, strategy and core business. The studied firms are operating within a variety of industries, from clothing, textile and shoe manufacturing to construction, automobile, aeronautics and maritime industries. In terms of firm size, all sizes are represented, from small firms with only a handful of

employees to large firms with over 100.000 employees. Offshoring and reshoring are thus occurring in a variety of industries and are not limited to certain firm sizes. Offshore internal factors are related to for example the size of the offshore plant and the characteristics of offshore production. Global factors include global industrial trends or global events. For example, two major events were identified in several of the studied articles. First, China's entrance into the WTO in 2001 opened up for foreign direct investment and for increased export of Chinese products, thus generating the offshoring trend towards China. Second, the financial crisis in 2008 was a turbulent period for many firms, with low demand, free capacity and high uncertainty, leading many firms to consider reshoring. Home country and host country contingencies are included in domestic external and offshore external factors respectively (e.g. the presence of an industrial district, the industrial landscape, labour market or governmental incentives/regulations either in the home or in the offshore country). Finally, supply chain factors concern, for example, the type of relationships with suppliers and customers, the length of the supply chain and the position in the supply chain. Therefore, contrarily to what was expected from the initial framework, we found that contingencies were spread all over our final framework. Moreover, we propose that every part of the framework can become contingent to the others. A clear example is represented by the debate on the relationship between offshoring and reshoring. Many studies claim that reshoring is strongly influenced by the previous offshoring decision, so much that it is worthwhile to study them together (Barbieri et al., 2018; Johansson et al., 2019; Joubioux and Vanpoucke, 2016). Therefore, the offshoring decision can be considered a contingency factor influencing how the reshoring decision is managed (Benstead et al., 2017). As an example, Di Mauro et al. (2018) argue that a captive offshoring mode makes firms less inclined to repatriate operations. In conclusion, contingencies result to be spread all over the final framework and to play a changing role over time, depending on the specific decision. This reveals the challenge to control for all the contingencies that might influence reshoring.

3.6 What do we want to know about reshoring?

The meta-synthesis of previous reshoring cases provides an accumulation of the knowledge collectively produced within this field, thus giving evidence of "what do we already know about reshoring?" concerning the "Why" and "How" questions. Of course, this knowledge can be complemented with insights emerging from reshoring literature that is not based on cases (e.g., on surveys or secondary data analysis). First, insights about the trends concerning home and host countries (i.e. "Where") can be derived from quantitative methodologies. Results show that: i) German companies from 2003 to 2009 tended to offshore less along time and to bring back manufacturing mainly form the Eastern countries that recently became European Community

members (Kinkel, 2012); ii) Companies from New Zealand were relocating a lot between 2001 and 2010, reshoring widely from China; iii) Companies from Western Europe and North America are the most interested from the reshoring phenomenon and they are mainly relocating their manufacturing activities mainly from China; iv) within Western Europe, UK, Italy and France are the most interested from the reshoring phenomenon; v) Nordic countries are reshoring widely and mainly from Western and Eastern Europe and China; vi) the US is mainly relocating from Asia, Mexico and Western Europe. Second, concerning the time-related aspect (i.e. "When"), this was considered as relevant to distinguish between decisions as correction of previous mistakes and strategic decisions; thus, demonstrating that the majority of reshoring initiatives of German companies were undertaken to correct previous mistakes (Kinkel and Maloca, 2009). Moving a step further, Ancarani et al. (2015) linked the offshoring duration to the companies characteristics, thus proposing that SMEs, companies belonging to electronics and automotive, companies implementing outsource offshoring, companies are driven by quality or "made in" reasons and that offshored in Asia generally return earlier.

Thanks to the application of the meta-synthesis methodology, instead, the analysis of the articles' coverage (Table 3.5) showed many areas that were not deeply studied and thus emerged as potential areas for future research. In this section, we suggest some directions for future research and answer the question "what do we want to know about reshoring?".

1. *Decision-making process*: Even though many previous studies focus specifically on the reshoring decision-making drivers (Barbieri et al., 2018; Wiesmann et al., 2017), the actual decision-making process is not well documented. It would be highly interesting, especially in light of the discussion about offshoring possibly being a managerial mistake (Kinkel and Maloca, 2009), to investigate how the decision-making is carried out within an organization and who is involved in the process. When the relocation decision is considered a managerial mistake, what was overlooked in the decision-making and how could the process be improved?
2. *Tipping point*: the tipping point or trigger of the reshoring decision has just recently been acknowledged in academia (Benstead et al., 2017; Hartman et al., 2017). This study also revealed an offshoring tipping point in some of the cases. Future studies could investigate these tipping points further and try to identify what factors are considered as secondary in terms of factors building up to an offshoring or reshoring case, and what factors actually drive the decision.

3. *Implementation choices*: The implementation stage of offshoring and reshoring is one of the least researched elements of the framework, thus further confirming the conclusions from previous studies (Bals et al., 2016; Barbieri et al., 2018; Benstead et al., 2017). Particularly, specific aspects of the implementation stage, such as degree of offshoring or reshoring, the process in terms of incremental or instantaneous implementation as well as how the organization around the relocated activities is structured and coordinated need further research.
4. *Preparation for the implementation*: As part of the implementation process, we also identified a preparation phase, related to organizational readiness in terms of the right competencies, skills and knowledge as well as access to technology. This has proven to be very relevant for reshoring, especially when the reshored activities have been offshore for a considerable amount of time since the knowledge base (both within the firm and in the region) might be diminished. The preparation phase for offshoring might be equally important, considering the number of offshoring cases that are considered as failures and the amount of time spent on implementation and coordination of activities. Maybe a well-structured preparation phase would improve the success rate of both offshoring and reshoring. How this phase should be structured would be of highest interest for practitioners and needs further investigation.
5. *Outcomes evaluation*: Quite surprisingly, offshoring and reshoring outcomes are not well documented. While offshoring outcomes are somewhat reported, the outcomes or performance effects of reshoring are not investigated in the studied cases. However, the success and outcomes of an offshoring and reshoring project should be of highest interest to document. It would also be of interest to study if firms evaluate the success of relocation projects and if so, how. Finally, it would be extremely important to understand whether outcomes change moving from the short-term to the long-term.

In addition, the cross-coding (Table 3.6), reflecting the connections between different elements of the framework, revealed additional interesting associations that open up for the following future research directions:

6. *Interrelatedness between subsequent location decisions*: The cross-coding revealed an association between offshoring outcome and reshoring tipping point, thus further confirming that the (negative) outcomes of offshoring can act as drivers to the reshoring decision. This connection provides a strong argument for the importance of studying offshoring and reshoring together, and for further investigating how the processes are interrelated.

7. *The influence of time on offshoring and reshoring factors and contexts*: The time element was widely mentioned in all articles, and also mentioned together with many of the other elements in the framework. However, the dynamics and changes in factors and contexts over time were not much discussed in the articles. For example, what happens at the domestic and offshore locations in terms of improvements in operations, technology advancements, new product development, competency levels, business environments etc., in order to really understand the dynamics in the offshoring and reshoring contexts.

3.7 Conclusions

In this study, the meta-synthesis methodology was used to accumulate the knowledge produced within the field of reshoring, by studying the empirical evidence in prevailing case studies. Based on the meta-synthesis, a comprehensive framework for describing and studying reshoring was developed. The framework is based on previous reshoring frameworks found in literature, including all aspects of the reshoring process that has previously been identified. Thus, it is argued to be more comprehensive than previous reshoring frameworks as it encompasses all aspects from decision-making, through implementation and outcomes, as well as contingency factors and the time aspect making location decisions dynamic over time. In addition to the reshoring process, the framework also includes the previous offshoring process, since previous studies have indicated that reshoring can only be fully understood in light of the preceding offshoring. This represents one of the first efforts in guiding future reshoring research to a full understanding of the reshoring phenomenon, and to make more comparable studies, thus overcoming the "contingencies control" challenge. This paper clearly demonstrates that even if articles are grounded on different characteristics in terms of theoretical perspectives, units of analysis etc., the information can be rich enough to allow a meta-synthesis to be successful. In fact, we succeeded in retrieving useful pieces of information from each article. This allowed to accumulate the existing knowledge within the field and to create a comprehensive framework for future studies, as suggested by Goldsby and Autry (2011) and Hoon (2013).

3.7.1 Implication for research and practice

The main contribution of this study is a comprehensive framework for research on reshoring, providing guidance on how to present a complete case description in order to enable the advancement of the accumulated knowledge within the field. In doing so, the article addressed the main limitations of previous frameworks, that gives only a partial picture of reshoring. The study demonstrated the

benefit of applying the meta-synthesis methodology to advance and complement the results achieved from the single articles in the field of reshoring. The implications for managers are connected to the possibility to gain a wider picture over the reshoring process as well as the preceding offshoring process and to gain useful insights about the dynamic nature of such processes and of the variety of challenges that previous cases had to face in multiple contexts. This study thus provides an important contribution to companies that are relocating manufacturing.

3.7.2 Limitations and suggestions for further research

The paper does not come without limitations. First, the meta-synthesis method relies on secondary data, namely the information provided in the original articles. Of course, we are aware of the fact that the authors of such articles might have limited space to present the relevant information and discuss it; therefore, authors might have favoured those evidence that allowed them to answer to their specific research questions, as well as they may have discussed them by adopting specific theoretical lens. Second, the choice to limit the articles to peer-reviewed sources allowed to control for the quality of the studies, but at the same time, it might have caused the exclusion of some interesting cases. In this case, we evaluated to have a fair number of articles and we tried to avoid the publication bias by including a wide array of journals, without choosing to limit our analysis to top journals articles. As the quality of the meta-synthesis depends on the quality of the primary studies (Dalton and Dalton, 2008), similarly the limitations of the meta-synthesis might be constrained by the limitations of the primary studies. Fortunately, we are confident in having addressed the main concerns from the original studies, namely context bias (either concerning country, industry or size), by choosing meta-synthesis as a method, that allowed to convey results from multiple articles characterized by multiple contexts. Of course, we are aware that most of the studies were conducted from the European perspective, given that most of the authors were from Europe. Interestingly, we also realized that the articles in our sample were complementary in a way since some of the limitations raised by certain articles were overcome by others, often becoming their main contributions. Instead, one limitation that certainly persists in our study is the lack of statistical generalizability. Nevertheless, the theoretical generalizability is made stronger by the lack of researcher or study biases. Future researches, besides trying to overcome the hereby presented limitations, could focus on the application and testing of the proposed framework in real cases, as well as on quantitative data collection.

3.8 Appendix

The appendix provides an example of how information was coded. The reported example is for the article Baraldi et al. (2018).

Coded text from Baraldi et al. (2018) Note: for brevity sake, only information from Section 5.1 are reported	1: Contingencies	2: Time-Dynamics	*Plants operations*					Offshoring							Reshoring					*Factors*			
			3: Domestic operations	*4: Offshore operations*	5: Decision-making	*6: Drivers*	*7: Tipping point*	*8: Barriers*	9: Implementation	*10: Preparation*	11: Outcome	12: Decision-making	*13: Drivers*	*14: Tipping point*	*15: Barriers*	16: Implementation	*17: Preparation*	18: Outcome	*19: Domestic external*	*20: Domestic internal*	*21: Offshore external*	*22: Offshore internal*	*23: Supply chain*	*24: Global*
"*The case shows how Fitwell's decisions about the locations of manufacturing activities (i.e., offshoring and reshoring) were strongly influenced by firm-level objectives which changed with the evolution of the firm's strategy."* (p. 162)					X	X						X	X							X				
"The company was initially established as a craft business focused on very high-end products. However, this business niche was not large enough to assure the firm's economic survival. T*he entrepreneur decided to commit part of the company's production capacity to contract to manufacture."* (p. 162)			X																				
"Lafuma became the key business relationship (Ivens et al., 2009) and the dominating customer, who could exploit its power position (Olsen et al., 2014) and ask Fitwell to substantially reduce its prices." (p. 162)																						X	
"This induced Fitwell to offshore the production to Romania, implementing a cost-oriented strategy." (p. 162)					X	X														X			

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
"Such a strategy, rather than being formed independently by the focal firm, emerged interdependently (Håkansson & Ford, 2002), under the pressure of the dominating customer." (p. 162)																				X			X	
"Mr Grotto made the decision to change competitive strategy and re-focus on the sales of high-end mountain shoes to be sold under Fitwell's own brand." (p. 162)	X																			X				
"And this very strategic change, triggered by the interactive dynamics in Fitwell's network (Gadde et al., 2003), namely a customer relationship reaching a "breaking point", is the key driver of Fitwell's reshoring decision." (p. 162)														X										
"...to reach the new strategic objective of higher-end own-branded offerings, product quality and brand perception by end-customers were critical elements." (p. 162)													X							X			X	
"Fitwell decided to reshore the production of this product line back to Italy in a selective manner, that is, by repatriating only two of the three manufacturing activities. These two were the most relevant activities in terms of perceived product quality and required technical skills not easily found in Romania." (p. 162)												X				X								
"This chain of events shows how Fitwell's offshoring and reshoring decisions were the results of a strategy to cope with changes in the external environment (Mugurusi & de Boer, 2014), and more specifically in the network embedding Fitwell." (p. 162)	X																		X	X	X			
"...the reshoring decision is part of a long-term dynamic process of internationalization. Offshoring and reshoring decisions might be re-evaluated and modified again and again over time. This view is consistent with a non-linear internationalization process (Fratocchi et al., 2016; Vissak & Francioni, 2013; Vissak, Francioni & Musso, 2012)." (p. 162)		X																						

4 A META-ANALYSIS OF RESHORING CASE STUDIES: THE INFLUENCE OF CONTINGENCY FACTORS ON THE RELOCATION DECISION

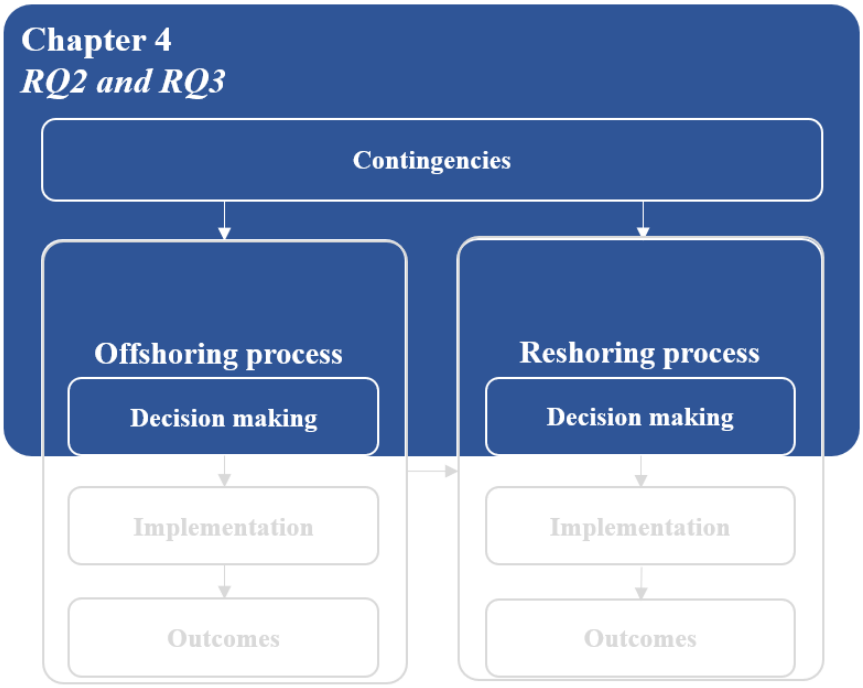

Figure 4.1 − Positioning of Chapter 4 in the overall research project

Acknowledgement: *This chapter is derived from the article "Johansson, M., Boffelli, A., Olhager, J., Kalchschmidt, M. (2019). A meta-analysis of reshoring case studies: the influence of contingency factors on the relocation decision" presented at the EDSI 10th Annual Conference in Nottingham (UK) in June 2019 and winner of the best paper award, as well as presented at the DSI 50th Annual Conference in New Orleans (US) in November 2019 and winner of the best regional paper award. I am personally responsible for any changes made from the last version.*

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4.1 Introduction

Reshoring is a relatively new concept that has gained increasing attention from practitioners, policymakers as well as academia. It refers to the relocation of a firm's manufacturing activities from an offshore site back to the home region and is usually described in relation to the previous offshoring activity. In general, location decisions are of high strategic importance for a firm because they have a long-term impact on the profitability and competitive position (Gylling et al., 2015). But location decisions are complex, and there are many factors that potentially can affect the decision-making process. Some of these are context-specific, suggesting that location decisions should be studied from a contingency perspective (Bals et al., 2016; Demeter, 2017). However, there are few empirical studies on the influence of contingency factors on the reshoring process. Early empirical evidence of reshoring was provided through survey research. Here, it is common to include contingency factors such as firm size, industry or region (Canham and Hamilton, 2013; Fel and Griette, 2017; Heikkilä, Martinsuo, et al., 2018; Heikkilä, Nenonen, et al., 2018; Johansson et al., 2019; Johansson and Olhager, 2018b; Kinkel, 2014; Kinkel and Maloca, 2009). However, it could be challenging to capture all context related aspects with a survey (Sousa and Voss, 2008). Instead, case studies have been conducted with the purpose to gain a deeper understanding of manufacturing firms' location decisions and the contexts around them. For example, Benstead et al. (2017) focused specifically on contingency effects and investigated the relevance of a number of conceptually identified contingencies in a single case study. Other case studies do not focus specifically on the contingency aspects, but they still provide rich information about the cases and valuable insights about the contexts in which the decisions were made. However, there has been little accumulation of the knowledge gained from primary case studies, and there is thus a potential to advance the knowledge within the field by aggregating the findings from these stand-alone works (Hoon, 2013). In this study, we will take advantage of this opportunity by using a quantitative meta-analysis methodology to study contingency factors in existing case studies. This methodology allows us to combine the advantages of the in-depth case study method with the strengths of survey research. In this study, we analyse 36 cases from 14 research papers, identified with a systematic literature search. Specifically, the purpose of this study is to investigate how contingency factors influence offshoring and reshoring decision processes. Our first research question is, therefore:

RQ1: How are contingency factors influencing offshoring and reshoring decisions? (RQ2 in chapters 2 and 6).

Moreover, since reshoring cannot be pursued unless there has been previous offshoring, researchers

have called for studies on reshoring in relation to offshoring (Barbieri et al., 2018; Gray et al., 2013). In fact, the previous offshoring decision could even be considered a contingency factor, influencing how the reshoring decision is managed (Benstead et al., 2017; Lampón and González-Benito, 2019). We want to investigate the relationship between offshoring and reshoring decisions. Accordingly, our second research question is:

RQ2: How is the previous offshoring decision affecting the reshoring decision? (RQ3 in chapters 2 and 6).

This is an exploratory study, aiming to shed some light on the role of contextual factors on relocation decision-making. The research highlights the importance for researchers to build on each other's efforts to advance the knowledge within this emerging field. The main contributions are (i) aggregation of knowledge in terms of contingency factors relevant for the offshoring and reshoring decision-making, and (ii) the application of a methodology new to this field. The paper is structured as follows. First, we synthesize the related literature and describe the research model for this study. Second, we present the quantitative meta-analysis and describe in detail the methodology applied. Third, we present the results related to the relationship between contingency factors and offshoring and reshoring decision-making drivers. Finally, the findings and limitations of the study are discussed, and we propose future research avenues based on our results.

4.2 Related literature

4.2.1 Offshoring and reshoring

Among manufacturing location decisions, researchers have widely focused on offshoring and reshoring decisions (Barbieri et al., 2018; Jain et al., 2016). In particular, the offshoring phenomenon has been the dominant trend for decades starting from the 1980s (Mihalache and Mihalache, 2016). Offshoring can be defined as "the assignment of business activities to locations outside a firm's national borders in order to support existing business operations" (Mihalache and Mihalache, 2016, p. 1105). The offshoring decision is far from being irreversible, given that it is based on the assumption that a host country provides a comparative advantage with respect to the home country and that this advantage might be eroded over time (Antelo and Bru, 2010; Kotabe et al., 2008; Mihalache and Mihalache, 2016). Consequently, the reshoring phenomenon started to attract attention and became increasingly relevant in the last decade. In this study, we use the most widespread term "reshoring", but, among the many definitions (Barbieri et al., 2018), we adopt the "back-reshoring" definition by Fratocchi et al. (2014) as "a voluntary corporate strategy regarding the home country's

partial or total re-location of (in-sourced or out-sourced) production to serve the local, regional or global demands" (Fratocchi et al., 2014). Moreover, we will specifically focus on the relocation of manufacturing activities, given the proven different pattern followed in case of services (Albertoni et al., 2017).

According to Wiesmann et al. (2017), the majority of empirical studies on reshoring have investigated the decision-making from a why perspective. Survey studies show coherent results, namely that offshoring is based on cost factors (labour cost in particular) while reshoring is made for a number of different reasons. The most important driver for reshoring is insufficient quality at the offshore site, followed by long lead times, low flexibility, and lack of skills and knowledge (Canham and Hamilton, 2013; Johansson and Olhager, 2018a; Kinkel, 2012; Kinkel and Maloca, 2009). Case study evidence strengthens these results, but also give a more nuanced picture of the relocation decision-making factors (Di Mauro et al., 2018). For example, they highlight that manufacturing relocation is driven by factors that could be considered as temporary, such as labour cost, exchange rate, logistics cost and market changes. This means that the contextual conditions that made offshoring a rational decision change over time, possibly in favour of reshoring (Tate et al., 2014).

4.2.2 Contingency factors

One area that is still to a large extent left unexplored in reshoring literature concerns contextual factors that influence the offshoring and reshoring decision processes. In general, contingency theory is considered to be highly relevant in the Operations Management (OM) field particularly as OM theory is less developed (Demeter, 2017; Sousa and Voss, 2008). In fact, it is one of the main theoretical lens used to view organizations, assuming that organizations adapt in order to maintain fit with changing contextual factors (Donaldson, 2014). Sousa and Voss (2008) identify four main categories of contingency variables for OM studies; (i) national context and cultural effect, (ii) firm size, (iii) strategic context (e.g. manufacturing strategy), and (iv) organizational context (e.g. industry, plant age). For reshoring in particular, Bals et al. (2016) strongly encouraged the adoption of contingency theory. They identified three relevant levels of contingency factors; (i) country level factors (e.g. labor market, regulation, cultural distance), (ii) firm level factors (e.g. size, countries of operation, supply chain complexity), and (iii) group/individual level factors (e.g. managers' perceptions, magnitude of the decision, task/activity characteristics). Building on this first call, other researchers adopted a contingency-based perspective for empirical studies on reshoring. First, Benstead et al. (2017) identified relevant contingency factors through a single case study. They identified three categories of factors; (i) company (and industry) factors (e.g. size, ownership mode, government policy, capital intensiveness, and bandwagon effect), (ii) product-related factors (e.g. market segment, price point,

bulkiness of product, customization), and (iii) behavioural (or individual) related factors (e.g. management perception of costs, emotional factors). These categories are similar to the categories presented by Bals et al. (2016), but with the difference that Benstead et al. (2017) include a category related to product characteristics instead of country-level factors. The factors identified by Benstead et al. (2017) were further empirically investigated in a study by Moore et al. (2018). They used secondary data from the textile and apparel industry but found few statistically significant relationships between contingency factors and reshoring drivers. Still, they conclude that reshoring drivers should be evaluated considering the identified contingency factors, but highlight that this is not an easy task (Moore et al., 2018). In addition to case studies, most survey studies in this field report some information about contingency factors, often considered as control variables. Commonly used control variables are firm size, industry, and geography (e.g. home country, host country, market) (Ancarani et al., 2015; Canham and Hamilton, 2013; Johansson and Olhager, 2018a; Kinkel, 2012, 2014). However, Sousa and Voss (2008) consider survey-based research to neglect the contextual richness of the respondent firms and the eventual effects of firm context. Thus, this opens up for further investigation of the importance of contingency factors in the offshoring and reshoring decision-making processes.

4.2.3 Research model

Based on the discussion above, a contingency-based approach seems to be particularly suitable to study the reshoring phenomenon, given that (i) theory is not established yet, (ii) the development of the research field is quite recent, and (iii) mostly qualitative research has been conducted. The complexity of location decisions and the fact that many offshoring and reshoring drivers could be considered as temporary, further highlights the importance of adopting a contingency perspective. In this study, we will investigate the relationship between contingency factors and relocation decision drivers, in both relocation directions. In addition, Benstead et al. (2017) argue that the previous offshoring decision could be considered a contingency factor influencing the reshoring decision. In fact, reshoring cannot be pursued unless there has been previous offshoring, (Gray et al., 2013). Moreover, reshoring has been related to problems at the offshoring site such as low quality, coordination issues and low flexibility, clearly indicating a relationship. However, even though the factors that influence the relocation decision-making have been investigated in a number of empirical studies, there is to the best of our knowledge no study looking specifically at the causality between offshoring and reshoring drivers. Thus, we will investigate this relationship. The research model of this study is depicted in Figure 4.2.

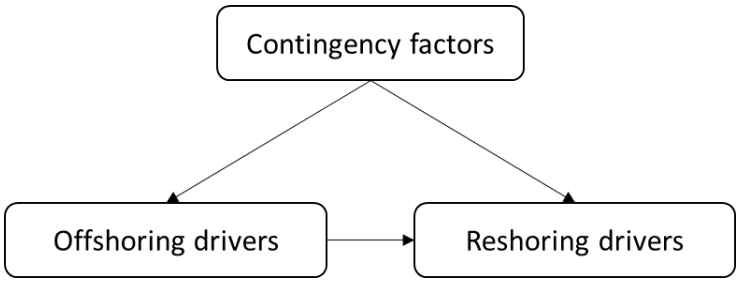

Figure 4.2 – Research model

4.3 Methodology

This study is based on a quantitative meta-analysis using data from previous case studies. Case studies are usually qualitative and provide rich information about a limited amount of cases but lack the possibility to generalize results over a larger population. This problem can be overcome by using a group of existing case studies for statistical analysis, i.e. by making a quantitative meta-analysis of previous qualitative studies (Combs et al., 2019). By doing so, the advantages with the in-depth case study method are combined with the strengths of survey research and its possibilities to generalize results. The meta-analysis is particularly suitable when; (i) a specific methodology, as case study research, is dominating a field, (ii) when the study object is the organization, and (iii) where there is a broad range of conditions of interest (Hoon, 2013; Lewis, 1998). It is thus of high interest for the field of reshoring, in which case study research has dominated in terms of empirical evidence (Barbieri et al., 2018). The main task in the quantitative meta-analysis is to aggregate the characteristics of a group of case studies, but not necessarily their conclusions (Combs et al., 2019). In this study, we will, therefore, focus on the descriptions of the cases, rather than on the analyses and conclusions of the original authors.

4.3.1 Locating relevant cases

Figure 4.3 summarizes the literature search process. In order to identify all relevant literature for our study, we developed a search strategy aimed at finding case study researches on the reshoring phenomenon, including descriptions of the preceding offshoring process. We retrieved the sample of potentially relevant literature, up to November 2018, from Scopus and Web of Science as we focused on peer-reviewed sources with strong academic contributions. The chosen databases had also been used in previous literature reviews on reshoring (Barbieri et al., 2018; Stentoft et al., 2016bc; Wiesmann et al., 2017). We discarded unpublished works in order to increase the scientific rigour,

generated through a peer-reviewed publication process (Hoon, 2013), and we increased reliability with a comprehensive and transparent search process (Hoon, 2013). We used the search terms "reshoring", as well as synonyms identified in previous literature, and "case stud*" (as reported in Figure 4.3). These were applied in the fields *title/abstract/keywords* in Scopus and *topic* in Web of Science.

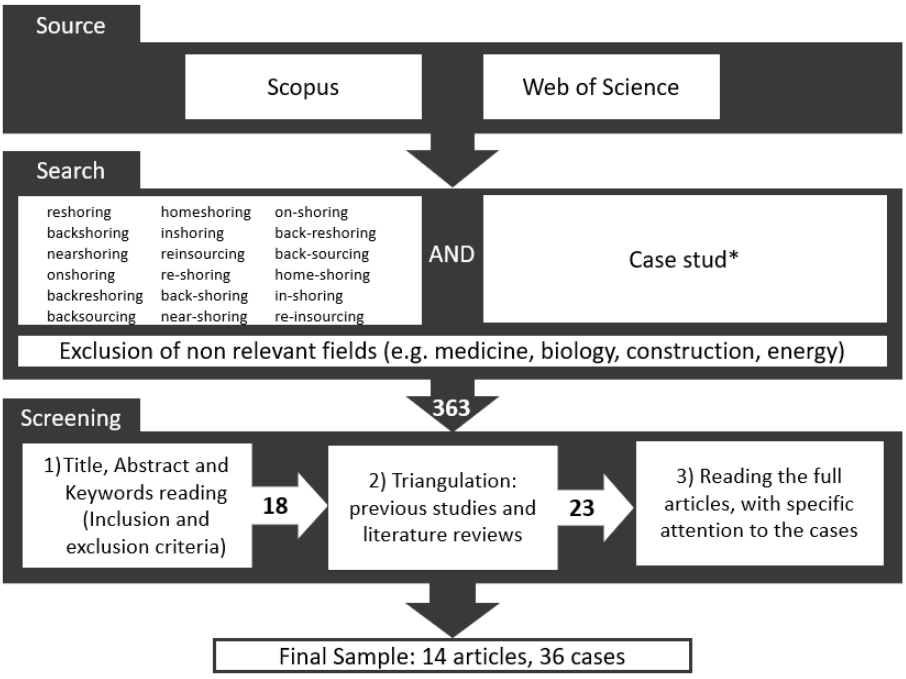

Figure 4.3 – Literature search process

The initial sample consisted of 363 articles. Here, we applied a set of clearly specified selection criteria, in order to ensure a high validity of the analysis, which strongly depends on the quality of the primary studies on which it is based (Dalton and Dalton, 2008). Conference papers, book chapters, articles focusing on other activities than manufacturing (e.g. services, IT or building techniques) and studies not using case-based methodologies were excluded. In terms of time span, we did not apply any delimitations; however, the search was conducted in November 2018 and all the studies published after that data were not included. After the first round of exclusions, the sample consisted of 18 articles. This result was triangulated with available systematic literature reviews on the topic (Barbieri et al., 2018; Stentoft et al., 2016c; Wiesmann et al., 2017), and we found additional 2 articles. Further, we added 3 articles that we were knowledgeable about from previous studies, and we reached a baseline sample consisting of 23 articles and potentially 101 different cases. Individually, two of the researchers read all articles and made a preliminary coding based on the research framework. This process resulted in another round of exclusions, as nine articles did not report enough information to

be analyzed. Thus, the final synthesis sample includes 36 cases from 14 articles. All the articles were checked in terms of quality: all of them are based on the methodological standards widely accepted in OM and SCM fields (e.g. the ones provided by Eisenhardt (1989), Voss et al. (2002) and Yin 2009)).

We developed a coding scheme including all the contingency factors and relocation drivers identified in the case descriptions during the first round of reading. This resulted in a final list of five contingencies and 44 drivers, identical for offshoring and reshoring. In order to avoid any potential bias along the process, two researchers were involved in all the phases and results were discussed after each phase with experienced researchers knowledgeable about the field of study. During the second round of reading, two researchers independently coded the primary studies according to the coding scheme, reaching an interrater agreement of 83%. Then, the databases were merged and contrasting coding results were discussed with a consensus resolution approach. The data were analyzed with IBM SPSS Statistics 25.

4.3.2 Characteristics of articles and cases

Case study research on reshoring is in its early stages. All studies found in our literature review could be considered as recent, with the first publication in 2014 following an increasing number of publications per year, see Figure 4.4. The articles are mainly published in OM or SCM journals. In terms of authors, the three Norwegian studies are performed by the same research team, and the Italian studies have one author in common. The rest of the studies are performed by different authors. The full list of articles is provided in Appendix 1.

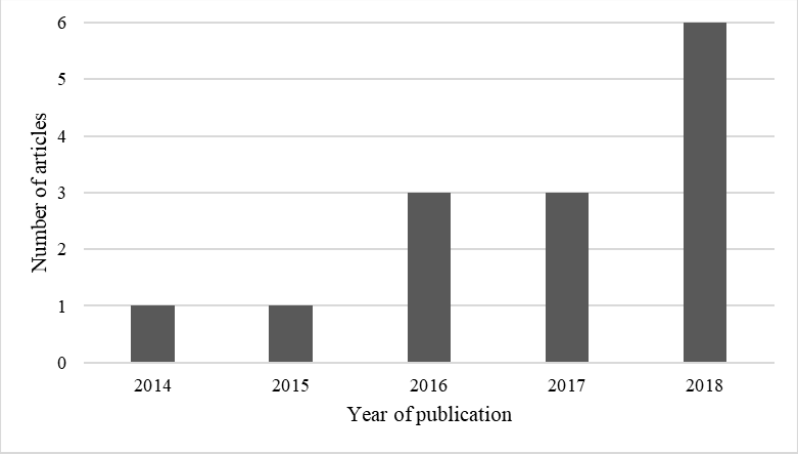

Figure 4.4 – Number of publications per year

Of the 14 analyzed papers, 50% present multiple case studies, with the number of cases varying

between two and 14 (the average number of cases is 5.1). Five studies only use one case firm. Of these, three are single case studies, one is longitudinal, and one is action research. Two studies are mixed-method studies, using both case study methodology and survey data or simulation. As could be expected, the amount of information provided about the cases differs significantly between the papers depending on the number of cases included. In general, single case studies are richer and provide more information than multiple case studies. Mixed method studies provide the least amount of information per case. In general, data had been collected at the top management level, for example, CEO, owner, or senior management level. Only in one case data had been collected at the operational level, using cost accounting data to evaluate the economic incentives of manufacturing relocation. In one study the level of data collection was not mentioned at all.

4.4 Results

Five contingencies were identified as relevant in the cases; namely firm size, type of industry, main market, home region and host region. In terms of frequency, firm size, home and host regions were reported in all of the 36 cases. The industry was reported in 35 cases and the market was only reported in 22 out of the 36 cases. The contingency factors and their sub-groups are displayed in Table 4.1. Firm size was categorized as small, medium or large, following the European Commission standard of firm sizes (reported as the number of employees or turnover in the cases) (European Commission, 2019). Industries were first categorized following the standard industry codes (SIC) and then further classified according to technology intensity based on the "High-tech classification of manufacturing industries" from Eurostat (2019). Market, home country and host country were categorized in regions following the countries reported in the cases. The studied cases are mainly medium and large firms from low-tech and medium-high tech industries. They are mainly conducted from a European perspective, with only one study (five cases) conducted outside of Europe. There is a strong contribution from the Nordic countries, where seven of the 14 case studies are performed (twelve cases). In terms of host countries, the majority of cases have moved activities to China and rest of Asia, while a number of cases have moved activities to Eastern Europe. All studies except for one are made in the context of developed to a developing country.

Table 4.1 – Contingency factor groups

Contingency factors		Frequency	Distribution (%)
Firm size			
	Small	5	13.9
	Medium	16	44.4
	Large	15	41.7
Industry technology intensity			
	Low tech	19	54.3
	Medium-low tech	4	11.4
	Medium-high tech	10	28.6
	High tech	2	5.7
Main market			
	Domestic	6	27.3
	European	6	27.3
	Global	10	45.5
Home region			
	Nordic countries	12	33.3
	Western Europe	19	52.8
	North America	5	13.9
Host region			
	Western Europe	1	2.8
	Eastern Europe	8	22.2
	China	17	47.2
	Rest of Asia	10	27.8

When it comes to drivers, not all of the 44 drivers included in the coding scheme were relevant for both offshoring and reshoring. Cases were coded with 1 if the drivers were mentioned in the case description, and 0 if they were not. This resulted in a final list of 25 drivers relevant for offshoring, and 34 drivers relevant for reshoring (i.e. identified in at least one case). These are displayed in Appendix 2 (offshoring drivers) and Appendix 3 (reshoring drivers). In general, low cost and imitation of competitors are most relevant for offshoring while the reshoring drivers with the highest observed frequencies are related to supply chain, quality and cost. However, many of the drivers were only identified in one or a few cases. In the following analyses, only the drivers with five or more observations are included. In effect, this means we are only analyzing five offshoring drivers and 15 reshoring drivers.

4.4.1 Contingency effects on relocation drivers

First, we address RQ1 by investigating the relationships between contingency factors and relocation drivers. We performed maximum likelihood ratio Chi^2 tests for each pair of contingency factor and relocation driver (five offshoring drivers and 15 reshoring drivers). The significant results are displayed in Table 4.2.

Table 4.2 – Differences between contingency factor groups for each relocation driver

		Firm size	**Industry type**	**Main market**	**Home region**	**Host region**
Offshoring drivers	Low cost					
	Imitating competitors		** (Low)		* (W Eur.)	
	Labour cost	** (Med.)				* (E Eur.)
	Price competitiveness				* (W Eur.)	
	Favourable legislation and/or taxation		** (High)		* (W Eur.)	
Reshoring drivers	Lead-time	* (Large)		** (Europe)	* (W Eur.)	
	Product quality					
	Other SC related		** (Low)		** (W Eur.)	
	Labour cost				* (W Eur.)	
	Other costs					
	Customer-related					
	Logistics cost		*** (Low)		* (W Eur.)	
	Exchange rate		* (Low)		* (W Eur.)	
	Proximity to R&D					** (E Eur.)
	Prox. customer/market			* (Global)		
	Favourable legislation and/or taxation		** (Low)		** (W Eur.)	
	Shortage of personnel			* (Europe)		
	Flexibility					* (E Eur.)
	Made-in-effect		* (Low)			
	Access to technology					* (E Eur.)

*** difference is significant at the 0.001 level,
** difference is significant at the 0.01 level,
* difference is significant at the 0.05 level.
The subgroup/s reporting the corresponding driver more often than expected are indicated within brackets

As evident from Table 4.2, all contingency factors, except for the main market, are significantly influencing the decision in both relocation directions, however, to varying extents. Firm size is less important than expected in previous literature, with only two significant observations. Medium-sized firms offshore to a larger extent than expected because of labour cost, this result reflect the high

representativeness of our sample with respect to high labour-intensive industries, such as the medium and high-end fashion industries. Instead, large reshoring firms tend to repatriate because of lead-time issues more than expected, the reason is that many of these firms are European and chose to offshore towards faraway countries, as China or India, thus extremely extending their lead times. When it comes to industry type (and specifically to technology content of the manufacturing), low-tech firms stand out compared to other groups. The results indicate that they imitate competitors more often when offshoring, thus following the bandwagon effect. In addition, they reshore to a higher extent than other groups for a number of reasons, i.e. supply chain-related issues, logistics cost, exchange rate, country legislation and made-in-effect. This let us suppose that these companies did not evaluate well the offshoring decision in the first place, pushed by their peers' pressure. Further, geographical aspects also seem to have an important influence on relocation drivers. For example, firms with their domestic operations in Western Europe offshore to a larger extent for price competitiveness and favourable country legislation in the host country, following their competitors. By going to a lower level, namely the specific cases that reported these drivers, it is possible to find an explanation behind these results: first, many companies from Western Europe offshored for price competitiveness because they were introducing low-end products among their product range; second, Western European companies that were relocating because of favourable country legislation were leaving countries like Italy and France, in which taxation for industrial activities is quite high; finally, all the companies imitating their competitors were belonging to important industrial districts, either in Italy or in Spain. Instead, Western European companies reshore more than expected because of supply chain issues, cost aspects or favourable home country legislation; here the picture does not appear completely clear, because of the many drivers that generate exceptions. When it comes to host region, Eastern Europe offers favourable labour costs, while firms are repatriating from the region because of low flexibility and low access to developmental competences and technology much more than from other regions.

4.4.2 The influence of offshoring drivers on the reshoring decision

To address RQ2 related to the relationship between reshoring and the previous offshoring, we analyzed the drivers of the two decisions. Since we purposefully selected cases that reported data on both reshoring as well as the preceding offshoring, we are able to draw conclusions related to the causality between offshoring and reshoring drivers. Thus, not only can we determine if there is a relationship between the drivers, but we can also identify if specific offshoring drivers lead to specific reasons for reshoring. First, we evaluated the possible patterns existing between offshoring drivers and reshoring drivers in a qualitative way through data visualization. In specific, we evaluated the

number of cases reporting both offshoring and reshoring drivers and computed the percentage with respect to the total number of cases for the offshoring driver. This way we received an indication of the association between offshoring and reshoring drivers based on the percentage of cases that repatriated because of a specific reshoring driver, *after* having relocated manufacturing because of a specific offshoring driver. As a second step, we performed a hierarchical cluster analysis with SPSS Statistics 25, based on Euclidean distance. The clusters were created based on the variables, which allowed us to clearly identify which offshoring and reshoring drivers were connected, i.e. belonging to the same cluster. With respect to the considered variables, the clustering algorithm ensures that the variables are as homogeneous as possible within the same cluster (small within-cluster variance) and as different as possible when compared with other clusters (large between-cluster variance). From the analysis of the dendrogram, we selected the three cluster solution, being characterized by the greater incremental change in the agglomeration coefficient (Ketchen and Hult, 2007). Thus, the analysis results in three offshoring clusters and three reshoring clusters. These are interpreted as *Cost*, *Competition* and *Labor* for offshoring, and *Operational performance*, *Cost* and *Resource seeking* for reshoring. The clusters are presented in Appendix 4. Due to the nature of the data, we conclude that the offshoring drivers in a specific cluster lead to the reshoring drivers in the same cluster. Table 4.3 reports qualitative data visualization. The grey scale indicates the strengths of the relationship between offshoring and reshoring drivers; the darker the colour the stronger the relationship.

Table 4.3 – Relationships among the clusters of offshoring and reshoring drivers

		Offshoring clusters				
		Cost	*Competition*		*Labor*	
		Low cost	Imitating competitors	Price competition	Labour cost	Favourable legislation
Reshoring clusters						
Op. perf.	Lead-time	71%	85%	86%	25%	40%
	Product quality	57%	23%	29%	50%	80%
Cost	Other supply chain related	50%	62%	86%	75%	60%
	Labour cost	29%	77%	71%	25%	0%
	Customer-related	36%	54%	86%	38%	20%
	Logistics cost	29%	69%	71%	13%	0%
	Exchange rate	29%	62%	71%	13%	0%
	Favourable legislation	25%	62%	71%	0%	0%
Resource seeking	Other cost	36%	23%	14%	25%	40%
	Proximity to R&D	25%	31%	14%	75%	60%
	Prox. to customer/market	18%	15%	0%	50%	40%
	Shortage of personnel	25%	31%	14%	50%	60%
	Flexibility	14%	15%	14%	38%	60%
	Made-in-effect	14%	8%	14%	50%	40%
	Access to technology	11%	8%	0%	13%	0%

Note: Each cell reports the ratio of the number of cases reporting both the specific offshoring driver on the column and the specific reshoring driver on the row, over the total number of cases reporting the specific offshoring driver on the column. This ratio represents the significance of a specific reshoring driver with respect to a specific offshoring driver.

In particular, the offshoring cluster *Cost* is connected to the reshoring driver *Operational performance*, including lead time and quality. The offshoring cluster *Competition*, including the drivers imitating competitors and price competitiveness, is connected mainly to the reshoring cluster *Cost*, including many cost-related drivers (e.g. supply chain, labour, logistic). Finally, the offshoring cluster *Labor*, including labour cost and favourable country legislation is connected to the reshoring cluster *Resource seeking*, including all the drivers typically referred to as resource-seeking. Possible explanations behind these connections are provided in the following section.

4.5 Discussion and conclusions

In this study, a qualitative meta-analysis methodology was used to investigate the relationship between contingency factors and offshoring and reshoring decision drivers. We used secondary data about 36 cases from 14 already published research articles to make statistical inferences. The results

confirmed what is claimed in the literature concerning the much wider set of motivations that are explaining reshoring decisions with respect to offshoring (Johansson et al., 2019; Di Mauro et al., 2018). In fact, starting from the same list of potential drivers to be coded, the final list of offshoring drivers was limited to 25 different drivers identified in at least one case. Reshoring instead accounted for 34 different drivers.

The first research question, related to the influence of contingency factors on offshoring and reshoring drivers, was answered by investigating the relevance of relocation drivers for different sub-groups of the contingency factors firm size, industry type, main market, and home and host regions. The results showed that all contingency factors have statistically significant associations to relocation decision-making, in both directions (except for the main market which is not related to any offshoring driver). Particularly, the results indicate that industry type in terms of manufacturing technology content is important for both offshoring and reshoring. Low-tech firms seem to follow the bandwagon effect to a larger extent than firms with higher technology intensity, and they also reshore to a larger extent for supply chain and cost reasons, as well as the made-in-effect. These results clearly show that contingency factors are relevant when discussing differences among offshoring and reshoring drivers. This study thus brings the research field one step further with respect to Moore et al. (2018), who did not find any statistically significant differences among contingency factor sub-groups assuming different values. Of course, Moore et al. (2018) focused just on the textile and apparel industry, and this choice might have biased the differences related to other contingencies. In particular, our results highlight that all the studied contingencies (namely company size, industry, main market, home country and host country), are relevant in differentiating the underlying motivations for offshoring and reshoring.

The second research question was related to the relationship between the previous offshoring decision and the subsequent reshoring decision, thus looking at offshoring as a possible contingency factor to reshoring. The cluster analysis and the qualitative assessment of drivers allowed us to study the relationships in terms of associations between offshoring drivers and reshoring drivers, and the nature of the data makes it possible to draw conclusions about the causality between factors. Interestingly, the results point towards the presence of specific patterns, given that certain clusters of offshoring drivers appear to be connected to specific clusters of reshoring drivers. In particular, companies that offshore because of cost reasons mainly reshore for motivations connected to the operational performance. This could reflect either a strategy shift from cost leadership to differentiation or a managerial mistake connected to unforeseen problems in the operations management area (Barbieri et al., 2018; Gray et al., 2013; Kinkel and Maloca, 2009). In our sample, cases clearly following this first pattern reflect mainly the second path, characterized by quite short offshoring durations and a

reshoring decision taken as correction of a previous mistake, made manifest through the non-satisfactory performance of the offshore production. This view is consistent with literature looking at reshoring as a correction of errors made by the management during the offshoring process, such as insufficient planning and lack of knowledge about the offshore location (Kinkel and Maloca, 2009; Di Mauro et al., 2018). Albertoni et al. (2017) suggest that managerial mistakes arise in all the cases in which firms experience hidden or unexpected costs, linked for example to coordination costs higher than expected or to more costly knowledge transfer. Moreover, they state that companies are more likely to reshore if they do not achieve satisfactory performance. Connected to this last point, Di Mauro et al. (2018) clearly associated problems with operational performance to the managerial mistake correction, even though in the end they found evidence also of the strategic change view in their case studies. Similarly, one case within our sample provides support of the strategic change that after a long period of time (almost 40 years in the specific case) could lead a company to revise a previous offshoring decision. Instead, companies offshoring for reasons connected to competition usually reshore for cost or lead time reasons. By going back to the descriptions of the cases certainly associated to this pattern, it is evident that these companies are constantly looking for right shoring (Tate and Bals, 2017); in fact, they choose strategically to move, by following bi-sourcing strategies in order to be ready to adjust previous decision following the dynamic changes in the external environment (Martínez-Mora and Merino, 2014). This decisional flexibility reflects, once again, short-term decisions often aiming at correcting previous managerial mistakes (Kinkel, 2014; Kinkel and Maloca, 2009). Besides, some authors have suggested that, given that the offshoring decisions are likely to be biased because of bounded rationality or behavioural heuristics, reshoring may represent a short-term mistake correction (Gray et al., 2017). The fact that two patterns and many cases are connected to the managerial mistake scenario does not come as a surprise. In fact, Barbieri et al (2018) in their literature review found that more than one-third of the articles were reporting some kind of managerial mistake drivers, with "miscalculation of actual cost and/or adoption of new cost accounting methods" being the most relevant. Coherently, Kinkel (2014) estimates from empirical data that only 20% of reshoring decisions made by German companies are mid- or long-term reactions to changes in the local environment, while the majority of them (around 80%) are pure corrections of managerial mistakes. Even though previous research found Small and Medium Enterprises (SMEs) being more subjected to making mistakes in the offshoring decision evaluation due to shortage of internal resources (Kinkel and Maloca, 2009), the evidence here reported does not exclude larger companies from being exposed to managerial mistakes. Finally, companies offshoring for labour-related reasons (i.e. labour cost or favourable labour legislation) usually reshore for reasons connected to access to resources. This means that companies that were attracted by low labour cost

or favourable host country legislations sooner or later faced problems connected to competence shortage or lack of valuable, non-replaceable resources (Wernerfelt, 1984). Interestingly, all the cases clearly connected to this pattern belong to industrial districts with a long tradition of strong and valuable competencies rooted in the local territory. Therefore, once these companies start experiencing a reduction in the benefits gained from the low labour cost, they gladly go back to their original roots, also reflecting a strong attachment (Benstead et al., 2017; Di Mauro et al., 2018). Moreover, these cases also bring evidence of the importance of checking the "reshoring readiness" (Nujen et al., 2018b), before deciding to bring the manufacturing activities back, because things might have changed in the districts in the meanwhile. This is particularly important in case the company did not maintain an active presence, thus reducing its embeddedness, in the local territory (Di Mauro et al., 2018). Altogether, this evidence supports the assumption that the offshoring decision can be regarded as a contingency factor to reshoring, and that there are strong associations between specific offshoring drivers and reshoring drivers.

The main contribution of this study is twofold. First, the study generates deeper insights into the importance of contextual factors for relocation decisions, and second, we adopted a methodology new to this field. For practitioners, these findings provide valuable insights related to the relationship between offshoring and reshoring drivers. In particular, the findings could be useful for firms aiming for right-shoring, highlighting possible pitfalls of offshoring and encouraging firms to pay careful attention to these during the offshoring decision-making process in order to increase the chance of finding the optimal location. For researchers, this study highlights the importance of investigating also contextual factors when studying offshoring or reshoring. In addition to "the traditional" contingencies, the previous offshoring decision is highly important, considerably influencing the reshoring decision-making. Thus, this study further confirms earlier statements that reshoring should be studied together with the previous offshoring, and calls for further research on the relationship between offshoring and the consequent reshoring processes. In addition, this study showed that the quantitative meta-analysis methodology provides promising possibilities for the fields of OM and SCM. In fact, there are many areas within OM and SCM for which the findings from individual studies could be accumulated into deeper knowledge by the use of this method.

The main contribution of this study also generates the main limitations; (i) the methodology relies on secondary data, and (ii) using only peer-reviewed articles from a relatively new research field limits the number of cases available for statistical analyses. We are aware of the fact that there might be a researcher bias in the case descriptions, but with this study, we believe to have moved one step further in overcoming this bias. However, multiple case studies with many cases from the same research group might have an influence on the final results. Future research could take this into account and

control for the original article (or research group) from which the case data is derived. Future research could also address the sample size issue and thereby gain the possibility to make more advanced statistical analyses of the data. Finally, a possible future development relates to the simultaneous consideration of multiple contingencies by adopting a system approach as advocated by Sousa and Voss (2008), in order to identify the relocation motivations profiles that best fit with a specific context, according to the experienced outcomes.

4.6 Appendix

Table 4.4 – Appendix 1: List of articles used in the meta-analysis

Authors	Title	Journal/Book	# of case studies included in the sample
Martínez-Mora and Merino (2014)	Offshoring in the Spanish footwear industry: A return journey	Journal of Purchasing and Supply Management	8/14
Gylling et al. (2015)	Making decisions on offshore outsourcing and backshoring: A case study in the bicycle industry	International Journal of Production Economics	1/1
Joubioux and Vanpoucke (2016)	Towards right-shoring: a framework for off-and re-shoring decision-making	Operations Management Research	2/6
Robinson and Hsieh (2016)	Reshoring: a strategic renewal of luxury clothing supply chains	Operations Management Research	1/1
Stentoft et al. (2016b)	Flexicurity and relocation of manufacturing	Operations Management Research	1/2
Benstead et al. (2017)	Why and how do firms reshore? A contingency-based conceptual framework	Operations Management Research	1/1
Gray et al. (2017)	Why in the world did they reshore? Examining small to medium-sized manufacturer decisions	Journal of Operations Management	5/6
Nujen and Halse (2017)	Global Shift-Back's: A Strategy for Reviving Manufacturing Competences	Breaking up the Global Value Chain	1/1
Baraldi et al. (2018)	A network perspective on the reshoring process: The relevance of the home- and the host-country contexts	Industrial Marketing Management	1/1 (Fitwell case discussed also in Di Mauro et al. (2018)
Di Mauro et al. (2018)	Offshoring and backshoring: A multiple case study analysis	Journal of Purchasing and Supply Management	4/4 (Fitwell case discussed also in Baraldi et al. (2018)
Engström et al. (2018)	Reshoring drivers and barriers in the Swedish manufacturing industry	Journal of Global Operations and Strategic Sourcing	4/4
Nujen et al. (2018a)	Managing reversed (global) outsourcing–the role of knowledge, technology and time	Journal of Manufacturing Technology Management	2/5

Nujen et al. (2018b)	Backshoring readiness	Journal of Global Operations and Strategic Sourcing	1/2
Sayem et al. (2018)	Investigating the influence of network-manufacturing capabilities to the phenomenon of reshoring: An insight from three case studies	BRQ Business Research Quarterly	5/6 (when considering the offshoring-reshoring processes as the unit of analysis the total number of cases is 6)

Table 4.5 – Appendix 2: Offshoring factors identified in the cases

Offshoring factors	**Frequency**	**Distribution (%)**
Low cost	28	77.8
Imitating competitors	13	36.1
Labor cost	8	22.2
Price competitiveness	7	19.4
Favourable country legislation, incentives and/or taxation	5	13.9
Labour productivity	4	11.1
Energy cost	3	8.3
Exchange rate	2	5.6
Access to skills and knowledge	2	5.6
Proximity to customer/market access	2	5.6
Requirement from customer	2	5.6
Globalization	2	5.6
Strategy change	2	5.6
Customer-related	2	5.6
Production cost	1	2.8
Following supplier	1	2.8
Supplier development	1	2.8
Strengthen brand	1	2.8
Capacity	1	2.8
Global recession	1	2.8

Table 4.6 – Appendix 3: Reshoring factors identified in the cases

Reshoring factors	Frequency	Distribution (%)
Lead-time	24	66.7
Product quality	21	58.3
Other supply chain related	16	44.4
Labour cost	12	33.3
Other costs	12	33.3
Customer-related	12	33.3
Logistics cost	11	30.6
Exchange rate	11	30.6
Proximity to R&D	10	27.8
Proximity to customer/market access	8	22.2
Favourable country legislation, incentives and/or taxation	8	22.2
Shortage of qualified personnel	7	19.4
Flexibility	6	16.7
Made-in-effect	6	16.7
Access to technology	5	13.9
Changing cost differentials	4	11.1
Access to skills and knowledge	4	11.1
Other transportation related	4	11.1
Strengthen brand	4	11.1
Capacity	4	11.1
Cultural differences (e.g. language barriers, cultural differences)	4	11.1
Supplier contracts	3	8.3
Strategy change	3	8.3
Emotional factors	3	8.3
IPR protection	3	8.3
Sustainability	2	5.6
Low cost	1	2.8
Labour productivity	1	2.8
Production cost	1	2.8
Access to raw materials	1	2.8
Requirement from customer	1	2.8
Centralization	1	2.8
Focus on core areas	1	2.8
Favourable home country work legislation	1	2.8

Table 4.7 – Appendix 4: Result from the hierarchical cluster analysis

Cluster	Driver	Interpretation
Cluster 1	Offshoring - Imitating competitors	Competition
	Offshoring - Price competitiveness	
	Reshoring - Exchange rate	Cost
	Reshoring - Favourable country legislation, incentives and/or taxation	
	Reshoring - Labor cost	
	Reshoring - Logistics cost	
	Reshoring - Customer related	
	Reshoring - Other supply chain related	
Cluster 2	Offshoring - Favourable country legislation, incentives and/or taxation	Labor
	Offshoring - Labor cost	
	Reshoring - Shortage of qualified personnel	Resource
	Reshoring - Made-in-effect	
	Reshoring - Flexibility	
	Reshoring - Proximity to R&D	
	Reshoring - Proximity to customer/Market access	
	Reshoring - Access to technology	
	Reshoring - Other costs	
Cluster 3	Offshoring - Low cost	Cost
	Reshoring - Lead-time	Operational performance
	Reshoring - Quality	

5 OPEN THE BOX: A BEHAVIOURAL PERSPECTIVE ON THE RESHORING DECISION-MAKING AND IMPLEMENTATION PROCESS

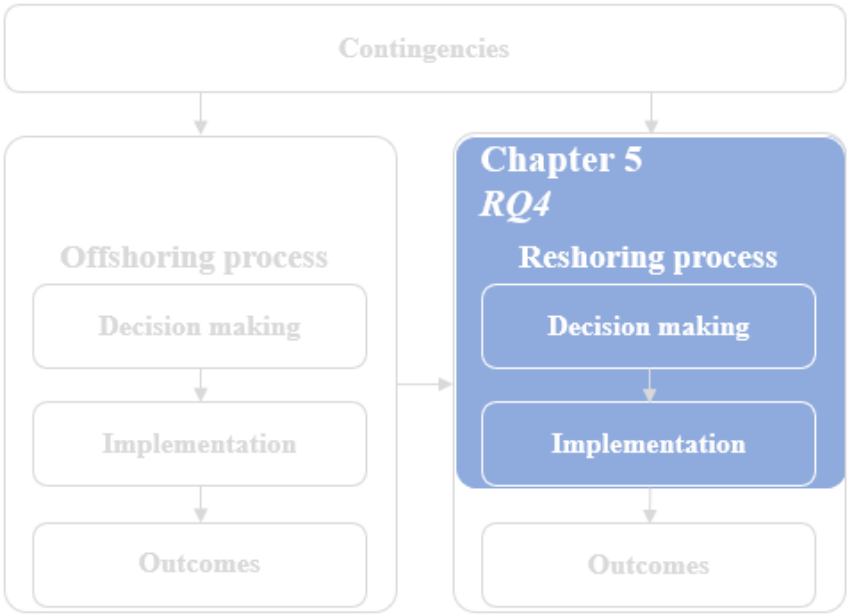

Figure 5.1 − Positioning of Chapter 4 in the overall research project

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5.1 Introduction

Starting from the '80s, firms tended to concentrate high value-added activities (such as research and development, marketing and post-sales services) in developed countries, and to move low value-added activities, such as labour-intensive manufacturing processes, to developing countries (Gereffi and Fernandez-Stark, 2016). This phenomenon is known in Economics and International Business literature as "Smiling Curve", a concept first introduced in 1996 by the founder and president of Acer, who observed that the share of value-added was shifting from the production stages to the pre- and post-production ones (Shih, 1996). The direct consequence of this trend is the movement of the lowest value-added stages towards developing countries, thus creating the so-called global value chains (Baldwin et al., 2014). At the firm level, this phenomenon gives rise to the offshoring trend, i.e., companies moving their (not core) activities to foreign countries, seeking for higher efficiency, specific resources, new markets and/or strategic assets (Dunning, 1988). However, the growing awareness of the hidden costs of offshoring (e.g., longer lead times, transportation costs, intellectual property losses, and cultural differences) and of the benefits generated by the control of the production stages (e.g., industrial commons) have recently led many companies to re-think their international value chains in terms of location and sometimes to reshore their production activities (i.e., bring them back home).

The reshoring phenomenon has gained increasing attention in the last decade. After the global recession, governments have started to idealize reshoring as the panacea for unemployment issues. Press and consultancy companies followed this wave, by developing reports and studies on scale and potentialities of the phenomenon (Booth, 2013; PricewaterhouseCoopers, 2012; Sirkin et al., 2013). Academic literature has not pulled back from the opportunity to explore the new trend from different perspectives, contributing to increasing the research interest on the topic (Barbieri et al., 2018; Di Mauro et al., 2018). After the first explorative articles, aimed at gaining an overview of the phenomenon and understanding whether it could be classified as a new global trend (Ellram et al., 2013; Kinkel et al., 2012), an urgent call to better define and characterize the phenomenon was launched by Gray et al. (2013). In fact, multiple terms have been used after the first article was published in 2007 (Kinkel et al., 2007). However, "reshoring" has been acknowledged as the most common label both among academics and practitioners (Barbieri et al., 2018; Wiesmann et al., 2017), and will, therefore, be used in this article. Despite the differences in terminology, some elements are shared across the recent literature on the *reshoring* definition (Fratocchi et al., 2014; Gray et al., 2013; Wiesmann et al., 2017): i) it is a location decision; ii) it can involve a change in the ownership; iii) it is the reverse of the offshoring decision, so it involves only previously offshored activities.

Moreover, this paper follows the assumption made by Fratocchi et al. (2014) that reshoring does not necessarily involve the complete closure of the company's offshore activities, which could be reconverted to the production of different products or simply reduced in volume.

Generally, the literature has focused on several factors underlying reshoring decisions: motivations (drivers), locations (e.g., low costs or developed countries), activities (e.g., labour or capital intensive) and governance modes (Fratocchi et al., 2014; Wan et al., 2019). In addition, a recent stream of literature started to look more in-depth into the two stages of the reshoring process, namely decision-making and implementation (Barbieri et al., 2018; Wiesmann et al., 2017). This need to open the box on the process was often included into the future research avenues suggested by scholars (Bals et al., 2016; Barbieri et al., 2018; Ketokivi et al., 2017; Stentoft et al., 2016a; Wiesmann et al., 2017) and Barbieri et al. (2018) ranked it among the main priorities for reshoring research. In fact, little knowledge has been gained in previous research about how firms decide to reshore and how they implement this decision (the "how" question identified by Barbieri et al., 2018). Moreover, studying the two stages (i.e. decision-making and implementation) of the process together can help in understanding which information is collected before and after the decision and to assess whether companies actually wait to take the decision until when they have complete and accurate information (Hartman et al., 2017).

Furthermore, available research (Barbieri et al., 2018; Stentoft et al., 2016c; Wiesmann et al., 2017), anecdotical evidence (e.g., numerous interviews to managers available in the news) and the fact that reshoring never became a mainstream fad across companies suggest that a purely "economic" evaluation of reshoring decisions seems to be insufficient to explain why firms reshore.

As the aforementioned stream of reshoring literature is still evolving and there is a general lack of empirical evidence, the aim of this work is to shed light on how companies take reshoring decisions and implement them, by highlighting the main phases, the information collected, the actors involved, and the main criticalities faced in each phase. Accordingly, the research question addressed in this research is the following:

RQ: How are the decision-making and implementation stages of the reshoring process structured? (Research question 4 in Chapters 2 and 6)

In order to answer to the aforementioned research question, we rely on a multiple-case study that was developed through a grounded theory approach, that allowed us to derive insights from four cases in the textile-clothing-leather-footwear (TCLF) industry and iteratively searching in the literature the most suitable theories to understand and explain them. Particularly, we considered the theories

available in the behavioural Operations and Supply Chain Management (O&SCM) literature, such as the dual-process theory (Kaufmann et al., 2014, 2017), the behavioural theory of the firm (Kirchoff et al., 2016), or, more in general, the assumptions behind bounded-rational decision-making (Bendoly et al., 2006, 2010; Gino and Pisano, 2008; Mantel et al., 2006). Our findings show how considering behavioural aspects in the case of reshoring is helpful in explaining even reshoring decision that might seem illogical when interpreted with the classical theories used to frame manufacturing relocation decisions (Gray et al., 2017; Gylling et al., 2015; Di Mauro et al., 2018; Oshri et al., 2019). In the end, we shed light on the critical points to which researchers, managers and policymakers should pay attention when considering reshoring decision-making and implementation.

The remainder of this paper is structured as follows. First, we present the background and research framework. Second, we explain and justify the adopted methodology. Then, we present and discuss the main results. Finally, conclusions, limitations and future research avenues close the paper.

5.2 Background and research framework

In our view, two streams of O&SCM literature are relevant to our research. The first one is focused on reshoring and provide evidence on drivers and motivations of the phenomenon as well as on decision-making and implementation (despite literature on these two last topics is scant). The second one – which emerged during the data analysis stage (grounded theory approach) – is instead focused on behavioural decision-making and sheds light on how the decision-making works in a context characterized by bounded rationality and not fully available information.

In this section, we summarize the two above mentioned streams of studies and we develop our conceptual framework.

5.2.1 Reshoring

The most recent systematic literature reviews on reshoring (Barbieri et al., 2018; Stentoft et al., 2016c; Wiesmann et al., 2017) acknowledged that a significant part of the literature has so far focused on the drivers or motivations of reshoring. Initially, the researches contributed to outlining a "dual view" of reshoring (Barbieri et al., 2018), by interpreting it either as a correction of a managerial mistake (Gray et al., 2013; Kinkel and Maloca, 2009) or as a strategic decision to face exogenous or endogenous changes (Fratocchi et al., 2015; Gylling et al., 2015; Martínez-Mora and Merino, 2014). More recent studies proposed instead a wider set of reshoring motivations/drivers and classified them. To this regard, Barbieri et al. (2018) recognized that the literature has followed two main approaches to classify drivers: the first is aimed at grouping motivations in homogeneous categories (Ellram et

al., 2013; Stentoft et al., 2016c; Wiesmann et al., 2017; Zhai et al., 2016), the second is instead oriented to the use of theory-driven classification criteria grounded on Dunning's eclectic paradigm or on Transaction Cost Economics and Organizational Buying Behaviour (e.g., Ancarani et al., 2015; Bals et al., 2016; Fratocchi et al., 2016; Foerstl et al., 2016).

Barbieri et al. (2018) proposed instead a classification that tries to take into account all the previously described approaches. They first separated drivers between strategic decisions and managerial mistakes; then they further divided strategic decision drivers into internal and external environment, and finally proposed a homogeneity-wise classification to reach the lowest level of classification. All the above-mentioned studies contribute to demonstrate the heterogeneity of factors driving the reshoring decisions (Di Mauro et al., 2018) and therefore, the intrinsic complexity that decision-makers have to face (Gray et al., 2017).

The identification of the drivers represents the first step towards a better understanding of reshoring decision-making. In fact, these factors should be taken into account by companies during the decision-making stage and monitored during the subsequent implementation. After having gained a widespread understanding of the drivers (the "Why" question according to Barbieri et al., 2018), the literature is therefore progressively evolving towards understanding "How" these drivers are considered, i.e. "How" companies decide and implement the decision.

Fratocchi et al. (2014) made a first attempt to conceptualize the manufacturing internationalization as a multi-step process, which considers the dynamic continuum between offshoring and reshoring. More recently, Joubioux and Vanpoucke (2016) developed, and empirically refined through a multiple-case study in the aeronautical industry, a conceptual framework to guide location decision-making. This framework encompasses the initial offshoring decision, the reconsideration of this decision and the "new" decision. While the initial offshoring decision is analysed in detail within the framework (by considering the firm's strategy, the analysis of risk, opportunity and constraints, and the entry mode), the reconsideration and "new" decision – i.e., reshoring in our case – is viewed as a change in the decision factors without any further in-depth analysis.

Bals et al. (2016) proposed instead a reshoring decision-making and implementation process framework, with the main objective to frame future research avenues. The framework – drawn by the authors from previous literature on outsourcing and offshoring without an empirical validation – encompasses a linear process consisting of eight phases, as reported in Table 5.1. Reasonably, what separates the decision-making from the implementation is the decision. To the best of our knowledge,

this article is the only one taking into account both decision-making and implementation, thus suggesting their very strong interplay.

Table 5.1 – Phases of the decision-making and implementation process (Bals et al., 2016)

Decision-making	1. Determine the current boundary of the firm
	2. Capability and performance analysis of the current state
	3. Information gathering on alternatives (including own capabilities)
	4. Data analysis and solution development
	5. Shoring sourcing decision
Implementation	6. Disintegration at former source/location
	7. Relocation to new source/location
	8. Reintegration to connect with other value creation activities

By building on this perspective entailing the separation between decision-making and implementation, Benstead et al. (2017) develop a conceptual framework that considers decision-making in terms of drivers and some implementation considerations as separate building blocks.

By taking a different perspective, Gray et al. (2017) developed a model of offshoring-reshoring decisions based on empirical evidence from several SMEs. While the previously mentioned frameworks theorized the presence of a decision-making (and in some cases of an implementation) made of well-defined phases, Gray et al. (2017) conveyed a sense of intrinsic complexity in the decision-making; in fact, they develop a system dynamics model that allows the simulation of complex and dynamic behaviour, capturing also loops in the process and time delays. The authors suggested that the complete analysis of all costs and benefits of offshoring versus reshoring would not help companies in their decision-making since it would just slow down the process (given the uncertainty characterizing the location decisions and the difficulty in developing accurate forecasts). They rather strived for the "ecological rationality" concept (Gigerenzer, 2008) and advise using tools whose analysis level would consider the complexity and uncertainty of the decisions. Similarly, Boffelli et al. (2018) provided insights about a non-linear decision-making and implementation process, characterized by a cyclical nature, loops and trial and errors.

Finally, Oshri et al. (2019) took into account the Behavioural Theory of the Firm to explain the inclination to bring back activities in-house. Particularly, the authors developed a model showing how dissatisfaction with offshoring affects firms' inclination to reshore and how this depends on

managerial expectations about the technical challenges, the possible financial losses and the potential decline in quality.

5.2.2 Behavioural decision-making in O&SCM

Many traditional theoretical models in the O&SCM field are based on the assumption that decisions are made in a rational way, i.e., assume rational decision-making (Gino and Pisano, 2008). Rational decision-making is characterized by the analysis of comprehensive information, the development of alternative actions and the selection of the one that optimizes a specific utility model (Eisenhardt and Zbaracki, 1992; Mantel et al., 2006; March and Simon, 1958). This kind of process implies active decision-making, which is "*intentional and conscious, involving a much greater degree of information search and analysis*" (Dutton, 1993, p. 342).

After Simon's (1955) pioneering work, scholars have started to realize that managerial decision-making does not always follow the rational model rules (Busenits and Barney, 1997). This rational model is built on an oversimplified view of the decision-making process, assuming a predetermined set of alternatives and future scenarios, known effects of such alternatives in each specific scenario, available information about the probabilities associated to each scenario, a well-defined "pay-off" function (Simon, 1955). Instead, actual decision processes carried out within organizations are "approximately rational", depending on the knowledge and ability of the people involved in the decision to gather information, map alternatives, define aspirational levels and select one among the satisfactory alternatives. In fact, decisions are made by humans, who are "bounded" in their ability to acquire and process information (Mantel et al., 2006) and prone to achieve the satisfaction of constraints rather than objectives optimization (Gigerenzer and Brighton, 2009). As a consequence, decision-makers tend to be biased and use simplified heuristics when dealing with complex problems (Mantel et al., 2006; Tversky and Kahneman, 1974). Biases and heuristics are "*decision rules, cognitive, mechanisms, and subjective opinions people use to assist in making decisions*" (Busenits and Barney, 1997, p. 12), as such, they are applied in automatic, bounded-rational decision-making (Dutton, 1993). Similarly, Kaufmann et al. (2014) distinguish between rational and intuitive decision-making as basic types of systems identified by the dual process theory. According to this theory, in rational decision-making, a substantial amount of information is gathered and processed through structured procedures (Dean and Sharfman, 1993; Kaufmann et al., 2014). Instead, intuitive decision-making imply either an affectively charged decision based on emotional processing (Dane and Pratt, 2007; Kaufmann et al., 2014, 2017) or experience-based intuition that derive from a vast expertise

and domain-specific knowledge acquired through associative learning (Burke and Miller, 1999; Kaufmann et al., 2014, 2017; Sadler-Smith and Shefy, 2004; Salas et al., 2010).

As one could imagine, rational decision-making involves a sequence of phases (e.g. identification, development and selection). Instead, in bounded-rational or intuitive decision-making, the same phases do not display the same sequential relationship (Eisenhardt and Zbaracki, 1992). As an example, Mintzberg et al. (1976) show that decisions follow multiple routines in each phase and that phases and routines might repeat without adhering to a specific sequence. Instead, Gino and Pisano (2008) identify four steps that are part of the decision-making, independently from the specific context considered: (1) Acquisition of information; (2) Processing of information; (3) Outcome; (4) Information received through feedback.

Multiple studies have investigated the assumptions behind the two types of decision-making, finding evidence of multiple relevant variables to be considered. Among others, many authors refer to decision complexity (Busenits and Barney, 1997; Eisenhardt and Zbaracki, 1992; Elia et al., 2019; Gino and Pisano, 2008; Mantel et al., 2006); anchoring effect, namely the people's tendency to rely too heavily on a limited amount of information and alternatives in order to make a decision (Bendoly et al., 2010; Carter et al., 2007; Elia et al., 2019; Gino and Pisano, 2008; Kahneman and Lovallo, 2003; Kirchoff et al., 2016; Tversky and Kahneman, 1974); risk and uncertainty (Busenits and Barney, 1997; Kirchoff et al., 2016; Li et al., 2014; Mantel et al., 2006); information availability (Gigerenzer and Brighton, 2009; Gray et al., 2017); and personal traits of the decision-makers (e.g. experience, issue familiarity and relevance to the self, role in the organization) (Busenits and Barney, 1997; Dutton, 1993). These studies found evidence that in an environment characterized by high complexity, high uncertainty or information paucity, less rationality is not only required but even preferable.

Unexpectedly, even with its limitations, bounded-rational decision-making has proved to be effective and efficient, given that it is less time-consuming and leads to higher accuracy in uncertain and complex environments (Busenits and Barney, 1997; Gigerenzer and Brighton, 2009; Gray et al., 2017). In fact, Kaufmann et al. (2014) claim that in environments characterized by high dynamicity or decisions for which objective information is not available, intuitive decision-making allows the achievement of positive decision outcomes (Dane and Pratt, 2007; Kaufmann et al., 2014). Nevertheless, organizations need to become aware of the biases that can be introduced in this kind of decision-making and put in place specific actions to overcome them (Eisenhardt and Zbaracki, 1992; Gino and Pisano, 2008; Mantel et al., 2006).

Acknowledging the impact of human behaviour on decision-making, many fields have started to introduce behavioural considerations in their theories (e.g. economics, finance, marketing) (Gino and Pisano, 2008). In International Business literature, Rugman and Verbeke (2003) provide an extension of the theory of the multinational enterprise by acknowledging the presence of bounded rationality in complex multinational enterprises decision-making; in fact, the top management often lacks visibility over the subsidiaries' opportunities and threats, thus it is not capable to make correct decisions and needs to delegate the decision-making at the subsidiary level. Only recently, O&SCM started to follow the lead of the other fields, such as International Business (Bendoly et al., 2006; Gino and Pisano, 2008; Kaufmann et al., 2014, 2017; Kirchoff et al., 2016; Mantel et al., 2006). In fact, many O&SCM contexts, characterized by a certain degree of complexity, face the risk to be affected by decision-making biases (Gino and Pisano, 2008). Among others, decisions connected to the Supply Chain (e.g. make or buy, manufacturing location decisions) potentially have all the characteristics underlying bounded-rational decision-making (Mantel et al., 2006; Wu and Pagell, 2011). Also in the context of reshoring, being such decision usually characterized by high complexity (Gray et al., 2017; Wiesmann et al., 2017) and high uncertainty (Ciabuschi et al., 2019), various researchers have claimed that decision-making can show bounded-rational features (e.g. use of heuristic, emotional attachment, personal feelings, perceptions and mood influence) (Ciabuschi et al., 2019; Gray et al., 2017; Gylling et al., 2015; Di Mauro et al., 2018; Oshri et al., 2019).

5.2.3 Conceptual framework

The review of the two streams of O&SCM literature presented in Section 2.1 and 2.2 allowed us to identify a set of constructs potentially relevant for our research (see Table 5.2). The literature on reshoring decision-making and implementation is rather scant and mostly based on two constructs: the structure of the decision-making and the sequentiality between decision-making and implementation phases (i.e. sequential vs. overlapped). The behavioural literature is instead much broader, we focused therefore on the most widely shared elements/constructs; namely, the rationality of the decision-making (rational vs. intuitive, divided between experience-based and emotional processing), the complexity of the decision and the presence of an anchoring effect. The constructs, upon which we based our analysis of the cases, are detailed and described in Table 5.2.

Table 5.2 − Elements considered in this study

Literature stream	Element/construct	Description	References
Reshoring	**Decision-making phases**	In reshoring literature, the phases of the decision-making process have been conceptualized as either sequential and linear (in a sort of stage-gate process) or with loops and recycle (similarly to a flexible kind of process) ***Values: Stage-gate; Flexible***	Bals et al. (2016); Boffelli et al., (2018); Gray et al. (2017); Joubioux and Vanpoucke, (2016)
	Sequence between decision-making and implementation	Decision-making and implementation are usually considered as separated, but similarly to the phases of the decision-making, keeping an overlapping between the two allow to collect more information and to be flexible in making and revise the reshoring decision ***Values: Sequential; Overlapped***	Bals et al. (2016); Barbieri et al. (2018); Benstead et al. (2017); Boffelli et al. (2018); Gray et al. (2017)
Behavioural O&SCM	**Rationality vs. intuitiveness (experience-based vs. emotional processing)**	According to the dual process theory, decision-making can be rational or intuitive, the latter being divided into experience-based and emotional processing according to the multiple-system approach ***Values: Rational; Intuitive (experience-based); Intuitive (emotional processing)***	Carter et al. (2007); Kaufmann et al. (2014); Kaufmann et al. (2017)
	Complexity of the decision	A complex decision involves a high number of variables or alternatives to be considered, the time pressure, the information availability, the presence of competing objectives ***Values: High; Medium; Low***	Bendoly et al. (2006); Bendoly et al. (2010); Busenits and Barney (1997); Eisenhardt and Zbaracki (1992); Elia et al. (2019); Gino and Pisano (2008); Mantel et al. (2006)
	Anchoring effect	People's tendency to rely too heavily on a limited amount of information and alternatives in order to make a decision ***Values: Anchoring to the home country; Anchoring to the host country; No anchoring***	Bendoly et al. (2010); Carter et al. (2007); Elia et al. (2019); Gino and Pisano (2008); Kahneman and Lovallo (2003); Kirchoff et al. (2016); Tversky and Kahneman (1974)

To summarize, the conceptual framework of this research, depicted in Figure 5.2, attempts to bring together the two considered literature: the reshoring literature and the behavioural decision-making literature. By doing so, we aim to achieve a better and more realistic characterization of the reshoring decision-making and implementation.

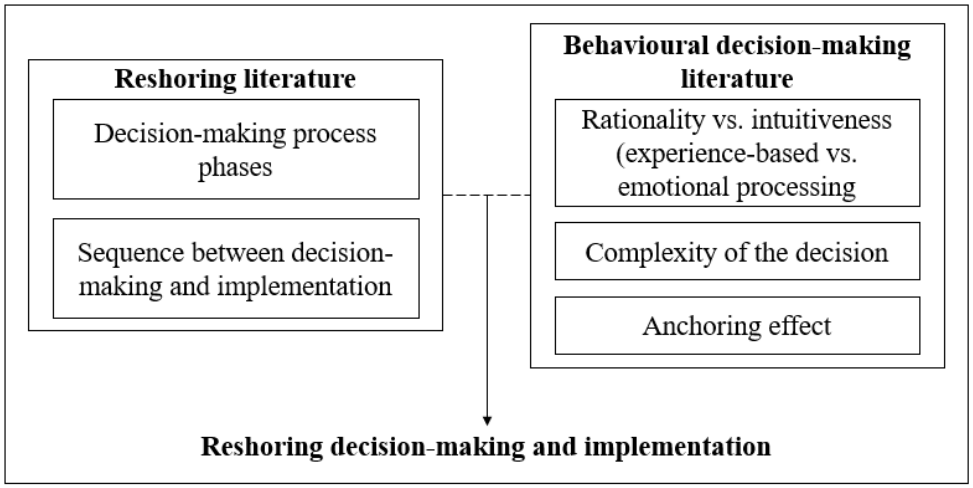

Figure 5.2 − Conceptual framework

5.3 Methodology

5.3.1 Research method and sampling

We employed the inductive multiple case study methodology (Yin, 2003; Patton, 2002; McCutcheon and Meredith, 1993). This approach – which is ‘‘particularly oriented towards exploration, discovery, and inductive logic’’ (Patton, 2002) – was well suitable for the research question of our study (i.e., “how are the decision-making and implementation stages of the reshoring process structured?”) and more in general for the development of data grounded theories (Eisenhardt, 1989; Voss et al., 2002).

Consistently with previous reshoring literature (e.g., Ancarani et al., 2015; Wan et al., 2019), the unit of analysis was the individual reshoring project/decision. As suggested by a number of researchers (e.g., Eisenhardt, 1989; Glaser and Strauss, 1967), we adopted a theoretical sampling method. We employed indeed a homogeneous sampling strategy (i.e., concentrating on picking homogeneous cases or studying in-depth sub-groups with homogeneous characteristics) as a form of theoretical sampling (Fletcher and Plakoyiannaki, 2011; Mahoney and Goertz, 2004; Patton, 2002). More in detail, we concentrated on reshoring projects of companies in the TCLF industry which brought production back to Italy. Despite this approach might reduce the possibility to generalize findings, it

ensures that variation is not caused by extraneous or confounding variables (e.g. Saunders et al., 2003). We then selected heterogeneous cases in term of product/component object of the relocation, firm size, relocation year, and governance mode in order not to limit too much the generalizability of the results. The TCLF industry was selected since it has been one of the most affected by globalization in the last decades and, consequently, by the reshoring phenomenon in more recent years (Di Mauro et al., 2018; Fratocchi et al., 2016). Moreover, this choice has been strategic, given that it allowed us to leverage on the results provided by Di Mauro et al. (2018), who studied motivations, governance modes and location choices of companies from the same industry and country.

Four reshoring projects with the characteristics mentioned above have therefore been selected (see Table 5.3). Because a reshoring decision is often related to "intangible" drivers, such as the company image, respondents may be prone to highlight the successful aspects of the operation and describe the decision-making as a very logical sequence of phases. To avoid this social desirability bias (Chung and Monroe, 2003), we ensured companies anonymity.

Table 5.3 – Summary of cases

Characteristic	**Case A**	**Case B**	**Case C**	**Case D**
Core business	Total look clothing	Zip fasteners	Outer wear	Dyeing
Product/ component object of the relocation	Seamless sweater	High-end zip fasteners	High technical content outerwear	Dyeing of basic colours yarns
Turnover 2016 (mln €)	>50	44106	18537	44106
Employees 2016	>250 (Group)	10-50 (Italy) – 50-250 (China)	10-50 (Italy) – >250 (Romania)	50-250
Starting country → Final country	Croatia → Italy	China → Italy	Romania→ Italy	Hungary→ Italy
Relocation year	2016	2010	2014	2011
Governance mode (Offshoring→ Reshoring)	Outsourcing (captive supplier[5]) → Insourcing (wholly-owned plant)	Insourcing (joint venture) → Insourcing (wholly-owned plant) + Outsourcing (external suppliers)	Insourcing (wholly-owned plant) → Insourcing (wholly-owned plant)	Insourcing (joint venture) → Insourcing (wholly-owned plant) + Outsourcing (external suppliers)
Interviewees' roles	Chief Operating Officer (COO)	Chief Operating Officer (CEO)	Production and foreign office manager	Entrepreneur

[5] Captive supplier is a supplier who is owned (controlled) by the customer company or by the group to which the customer company belong to.

Considering that the decision-making and implementation process usually lasts various months (sometimes years), we adopted a retrospective longitudinal approach. Various strategies were adopted to minimize the two main issues of retrospective research: lack of memory and post-rationalization (Voss et al., 2016). The first problem is related to the impossibility to recall important events that happened a long time before; to overcome this problem the selection of the interviewees and the assessment of their knowledge about the events have been of fundamental importance (Voss et al., 2016). Post-rationalization concerns a change in the interpretation of events over time; consequently, we triangulated data from secondary sources (Voss et al., 2016).

5.3.2 Data collection

The data collection was based on direct semi-structured interviews with the key informants of the companies as reported in Table 5.3 (in each specific case we interviewed the person that was more involved in the reshoring decision-making and implementation).

The interview checklist was developed based on the reshoring literature (see Section 5.2.1) and consisted of four sections: (1) general information about the company and the interviewees; (2) evolution of the manufacturing footprint; (3) reshoring decision-making; and (4) implementation (see Appendix A). In order to avoid any confirmation bias (Nickerson, 1998), even if we had in mind an idea of decision-making and implementation process proposed by Bals et al. (2016), we asked the respondents just to recall how the process went and the decisions were taken.

Each interview was carried by two members of the research team and lasted at least two hours. All interviews were recorded and fully transcribed.

We created a database for each case consisting of the interview transcripts, field notes, and archival data. Preliminary versions of the case studies reports were developed and sent to respondents to verify information accuracy. Based on the feedback received, a second (final) version of each case study report was then developed.

5.3.3 Coding and data analysis

Given the need for more theory in the reshoring literature and the complexity of the reshoring decision-making and implementation, we used a grounded theory approach (Strauss and Corbin, 1998), i.e., we iteratively analyzed data and reviewed existing literature. More in detail, while the interview checklist was only based on the reshoring literature, we noticed from the first round of data analysis that some behavioural constructs could be potentially relevant. We, therefore, reviewed in

detail such additional literature stream and performed again the data analysis based on such constructs.

The coding process was carried out by two different researchers separately to ensure a robust and shared data reduction process (Miles and Huberman, 1994; Voss et al., 2016). An additional researcher was assigned the role of "resident devil's advocate" in order to discuss and resolve any disagreement. Table 5.4 in the cross-case analysis results section (Section 4.2) shows how the main constructs have been coded; Appendix B, instead, reports a set of relevant quotations from the interviews.

As suggested by Eisenhardt (1989), we first performed a within-case analysis, to become intimately familiar with each case without aiming at generalizing patterns among the cases; then, a cross-case analysis allowed us to generalize the conclusions drawn from the cases.

5.3.4 Validity and reliability

The data collection and analysis were designed to guarantee construct validity, internal and external validity and reliability (Voss et al., 2002). Particularly, the construct validity was achieved through triangulation of data sources, as well as through the involvement of multiple researchers in all the steps of the research. Internal validity was ensured by following a pattern matching approach: the propositions were developed in an iterative way until theoretical saturation was reached. External validity was strengthened thanks to the multiple case method that allowed to compare results and evidence across cases. Finally, reliability was ensured by the transparency of the research process as well as by the development of a research protocol on which the semi-structured interviews were based (see Appendix A).

5.4 Results

5.4.1 Within-case analysis

Case A (Total look clothing)

The company is headquartered in Northern Italy, where the high value-added activities are also carried out (e.g. design, purchasing, sales, and production planning). Between the 1990s and 2000s, the company delocalized its production activities first in Spain, then in France, Tunisia, and Eastern Europe. Starting from 2005, the company has started to outsource production activities to external suppliers as well as to a manufacturing company belonging to the same group. In 2016, company A decided to bring back some machinery from Croatia to Italy and start to produce again a specific

product, a seamless sweater, there. The machinery was bought from the mentioned manufacturing company belonging to the same group of company A and partially updated with cutting edge technologies, thanks to the collaboration with a strategic machinery supplier. Moreover, all the raw materials (yarn) and accessories (e.g. zips, buttons) suppliers, selected for this product, are located in Italy, to ensure the achievement of a true "Made in Italy" product. The "Made in" effect was indeed one of the main drivers of the reshoring decision. Other drivers, according to the company's Chief Operating Officer (COO), were the lower need to rely on human workforce allowed by the new technology used, the development of innovative know-how, the higher service level towards the retailers, the internal branding (towards the employees), and the proximity between production and research and development (R&D). The main barriers were instead the labour cost, partially compensated by the adoption of higher automated technology, and the lack of some competences in Italy lost due to the extensive offshoring processes of the last decades.

Nowadays, company A has decided to stop the production of the seamless sweater and to bring the machinery back again to Croatia. The main reason behind this choice is that the customers have not appreciated the "new" product, therefore its production has been terminated.

The company has not followed a structured ***decision-making*** during the reshoring decision. The decision was triggered by the opportunity to improve the brand perception by the customer and to use a low labour-demanding technology that allowed to reduce the cost gap between Croatia and Italy. In the process, besides the Chief Executive Officer (CEO) and the Chief Operating Officer (COO), various company departments were involved: marketing and communication, the sales department and R&D. The decision-making took two months and entailed an analysis of the costs associated with the shipment of the machinery from Croatia to Italy, the design and development of the new product, as well as, its pricing. The final reshoring decision was made by the CEO.

After the decision was taken, everything has been set up in the reshoring location in Italy (***implementation***): the raw materials were ordered, the machinery was shipped to the new production site, the human resources were hired through an internal process and trained. After three months the production started, first with a pilot production and then with the regular process. An ex-post analysis allowed to establish the differences in the production costs, lead time, and margins with respect to similar sweaters produced with different technologies and in different plants. All these data, as well as the sales-related data, were constantly monitored. During the implementation, the operations management function has been heavily involved, to manage the production process.

Figure 5.3 provides a summary of the reshoring decision-making and implementation of company A, with the detail of activities and involved stakeholders (in italics).

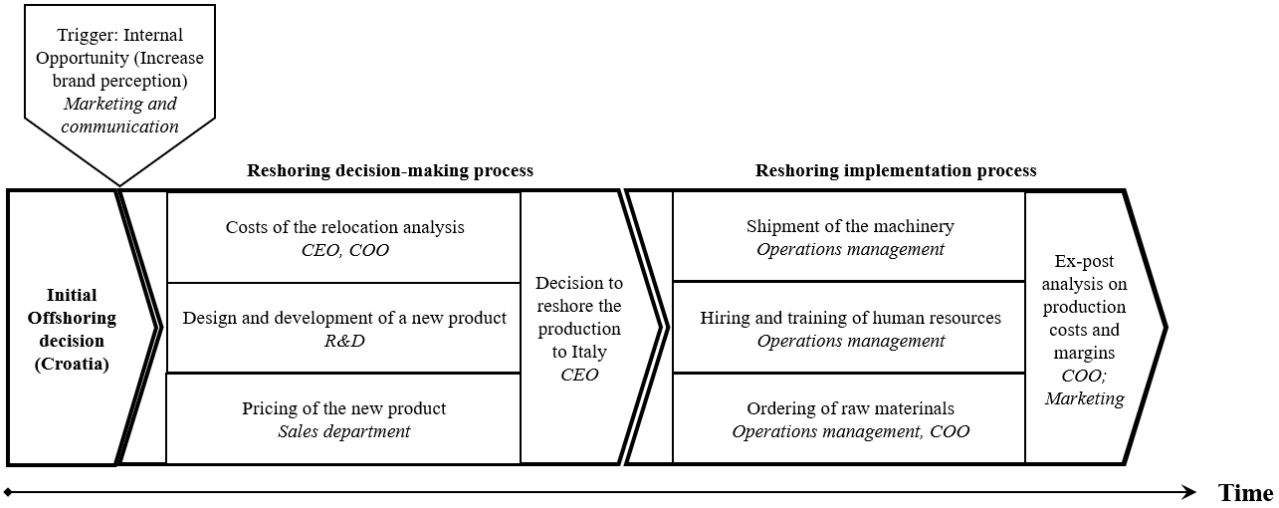

Figure 5.3 – Decision-making and implementation process of case A

Case B (Zip fasteners)

The company was established in Northern Italy and always maintained there its headquarters. It is a family firm and the strategic decisions regarding the company are taken by the two family members (father and son) who still run the company. In the 80s, the company opened a joint venture in China, where half of the employees (almost 100 people) were dedicated to the production activities. The Chinese plant is currently focused on the production of low-end products. In 2010, the company decided to move part of its manufacturing activities back to Italy, to extend the core business to high-end products (e.g. zips and other accessories for clothing and leather items) for luxury brands. The manufacturing activities of the low-end products were instead kept in the Chinese joint venture plant. The new plant in Italy is much less vertically integrated than the Chinese one; in fact, it is more economically convenient to outsource some activities to external suppliers, despite finding capable suppliers has been a real challenge for company B.

The main drivers of the relocation decisions, as stated by the company's Chief Executive Officer (CEO), were the search for a new and more profitable market, the need for a higher quality, having a "Made in Italy" product, guaranteeing a higher service level to the luxury brands, lower costs for quality control and intellectual property protection. The main barriers have instead been the suppliers' shortage, an issue significantly underestimated by the company, the lack of public funding for reshoring initiatives, especially for SMEs, the establishment of commercial agreements among different brands that became part of larger groups (e.g. Kering, LVMH) that limited the freedom of supplier selection to a lot of company B's potential customers, and the weakness of the case company's brand with respect to some bigger competitors (more likely to be selected by the large customers).

The company has not followed a structured ***decision-making*** during the reshoring decision. The decision was triggered by the opportunity to enter into a "new" more profitable market (high-end products for the luxury brands). The entrepreneur, eager to seize this opportunity, did not lose much time into data collection and analyses. General information about costs, financing opportunities, as well as the investment analysis was developed with the support of an external business consultant. The decision-making took almost six months and the people involved were the two entrepreneurs (family members), the business consultant and a technical expert to support the machinery selection. After the decision was taken, the ***implementation*** took six months, the time needed to produce and import the machinery from China. Some criticalities were encountered along the implementation. First, it was more difficult than expected to penetrate the new market, thus leading to lower revenues and a longer time to recover the investment. Moreover, the company missed to evaluate the presence and availability of suitable suppliers during the decision-making; this revealed to be a critical issue during the implementation, since the company had still to import some components from China, thus increasing its inventory costs. To resolve the issue, the company have had to make some additional investments to train and help some strategic partners to develop the needed competencies.
Figure 5.4 provides a summary of the reshoring decision-making and implementation of company B, with the detail of activities and involved stakeholders (in italics).

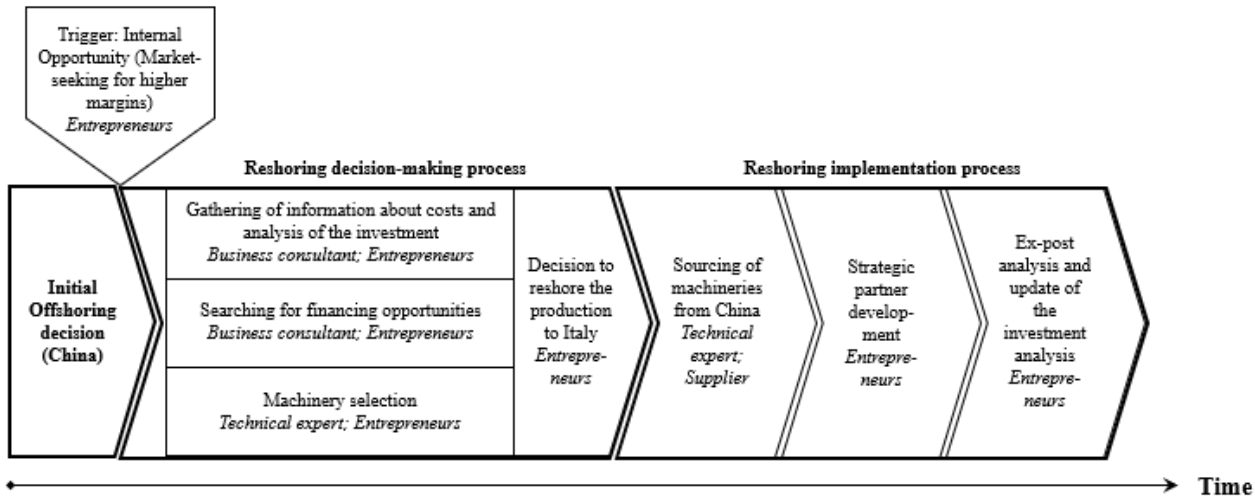

Figure 5.4 – Decision-making and implementation process of case B

Case C (Outerwear)

The company's headquarters are in Northern Italy, where all the high value-added activities have always been maintained (e.g., administration, management, R&D, purchasing, sales, quality control). Case C is a family firm at the third generation, with family members from two generations involved

in the top management. Starting from the '90s, the company has begun the process of manufacturing delocalization to Romania. In the beginning, the activities were entrusted to third-party suppliers. A fully owned company was then founded in Romania in 1996. In 2008, the case company decided to run a production test in China. However, due to quality issues, all the manufacturing activities were brought back to Romania in 2011. In 2014, because of the customers (high-end brands of technical and sports clothing) requests for small batches of very high-quality and highly innovative products, the company decided to bring some production activities back to Italy.

The production and foreign office manager has identified three main drivers of this reshoring decision: the difficulty to produce small batches in Romania, the high technological content of the products and the need to maintain a linkage between the high value-added activities and the manufacturing. The main barriers have been the lack of competences in Italy (the company has been able to find sewing abilities only in people graduated from design or fashion-oriented courses, thus quite expensive employees) and consequently, the high labour cost, which was partially compensated by the higher value recognized by the customer to a "Made in Italy" product.

The company has followed a ***decision-making*** made of few phases, to some extent well-defined. The decision was triggered by the difficulty of the plant in Romania to manage small volumes, as requested by some customers. Therefore, the first phase was an analysis of the current situation, to evaluate the lowest batch size that the Romanian plant could handle. Then, the products that could not be realized in Romania (due to the small batches required) were identified and the company started looking for alternatives, such as outsourcing to external suppliers in Romania or reshoring to Italy. Information was collected about the available capacity at home, the costs connected with reshoring, the availability of potential suppliers and the sales forecasts. All the data confirmed the convenience of the reshoring solution. The final decision was made by the entrepreneur, with the support of the production manager. An important role in making the decision-making very fast (less than six months) was played by the experience of the entrepreneur, and by the limited risk connected with the decision, given that the plant in Romania was maintained (for products with larger batches).

After the decision was taken, the ***implementation*** was very short (almost immediate) given that both the Italian and the Romanian plants were already operative. The company did not feel the need to reintegrate production with the other activities, because this integration was not lost during the previous offshoring process (the company maintained both the plant in Italy and in Romania). Some criticalities were encountered because of the increased workload on the employees. The company tried to hire new employees, but this was a difficult task because of the competence shortage in Italy (its home country). On the contrary, the company found great support from the suppliers, that were willing to agree very convenient conditions just to support the increase of local (domestic) orders.

The biggest benefit was an increase of sales thanks to the "Made in Italy" brand and this has convinced the company to go further in this pilot production and, for the next future, to bring an entire production line in Italy.

Figure 5.5 provides a summary of the reshoring decision-making and implementation of company C, with the detail of activities and involved stakeholders (in italics).

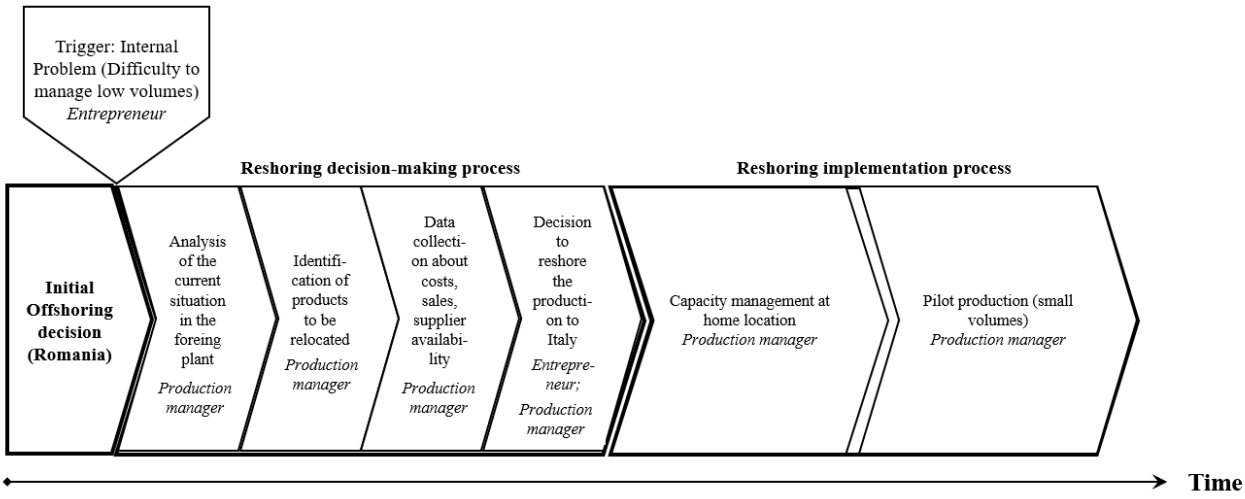

Figure 5.5 – Decision-making and implementation process of case C

Case D (Dyeing)

The company D is headquartered in Northern Italy and its core activities concern the dyeing and finishing of cotton yarns. It is recognized as one of the leading companies in the activities aimed at increasing cotton yarn quality. However, it is an intermediate actor that struggles in maintaining its margin and is pressed both by suppliers and customers. To stand over this pressure, the company has strategically decided to establish very tight partnerships with its customers, thus making them aware of the difficulties faced and seeking for collaborative problem-solving. Of course, this puts its first customer in a very powerful position, given that almost 40% of sales depend on this customer. Following the request of the abovementioned strategic customer, in 2004 the company moved part of the production in Hungary, by acquiring a local dyeing company. When in 2011 the customer decided to further offshore its production from Hungary to Egypt, company D decided to reshore the production to Italy, where some production capacity was still available.

During the offshoring experience, company D was also able to insource some activities, that were not part of its traditional production process. After reshoring, these activities were then outsourced again to an Italian supplier. The availability of suppliers in Italy was a key factor in allowing the firm to

reshore. No barriers were identified except for the loss of the investment in the Hungarian plant, that was not sustainable anymore without the strategic customer.

The company's reshoring ***decision-making*** was triggered by the choice of its strategic partner to further offshore its production from Hungary to Egypt. Therefore, being the investments needed in the Hungarian plant not affordable, the company decided to bring its production back to Italy. The decision-making was therefore very simple: first, the company looked for some alternative partners; then, it evaluated the availability of production capacity at home; and finally, the entrepreneurs (the three brothers running the company) decided to reshore the production. The whole decision-making took just 4 months.

The ***implementation*** was immediate since the production activities were maintained in Italy also during the offshoring. The company just needed to contact the customers to communicate the decision and to assess whether they wanted to change the ordered quantity, given that the Made in Italy product had different pricing. Moreover, some employees with technical skills were involved in a reverse engineering activity to identify the process characteristics (in terms of chemicals, treatments, temperatures, etc.), with the aim to obtain the same product that was manufactured in Hungary.

Figure 5.6 provides a summary of the reshoring decision-making and implementation of company D, with the detail of activities and involved stakeholders (in italics).

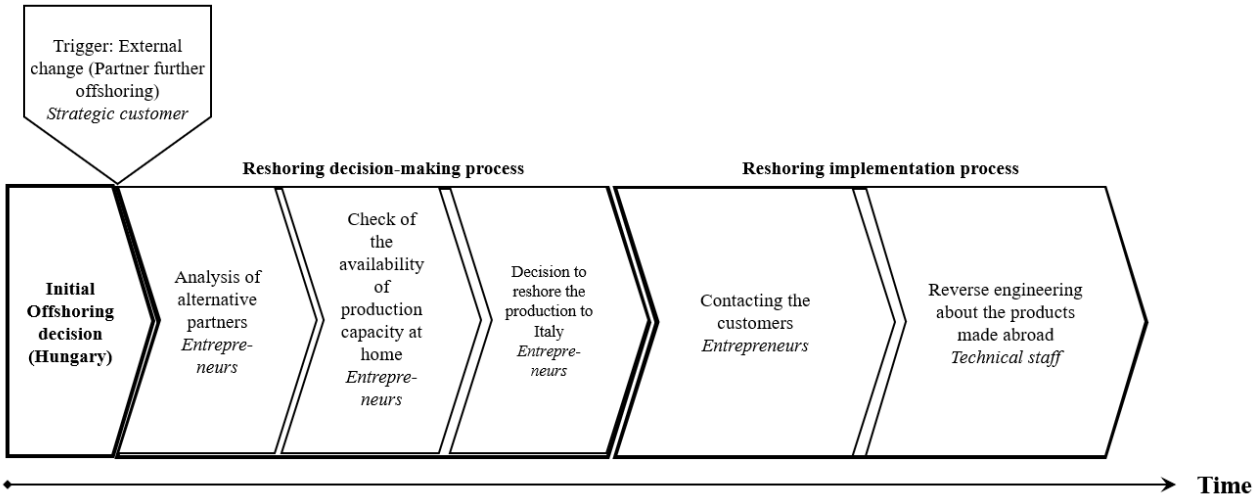

Figure 5.6 – Decision-making and implementation process of case D

5.4.2 Cross-case analysis

As explained in the methodology section (Section 5.3.3), the grounded theoretical approach allowed us to dynamically assess which constructs were the most suitable to frame and explain our results. In the end, we coded the data according to the five constructs, two from the reshoring literature and three

from the behavioural decision-making literature, as reported in Table 5.2 and Figure 5.2. Table 5.4 shows the results of the coding process and provide a first comparison among the four cases.

Table 5.4 − Cross-case comparison on reshoring and behavioural decision-making elements

	Reshoring elements			
	Case A	**Case B**	**Case C**	**Case D**
Decision-making phases	Flexible	Flexible	Stage-gate	Stage-gate
Sequence between decision-making and implementation	Overlapping (presence of an ex-post analysis)	Overlapping (presence of an ex-post analysis)	Sequential	Sequential
	Behavioural decision-making elements			
	Case A	**Case B**	**Case C**	**Case D**
Rationality vs. intuitiveness (experience-based vs. emotional processing)	Intuitive (experience-based and emotional processing)	Intuitive (experience-based and emotional processing)	Partially Intuitive (experience-based), partially rational	Intuitive (experience-based)
Complexity of the decision	High complexity: insourcing; no previous manufacturing activities; new production plant at home; high number of considered variables	High complexity: insourcing; previous manufacturing activities only offshore; new production plant at home; high number of considered variables	Low complexity: insourcing; previous production activities at home; existing production plant at home; few considered variables	Medium complexity: insourcing; previous production activities at home; existing production plant at home; high number of considered variables
Anchoring effect	Host country anchoring	No anchoring (Made in Italy was a driver)	Home country anchoring	Home country anchoring

The analysis of cases has highlighted that each ***decision-making*** has its own specificities. In some cases, it is very flexible, with phases/activities often done in parallel in a very exploratory way (Cases A and B). Even when the decision-making was better defined and followed a stage-gate approach (Cases C and D), a common path cannot be identified. Anyway, all the companies recognize that if they had better structured their decision-making, the reshoring would have been more effective and efficient. In general, lots of information is collected and processed (e.g. demand forecasting, costs analyses, and expected return of the investment).

Once the decision is taken, the ***implementation*** is usually very fast (less than six months). In cases A and B, an ex-post analysis allowed to assess the differences with what was expected during the decision-making in terms of costs, sales and benefit, and they turned out to be quite different, thus evidencing a bad initial analysis. This ex-post analysis was experienced by the cases that followed very flexible decision-making, thus evidencing the lack of confidence about the reshoring decision. Generally, the reshoring decision had a positive effect on the company image, both externally and internally (in front of employees), independently from the type of decision-making followed by the company.

Interestingly, even if the interviewees tried to separate their reshoring decision-making and implementation stages, by looking at the processes they describe (Figures 5.3, 5.4, 5.5, and 5.6) it is clear how the two stages are blended (overlapped) in practice. In fact, even during what the companies described as "decision-making", part of the analyses was already oriented in planning the implementation of the reshoring decision. This is the case of company A that was already designing the new product or Case B that was selecting the new machinery for the relocated production. Cases C and D instead just went through a waterfall (sequential) approach, where the decision-making stage ended with a go (vs. no go) decision and the implementation was started immediately afterwards. In all the cases, a very strong role was played by the CEO of the company (in most cases also the entrepreneur, i.e., Cases B, C, and D) that strongly believed in the reshoring decision and found the occasion to make it suitable for the company.

For what concern the behavioural decision-making constructs, all the cases demonstrated the presence of some features of the intuitive decision-making. While Cases C and D, were clearly relying on the intuitions of the entrepreneurs, who were guided by their experience and knowledge about the TCLF context; Cases A and B were partially relying on the experience of the people involved in the decision and partially letting their emotions, feelings and "*gut*" sensations guide the decision-making. In fact, the interviewees often referred to "return to the origin", "passion", "sensations of the entrepreneur", "throwing the heart beyond the obstacle" (Appendix B reports the main quotations from the cases).

Of course, the decisions faced by the cases were different in terms of complexity involved. Case C faced a relatively simple decision, given that even if the company was insourcing the reshored activities, other production activities were still carried out at the home plant. Moreover, just a few variables were considered to take the decision, namely costs, production volumes and technological content associated with the product to be relocated. Case D had to face a medium complex decision: as in Case C, insourcing did not create any problems thanks to the presence of a manufacturing plant

in the home country, although the company considered many variables in order to make the decision, namely the presence of alternative partners, the machinery assessment, the home plant performance, the home plant capacity, the production process technological parameters. Instead, Cases A and B dealt with highly complex reshoring decisions, first because of the lack of manufacturing activities in the home country and the need to open a new production plant. Moreover both the companies considered again many variables: production costs, machinery transportation costs, suppliers availability, employees availability, employees training needs, product design opportunities in Case A; financing opportunities, costs, return of the investment, market analyses, potential partners, market analyses, environmental norms in Case B.

Finally, regarding the presence of an anchoring effect, namely the people's tendency to rely too heavily on a limited amount of information and alternatives in order to make a decision, we could witness how Case C and D were strongly anchored to their home country. The interviewees often referred to Italy as the "only alternative" or an "obligatory choice". Vice versa, Case A demonstrated to be anchored to the host country, as the Chief Operating Officer's words demonstrate: "we can also find suppliers abroad that do everything we need, and I have to say that over the years the logistics costs have been reduced". Case B, instead, was not showing a specific anchoring, given that the Made in Italy was for this company the main driver behind the reshoring decision.

5.5 Discussion

In order to contribute to the scientific debate on the reshoring decision-making and implementation, we summarize in this section the most insightful evidence of our paper and discuss them in light of the relevant literature presented in Section 2. Based on this, we also develop a set of propositions that might drive future research in this field.

The first insight derived from the empirical investigation is that, in most of the analysed cases, the decision-making phases appear to be overlapped and not well-defined. This seems to indicate that the reshoring decision involves high levels of complexity, as hypothesized by Gray et al. (2017), and this leads companies to adopt a "flexible" approach towards decision-making (Verganti, 1999), in line with the uncertainties and risks that characterize a location decision (Gylling et al., 2015; Huq et al., 2016; Tate et al., 2014; Tate and Bals, 2017). In light of the behavioural decision-making literature, this result is not surprising. In fact, it provides evidence of the bounded-rational feature of the reshoring decision-making, being characterized by non-sequential phases and multiple routines and cycles (Eisenhardt and Zbaracki, 1992; Gino and Pisano, 2008; Mintzberg et al., 1976). Moreover, in case of high complexity, we found that companies include an "ex-post analysis", to assess the decision

after its implementation. This is the situation for Case A, where the change in the governance (from outsourcing to insourcing) and the need to open a new production plant led to higher complexity and therefore the need to evaluate ex-post the results. Similarly, Case B had to face a high complexity, also considering all the variables that changed during the offshoring period (e.g. suppliers not available anymore in the home country, the establishment of strong competitors). Previous literature supports this evidence concerning complexity as driving factors towards bounded-rational decision-making (Bendoly et al., 2006; Eisenhardt and Zbaracki, 1992; Elia et al., 2019; Kirchoff et al., 2016; Li et al., 2014). Moreover, this finding supports the claim made by Hartman et al. (2017) that companies usually fail to consider process complexity during the decision-making stage. As a consequence, a first proposition can be derived for further investigation:

Proposition 1*: When the reshoring decision is characterized by high complexity, the decision-making is managed through a flexible approach, characterized by an overlapping of phases and problem-solving cycles.*

As discussed in the cross-case analysis, most interviewees had difficulties in identifying the exact shift from the decision-making to the implementation. This could mean that an additional phase should be considered, i.e., a more structured transition period in preparation for the implementation. This phase was however not formally recognized by the interviewees. The evidence collected calls into question the effective separation between the decision-making and the implementation stages, hypothesised by Bals et al. (2016). Particularly, in cases characterized by high complexity (Cases A and B), the two stages appear to be overlapped with implementation-related activities anticipated before the definitive decision and analyses typical of the decision-making postponed justifying ex-post the correctness of the choice. Nevertheless, this result is in line with the literature on behavioural decision-making. The main phases identified in the literature are not completely separated between decision-making and implementation, moreover, they are supposed to loop and not to be sequential (Mintzberg et al., 1976). Hence, the second proposition is:

Proposition 2*: When the reshoring decision is characterized by high complexity, decision-making and implementation are overlapped and need to be analysed together.*

The previous proposition is also in line with Gray et al.'s (2017) view that companies do not need to wait to have complete information to make a location decision. In fact, the analysed companies managed this issue by anticipating the implementation, thus being able to speed up the process and collect accurate information at the same time. This also indicates that the decision-making was at

least partly emotional, with the entrepreneur/CEO being the main sponsor of the reshoring initiative. In other words, we have the impression that sometimes the analyses performed were more oriented to justify a decision already in the mind of the entrepreneur/CEO rather than to help him/her to take the decision. Previous literature has demonstrated that emotions can play a positive role in decision-making (Kaufmann et al., 2014, 2017). In fact, while infused emotions or moods can drive the decision to be fully irrational, expected emotions and situational anxiety can instead become a fundamental part of a bounded-rational decision-making, by allowing the decision-maker to make sense of his/her choice, even when the results are uncertain (Li et al., 2014). In addition, Di Mauro et al. (2018) highlighted some emotional elements (e.g. the sense of belonging to the local territory) among the factors driving the reshoring decision, while Benstead et al. (2017) included some behavioural related factors among the contingency factors influencing the reshoring decision. We would, however, make a step further and develop the following proposition:

Proposition 3*: When the decision is characterized by medium-high complexity, the reshoring decision-making is intuitive (e.g. emotional and/or experience-based).*

This generates some preliminary evidence about one of the future research avenues identified by Barbieri et al. (2018), namely the role of the entrepreneur in driving reshoring decisions. In fact, in three of the analysed cases (Cases B, C, and D), the decision has been strongly driven by the entrepreneurs, that have been proved to be more used to face uncertain and complex environments and, therefore, in making successful bounded-rational decisions, by relying on previous experiences (Busenits and Barney, 1997).

Finally, when a company is not satisfied anymore with the offshore location, it can evaluate whether to move to another third country or to go back home. Recent evidence suggests that movements to third countries are happening (Barbieri et al., 2019), but despite the broad choice of alternative locations, going back to the home country represents an option followed by a significant amount of companies. Our paper helps to explain this "home-country bias". As a matter of fact, all the sampled companies did not consider during the decision-making alternative offshoring locations (besides the current offshoring country), thus demonstrating the existence of a home-country bias effect (Baraldi et al., 2018; Obstfeld and Rogoff, 2000) that creates a higher propensity to invest in the home country. The reason might be due to the fact that the home country represents a familiar context, where there is a higher social capital and there could be a national regulation supporting domestic companies (Fratocchi et al., 2014). Evidence of such effect was previously provided by Gray et al. (2017) and their cases of small and medium enterprises relocating production in their home countries against any

common sense. Instead, Di Mauro et al. (2018) explained the preference of reshoring over nearshoring both through a "Made in" effect and an emotional "sense of belonging" to an industrial district. Even if the analysed cases provide evidence form the same context and could, therefore, be explained by the same underlying factors (i.e. "Made in" and "sense of belonging"), we believe that a more general effect, explained by the tendency to strive for something less uncertain, could be hypothesised from this larger evidence. In addition, we propose that an attachment to a country in which the company previously operated might exist also from the host country side, as proven by Case A, that because of the strong attachment to the host country faced a failure in the reshoring initiative. This attachment, to either the home country or the host country, can be explained with the anchoring construct from the behavioural decision-making literature (Bendoly et al., 2010; Carter et al., 2007; Elia et al., 2019; Gino and Pisano, 2008; Kahneman and Lovallo, 2003; Kirchoff et al., 2016; Tversky and Kahneman, 1974). Consequently, the fourth proposition is:

Proposition 4*: An anchoring effect (e.g., home-country or host-country anchoring) might prevent companies from considering all the location alternatives, thus limiting their ability to flexibly modify their Global Manufacturing Footprint towards right-shoring*

5.6 Conclusions

5.6.1 Contribution to research, management practice and policymakers

The paper answers to a precise call for research on the reshoring decision-making and implementation raised by the most recent reshoring studies (Barbieri et al., 2018; Ketokivi et al., 2017; Wiesmann et al., 2017). Through an empirical investigation of four case studies, we shed light on the phases, collected information, actors involved, and criticalities faced. We then developed four propositions focused on various features of the reshoring decision-making and implementation process. This is the first step to gain a better understanding of "how" reshoring is implemented (Barbieri et al., 2018).

Our study has significant implications for reshoring – and more in general O&SCM – ***literature***.

First, we answer to a precise call of recent reshoring research to open the box on the decision-making and implementation process (e.g., Bals et al., 2016; Benstead et al., 2017; Ketokivi et al., 2017; Stentoft et al., 2016c; Wiesmann et al., 2017) and shed empirical light on the phases of the process, the information collected, the stakeholders involved, and the criticalities faced.

Second, we pointed out that reshoring projects might be characterized by different levels of complexity which affect the decision making and implementation. When the reshoring decision is characterized by medium-high complexity, the decision-making is intuitive (e.g. emotional and/or

experience-based). Vice versa, when the reshoring decision is characterized by low complexity, the decision-making is at least partially rational. In addition, the high complexity also drives decision-makers to manage the relocation decision through a flexible approach, characterized by problem-solving cycles, as well as an overlapping between the decision-making and implementation stages. Instead, in case of medium-low complexity, the decision-making is rational and managed through the traditional stage-gate approach, while the decision-making and implementation stages are sequential. This generates a warning signal about the research on reshoring drivers. In fact, when the decision is connected to emotional processing, as in some of our cases, all the other drivers might become "justification" factors that are considered just to make the decision looking feasible and not the "real motivations". In that case, any answer provided by respondents in surveys or interviews might be biased by some kind of post-rationalization, that might lead to a biased alignment of drivers with outcomes (Johansson and Olhager, 2018b).

Third, we highlighted the existence of a home-country or host-country anchoring effect (i.e., the tendency to rely on a limited amount of information and alternatives in order to make a decision) in the reshoring decision. Recent studies (e.g., Joubioux and Vanpoucke, 2016; Tate and Bals, 2017) argued that firms flexibly modify their Global Manufacturing Footprint and gave rise to a debate focused on this practice (*right-shoring)*. The anchoring effect should in our view be considered in this context.

Our study has also significant implications for ***managers*** and ***policymakers***.

We made one of the first attempts to shed light on the "how to reshore" issue, which is of particular importance for managers. This actually provides managers with some initial guidelines for the reshoring decision-making and implementation process. Furthermore, we provided evidence of some potential problems that companies might face during the reshoring implementation (such as the difficulties in finding employees with the needed skills as well as suitable suppliers). This suggests managers consider these potential problems carefully and to plan in advance actions for mitigating them. In addition, we showed to managers and entrepreneurs that reshoring decision-making is often intuitive and bounded-rational. Even if the research has demonstrated the efficacy of this kind of decision-making in uncertain and complex contexts (Eisenhardt and Zbaracki, 1992; Li et al., 2014), some actions can be envisaged in order to avoid cognitive shortcomings of decision-makers (Gino and Pisano, 2008; Kahneman and Lovallo, 2003). Some examples concern the creation of more diverse viewpoints by, i) involving people with different backgrounds in the decision-making, ii) creating devil's advocates or involving outside experts, iii) making people responsible of the

decisions aware of the role that their mood can play in their decision-making, and iv) comparing the possible outcomes of a decision with similar past projects in order to base the decisions on more accurate predictions (Eisenhardt and Zbaracki, 1992; Kahneman and Lovallo, 2003; Li et al., 2014; Mantel et al., 2006). Finally, some evidence of the existence of a home-country anchoring effect was found (Fratocchi et al., 2014; Obstfeld and Rogoff, 2000). This might suggest policymakers to act on the barriers (e.g. lack of suitable suppliers, competence shortage, and lack of funding opportunities) that prevent companies from bringing the production back, thus building a "reshoring readiness" (Nujen et al., 2018b), rather than designing policies aimed at increasing the reshoring drivers through incentives.

5.6.2 Limitations and future research

This study does not come without limitations.

First, being an exploratory study, a case study approach has been selected as research method. Therefore, despite we tried to ensure theoretical generalizability by adopting a rigorous research design, our results cannot be statistically generalized. In future, quantitative studies (e.g. surveys) could help in overcoming this limitation and empirically testing the propositions developed in our study. The evidence presented in this paper will help in improving the survey design and reducing any bias.

Second, the selected cases belong to the same context (Italian companies in the TCLF industry). This was a thoughtful decision, that allowed us to control for some contingent variables and to leverage on previous studies conducted in the same context (Di Mauro et al., 2018). Nevertheless, some of our findings – such as the short duration of the different stages, the problems faced in the implementation – might be tight to the analysed industry, which is characterized by low technology intensity, high clockspeed (Fine, 1998), and high labour intensity. Similarly, the Italian context – which is characterized by a pragmatic culture in which people believe that truth depends very much on situation, context and time (Hofstede, 2001) – might have emphasized some of our evidence, such as the anchoring effect. Despite both Italy and the TCLF industry are acknowledged as being particularly relevant for the reshoring phenomenon and has been studied by previous reshoring papers (e.g., Di Mauro et al., 2018), future research is therefore needed to extend our findings to other industries and countries.

Third, although the behavioural approach proved to be particularly suitable to explain our empirical evidence, it is by definition based on the people perceptions. However, we are confident enough that the choice to rely on a grounded theoretical approach and not disclose constructs with interviewees

allowed us to reduce perception bias. As demonstrated in previous research, grounded theory is indeed well suited when investigating the decision-making of individuals who deal with socially complex phenomena (Kaufmann and Denk, 2011; Kirchoff et al., 2016; Manuj et al., 2014). Nevertheless, other theoretical frameworks might also be considered by future studies.

5.7 Appendix

Appendix 1: The interview protocol

1. Section 1: General information about the company and the interviewees
   1.1. Interviewees: Names, roles, experience.
   1.2. Company: Number of employees, turnover, main products, evolution of the products offer over years, number and location of plants.
2. Section 2: Evolution of the manufacturing footprint
   2.1. Main steps over the years in terms of relocations and changes in governance modes
   2.2. Focus on one (or more) reshoring decision(s):
      2.2.1. Chain of events connected to the reshoring decision(s)
      2.2.2. Products/Activities/Supply Chain involved and their characteristics
      2.2.3. Objectives, Drivers of the decision(s), Enabling factors, Outcomes
3. Section 3: Decision-making stage
   3.1. Description of the phases and timing
   3.2. Phases, stakeholder involved, collected information, risks evaluated
   3.3. Differences with previous offshoring
4. Section 4: Implementation stage
   4.1. Description of the phases and timing
   4.2. Phases, stakeholder involved
   4.3. Changes in the relationships with stakeholders after reshoring
   4.4. Learning process, criticalities faced, costs and benefits
   4.5. Differences with previous offshoring

Table 5.5 − Appendix 2: Quotations from the cases for each element considered in the conceptual framework

	Case A	Case B	Case C	Case D
Decision-making phases	• "A small group of people wanted to investigate this opportunity: to understand how much it would have cost us to bring the machines back to Italy, to understand how the cost of the product would have evolved, to understand this type of technology that opportunities gave regarding product design." • "The most unstable phase is linked to the evaluation of constraints, risks and opportunities as there is initial and natural inertia that leads to the lengthening of time."	• "The decision-making process that led Case A to adopt the choice of reshoring is linked, as previously stated, to a market need. The time between the perception of the need, the analysis of the decision and the opening of the production plant located in Vercelli is very short. It is in fact about a year. • "The different phases are considered in an "aggregate" and not very detailed/in-depth way"	• "The localization and sourcing decisions were immediate, given that the most favourable solution in terms of costs and comfort was the move to the Italian headquarters."	• "The decision-making process that led the company to adopt the choice of reshoring was strongly linked to the decision of the partner company to move the offshore plant in Egypt ... also having to face a renewal of the plant and the machines that were becoming obsolete, the return to Italy was an almost obligatory choice. Therefore, a well-defined decision-making process was not followed"
Sequence between decision-making and implementation	• "Having made all these assessments it was decided to proceed with the process: in July the machines arrived in Castrette, in the meantime, we had already designed the product, in June we ordered the yarn, the raw material, the people were as I told you internally recruited, some difficulties for the mechanical programmer but basically at the beginning of August we turned on the machines to start obviously with a lower efficiency at the beginning ... so it was a very fast thing: three months after the decision the department was operative." • "An important analysis, following the implementation, concerns the calculation of cost differentials, margins and sell-through, which allow reaching the break-even point"	• "The timing was fast enough because in less than 1 year we perceived the urgent need, decided and opened the plant in Vercelli." • " The plant in Vercelli, from the moment we made the choice, took about 6 months to start up because the problem was to import the machinery given that in Europe there are no suppliers of machinery to produce zippers and therefore we had to import them from China or from Taiwan ... more than anything else the time needed for the production of the machinery and then for the import by ship, we lost 4-5 months."	• "The company's reshoring implementation process was very fast. The relocation phase was almost immediate and the integration between the various activities was already present even before reshoring."	• "A well-defined decision-making process was not followed ... in the case of reshoring, it lasted 3-4 months. The implementation was also fairly easy. The production that was made in Hungary was the same that was done in the Italian factory, so the company only had to verify that there was the necessary production capacity. Furthermore, it was necessary to notify customers of the move to assess changes in the ordered quantities. It was not necessary to reintegrate the activities, as the production has always remained active in Italy."

Rationality vs. Intuitiveness	• "The choice of reshoring does not follow a careful analysis but is rather an instinctive decision." • "It wants to be a project a little bit about the return to the origins." • "There was also a tactical opportunity regarding the use of about twenty people of ours that would have been outgoing that we could have re-used in this type of project." • "It was pure intuition and therefore it was a project that put together the factors that I told you about the company has basically decided to throw the heart beyond the obstacle and decide to produce a product that, exactly the same could have produced elsewhere at lower costs, and do it again at home and therefore, as often happens, certain decisions also for what would have been the media benefit ... for which there is no real science that led to this decision"	• "The decision-making process of reshoring was extremely similar to that of offshoring, that is characterized by choices taken more following the sensations of entrepreneurs about the market than on the basis of detailed analyses." • " When it is decided at the company level, perhaps less analysis is made of what one would expect in the sense that it is the perception about the market that has determined the decision to transfer production... a decision from the entrepreneur is often based on the feelings and consequently on the passion about what he is doing more than on the analysis, also because when one makes an analysis often he takes fear."	• "Since we had some customers who need to work on high quality, we have kept customers with small production lots and, for two or three years, when we are below a certain threshold of production size, we can do them here in Italy, managed internally" • "In my opinion, it is the cost that from the customer's point of view influences where they decide to produce." • "An evaluation of the costs at the beginning was made, at least to see if I can manage this thing in Italy." • "We also had requests from customers about special processes, for example, heat-sealed tapes, ultrasonically welded tapes that require certain investments. In that case, there is obviously an analysis of the costs and risks that can be required, asking the customer to give a real prospect of future sales." • "We evaluated along the path, perhaps some evaluation has been done but all were preliminary, a little more based on experience."	• "Our decision-making process was not a completely deliberate choice, perhaps to improve aspects such as quality, service, etc., but rather a decision dictated by the context." • "The choice of reshoring was almost obligatory when our partner decided to move to Egypt."

			• "An evaluation of the costs at the beginning was made, at least to see if I can manage this in Italy." • "It becomes difficult to manage small volumes so if the volume is small but technologically not advanced I can also find a small laboratory in Romania that can do it for me; if instead, the product is technologically more complex you can do it only within the line of my company. But my company is unable to work under certain volumes because under 50 garments it is impossible to start a production because the line does not understand, we almost never even say which side the work should start. The quite high technological content and small volumes are the drivers that make me evaluate the decision to bring production back to Italy."	• "The company assessed the possibility of finding an alternative to the initial partner, without being able to find a new partner. • "It was decided to return production in the Italian factory after having carried out a performance analysis, thanks to which we could see that the Italian branch would have been able to produce the part of the production that was made in Hungary, without having any particular capacity problems" • "When we returned, it was just a matter of increasing productivity. For some colours, we had to do some analysis to understand how they were dyed ... Basically, there was a bit of work to refine our production process."
Complexity of the decision	• "The production and transport costs of the machinery, the availability of suppliers, the problems linked to the training of qualified personnel for the use of the Whole Garment technology and finally the design opportunities linked to the technology used were analyzed in broad terms." • "Another topic is related to training and the ability to manage these machines this technology since we have not succeeded in the past."	• "We did an analysis with the accountant to try to see if there were possibilities of financing or anything else and to discuss costs and make an analysis of the investment, but then it was exclusively our choice." • "The lack of partners and suppliers who could follow us on certain processes forced us to import the raw material" • "A calculation had been made but unfortunately I would say that we were wrong in the sense that we expected to succeed in this market more easily but instead we clashed with a very closed market."		
				• "The return to Italy was an almost obligatory choice. • "There was the possibility of completely delocalizing the activity in Hungary, but this option was not taken into consideration." • "That part of production that we did in Hungary we decided to bring it back to Italy, more or less half of that production, also thanks to the fact that in that period of decline our production in Italy was not completely saturated and therefore we had free production capacity in order to satisfy Italian customers who continued to work with us."
Anchoring effect	• " Made in Italy is fundamentally accessible in a difficult way for the company because obviously, the cost of manufacturing is high, so it is much higher than outside and now at least for what our quality standard is, it is also good, but it is not that high. In short, we can also find suppliers abroad that do everything we need, and I have to say that over the years the logistics costs have been reduced."	• "We had to bring the production back to Italy because even the big brands asked me for the made in Italy, therefore totally Italian production."	• "The alternative would have been to move beyond Europe, but when I have to work 50/100 pieces it is unthinkable. So the only alternative was to return here to Italy."	

6 CONCLUSIONS

This dissertation dealt with the topic of reshoring, namely the relocation of manufacturing activities from a foreign to the home country. This phenomenon was characterized by an increasing trend in the last decade, in terms both of magnitude (i.e., number of companies and countries interested by the phenomenon) and of attention (i.e., number of publications both in academia and in press).

The main goal of the dissertation was *overcoming the frontier reached in previous literature, as well as generating relevant practical advice, by offering new insights into the reshoring process; taking into account all its characterizing elements and phases, their connections, the previous offshoring process and by shedding light on the most obscure ones, namely decision-making and implementation.* This overall goal can be broken down into specific research objectives, namely increasing the knowledge about the structure of the reshoring process (RO1) and understanding how different factors may influence the reshoring process (RO2), reached by answering to the following research questions, as shown in Figure 6.1:

- ***RQ1****: What can be learned about reshoring process by accumulating knowledge from previous case research into a comprehensive framework?* (Answered in the first essay, reported in Chapter 3)

- **RQ2**: *How are contingency factors influencing offshoring and reshoring decisions?* (Answered in the second essay, reported in Chapter 4)

- ***RQ3****: How is the previous offshoring decision affecting the reshoring decision?* (Answered in the second essay, reported in Chapter 4)

- ***RQ4****: How are the decision-making and implementation stages of the reshoring process structured?* (Answered in the third essay, reported in Chapter 5)

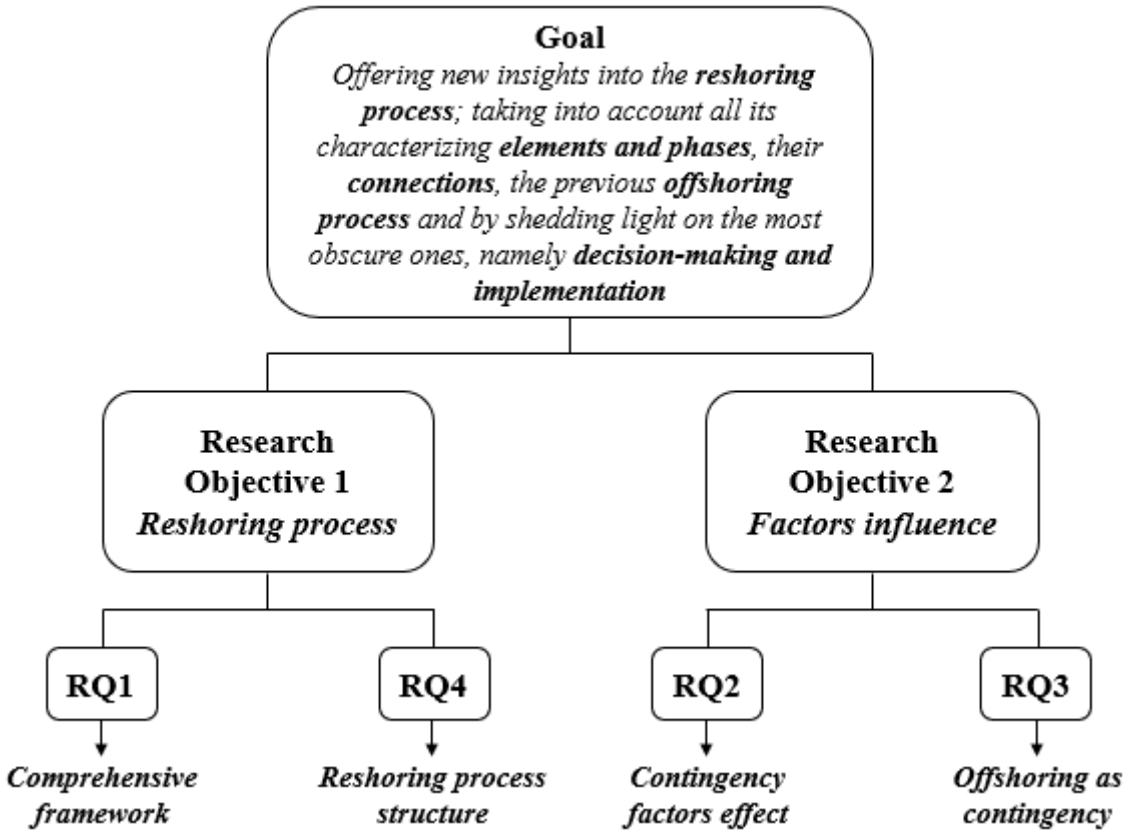

Figure 6.1 − Research breakdown structure and outputs

The first research question was answered in the first essay "What do we want to know about reshoring: developing a framework through a meta-synthesis" by demonstrating that even if the considered articles are grounded on different characteristics in terms of theoretical perspectives, units of analysis etc., the information they provide can be rich enough to allow a meta-synthesis to be successful. This allowed to accumulate the existing knowledge within the field and to better understand how the reshoring process is structured, by considering also the importance of understanding the antecedents (i.e., how the previous offshoring process have been structured). In the end, a comprehensive framework for future studies has been developed. This represents a first effort in guiding future research to make studies more comparable.

Answers for the second and the third research questions (RQ2 and RQ3) were provided in the second essay entitled "A meta-analysis of reshoring case studies: the influence of contingency factors on the relocation decision". In this study, a meta-analysis methodology was used to investigate the relationship between contingency factors and offshoring and reshoring decision drivers, thus contributing to the second research objective about the influencing factors. The second research question (RQ2), related to the influence of contingency factors on offshoring and reshoring drivers,

was answered by investigating the relevance of relocation drivers for different sub-groups of the contingency factors firm size, industry type, main market, and home and host regions. The results showed that all contingency factors have statistically significant associations to relocation decision-making, in both directions. These results clearly show that contingency factors are relevant when discussing differences among offshoring and reshoring drivers. The third research question (RQ3) was related to the relationship between the previous offshoring decision and the subsequent reshoring decision, thus looking at offshoring as a possible contingency factor to reshoring. The results support the interconnectivity between offshoring and reshoring, given that: i) companies that offshore because of cost reasons mainly reshore for motivations connected to the operational performance; ii) companies offshoring for reasons connected to competition usually reshore for cost or lead time reasons; iii) companies offshoring for labour-related reasons usually reshore for reasons connected to access to resources. Altogether, this evidence supports the assumption that the offshoring decision can be regarded as a contingency factor to reshoring, and that there are strong associations between specific offshoring drivers and reshoring drivers.

Finally, the fourth research question (RQ4) was addressed in the third essay "Reshoring decision-making and implementation: a behavioural perspective", that answers to a precise call for research on the reshoring decision-making and implementation raised by the most recent reshoring studies (Barbieri et al., 2018; Wiesmann et al., 2017; Ketokivi et al., 2017). Through an empirical investigation of four case studies, better insights on the phases, collected information, stakeholders involved, and criticalities faced, was gained. Four propositions about various features of the reshoring decision-making and implementation were developed as answers to the fourth research question (RQ4), thus generating a better understanding of the reshoring decision-making and implementation processes and by contrasting results with the extant literature. These results can be considered a first step to gain a better understanding of "how" reshoring is implemented (Barbieri et al., 2018).

6.1.1 Theoretical implications

The insights generated by each essay presented in this dissertation provide many theoretical implications. Instead of focusing on the contributions of the single essays, already reported in each chapter, here an additional effort to consolidate and summarize the theoretical implications of the dissertation will be made. First, wider knowledge about the reshoring process has been developed in this research project. In fact, with a knowledge accumulation process enabled by the meta-synthesis method, it has been possible to build a comprehensive framework for empirical research on reshoring, including also the previous offshoring process. Hopefully, this framework will become a guide on

how to present a complete case description in order to enable the advancement of the accumulated knowledge within the field. In addition, more in-depth knowledge of the reshoring decision-making and implementation stages was gained thanks to the development of a multiple-case study in the Textile-Clothing-Leather-Footwear industry. The results propose that decision-making and implementation can vary a lot depending on the complexity faced by the decision-makers; furthermore, the two stages are usually overlapped and difficult to be separated and distinguished, when facing complex decisions. Altogether, these results contribute to the reshoring literature by filling a significant gap and providing some preliminary insights into the "how" question, particularly for what concern the structure of the reshoring process.

A second major implication concerns the identification of factors influencing the decision-making in manufacturing location decisions. Particularly, the importance of contingencies (namely company size, industry technological intensity, main market, home country and host country) is highlighted in the second essay (*Chapter 4*). All these contingencies somehow affect which drivers are considered by the companies while making both the offshoring and reshoring decision. Moreover, the offshoring drivers have proven to highly influence which factors are usually considered in the subsequent reshoring decision. This represents an important contribution to the reshoring literature by, first, supporting the empirical evidence about the connection between consequent location decisions and, second, by identifying clusters of factors that entail different strategies among relocating companies. In addition, this study showed that the quantitative meta-analysis methodology provides promising possibilities for the fields of OM and SCM. In fact, there are many areas within OM and SCM for which the findings from individual studies could be accumulated into deeper knowledge by the use of this method. Finally, among the factors influencing the decision-making, the relevance of an emotional and not fully rational component is brought to evidence in this dissertation. This generates a warning signal about the research on reshoring drivers. In fact, when the decision is driven by an emotional factor, all the other drivers might become "justification" factors that are considered just to make the decision looking feasible and not the "real motivations".

6.1.2 Implications for managers and policymakers

The practical implications of this dissertation are intertwined with the theoretical ones and will be made possible by dissemination of the main insights through practice-oriented channels (e.g.; national press, reports, workshops and events with companies).

First of all, the adoption of meta-analytic methods allowed the practical implications are connected to the possibility to gain a wider picture over the offshoring and reshoring processes and to have useful insights about the dynamic nature of such processes and of the variety of challenges that previous cases had to face in multiple contexts. In particular, the findings could be useful for firms aiming for right-shoring, highlighting possible pitfalls of offshoring and encouraging firms to pay careful attention to these during the offshoring decision-making in order to increase the chance of finding the optimal location.

Finally, this dissertation made one of the first attempts to shed light on the "how to reshore" issue, which is of particular importance for managers. The research project highlighted the activities and the analyses that should be performed by companies and the stakeholders that can be involved in the decision. Furthermore, some of the potential problems that companies might face during the reshoring implementation were exacerbated. Thanks to the study reported in the third essay (*Chapter 5*), managers and entrepreneurs are now aware that reshoring decision-making is bounded-rational. Even if the research has demonstrated the efficacy of this kind of decision-making in uncertain and complex contexts (Eisenhardt and Zbaracki, 1992; Li et al., 2014), some actions can be envisaged in order to avoid cognitive shortcomings of decision-makers (Gino and Pisano, 2008; Kahneman and Lovallo, 2003). Finally, some evidence of the existence of a home-country anchoring effect was found (Fratocchi et al., 2014; Obstfeld and Rogoff, 2000). This might suggest policymakers to act on the barriers (e.g. lack of suitable suppliers, competence shortage, and lack of funding opportunities) that prevent companies from bringing the production back, thus building a "reshoring readiness" (Nujen et al., 2018b), rather than designing policies aimed at increasing the reshoring drivers through incentives.

6.1.3 Limitations and suggestions for further research

Like any research project, this dissertation has some limitations due to the specific choices made within the research design phase.

Concerning the first two essays (*Chapter 3 and 4*), the chosen methods rely on secondary data, namely the information provided in the original articles. Of course, it is important to consider that the authors of such articles might have limited space to present the relevant information and discuss it; therefore, the primary data might be much richer than what is provided in the articles. Although, this limitation does not strongly affect the study reported in the first essay (*Chapter 3*), given that the analyses were carried out on the results and discussions reported by the original author, without going down to the analysis of the specific cases. Concerning *Chapter 4*, this limitation has been taking into account by

limiting the statistical analyses to those variables that were more discussed in the cases, namely drivers and contingencies. Moreover, the limited number of retrieved cases from previous researches only allowed simple statistical analyses, but the insights gained even with a simple comparison between groups opens up for huge contributions from knowledge accumulation in many other fields.

Second, the choice to limit the cases to peer-reviewed sources allowed to control for the quality of the studies, but at the same time, it might have caused the exclusion of some interesting cases. The reasons to include such cases and the relative studies could be either the need to have a higher amount of studies and cases, or the willingness to avoid publication bias. In this dissertation, the number of articles was big enough and aligned with previous qualitative meta-analytic studies (Hoon, 2013; Larsson, 1993).

Another aspect to be considered is that the limitations of meta-analytic studies might be constrained by the limitations of the primary studies. Fortunately, the chosen methods addressed the main concerns from the original studies, namely context bias (either concerning country, industry or size), given that it allowed conveying results from multiple articles characterized by multiple contexts. Of course, most of the studies were conducted from the European perspective, given that most of the authors were from Europe. One limitation that certainly persists in the first two studies is the lack of statistical generalizability. Nevertheless, the theoretical generalizability is made stronger by the lack of researcher or study biases.

In the third essay (*Chapter 5*) a multiple case study has been developed; consequently, results cannot be statistically generalized. Moreover, the selected cases belong to the same context (country and industry). This was a thoughtful decision, that allowed to control for some contingent variables and to leverage on previous studies conducted in the same context (Di Mauro et al., 2018).

Future researches, besides trying to overcome the hereby presented limitations, could focus on the application and testing of the comprehensive framework, developed in *Chapter 3*, in real cases, as well as on quantitative data collection. In fact, the framework, as well as the evidence gained from the case study, could provide support in designing quantitative studies (e.g. surveys), aiming to test the proposition developed as an output of this research.

Finally, the meta-synthesis presented in *Chapter 3* allowed the identification of many areas that were not deeply studied and thus emerged as potential areas for future research, such as i) Gaining knowledge about the *decision-making* and the existence of a *tipping point* generating it; ii) Shedding light on specific *implementation choices*, as well as on the antecedent phase of *preparation;* iii)

Understanding how to *evaluate the outcomes* of relocation decisions; and, more importantly, iv) Increasing the knowledge about *the interrelatedness between subsequent location decisions* (i.e. offshoring and reshoring); as well as v) Taking into account *the influence of time on offshoring and reshoring factors and contexts*.

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