



UNIVERSITA' DEGLI STUDI DI UDINE

Dipartimento Politecnico di Ingegneria e Architettura

Dottorato di Ricerca in Ingegneria Industriale e dell'Informazione

XXXII Ciclo (32°)

Doctoral Dissertation

*Global Operations and Supply Chain
Configurations:
Reshoring Dynamics in Europe*

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October 2019

ABSTRACT

In recent years, the growing tensions in trade and investment between major developed countries (e.g., US) and leading developing countries (e.g., China), the thinning of location advantages in some low-cost countries, and the growing awareness of the “total cost” of offshoring have driven many companies to re-think the location of their international value chains. Previously offshored operations have been relocated to countries closer to the companies’ headquarters or even to the domestic context. This phenomenon is referred to as “reshoring”.

Extant literature on reshoring has provided rich insights into *why* companies reshore by identifying an array of motivations. It has also enlightened us that reshoring is complex and dynamic. Despite the fact that the dialogue has shifted gradually from *why* aspect towards a wider scope involving *how* companies reshore and *what* the outcomes are, the nuanced understanding of reshoring dynamics is still lacking. Prior studies fall far short in addressing questions concerning reshoring trends and features, the determinants of key strategic decisions, country effects, and reshoring impact.

The purpose of this thesis is to probe the dynamics of reshoring with a particular focus on reshoring or repatriation of manufacturing production in Europe. More in detail, we have set five objectives: (1) provide a systematic understanding of the reshoring literature, (2) analyse the dynamics and evolution of reshoring in Europe, (3) investigate the determinants of reshoring entry modes, (4) compare reshoring practices and analyse how the home country matters, and (5) articulate frontier issues and propose future research directions.

This thesis is based on the large-scale data of reshoring projects recorded in the European Reshoring Monitor (ERM) database whose goal is to identify, analyse and summarise evidence on the reshoring of manufacturing and other value-chain activities to the EU. ERM project, as part of a multi-annual research (2015-18) project on the “Future of Manufacturing in Europe”, is based on a collaboration between Eurofound and a consortium of Italian universities with an active interest in tracking reshoring activities. The lead university in the consortium is the University of Udine. The writer of this thesis has been deeply involved in this project since its inception and has undertaken database creation and management tasks.

In general, the key empirical findings reflect the dynamism and evolutionary trajectories of reshoring practices and the complexity of reshoring countries that themselves differ in terms of institutional environment, industrial conditions, and culture.

Specifically, by analysing 253 reshoring projects (2014-2018) recorded in the ERM, we find that there has been an upward reshoring trend since 2014, but a drop in 2018. The reshoring flows which in the past predominantly affected developed western European manufacturing countries (i.e., France, Germany, Italy and the UK) have broadened to encompass northern and eastern Europe. The variety of industries affected has grown significantly, whereas the concentration in labour-intensive industries observed in the past has declined. Cost factors, and even quality factors to some extent, which dominated the first wave of the reshoring, have today given way to factors linked to the global reorganisation of value chain activities, the need for customer responsiveness (e.g., delivery times) and new technological trajectories (e.g., automation and digitalisation). Moreover, we develop a conceptual framework that explains the reshoring entry modes (EM) in terms of country-, industry-, firm- and project-specific factors, in addition to the offshoring EM choice. We test this model by using a sample of 677 cross-industry and cross-country reshoring projects. Based on the results, we find that offshoring EM significantly constrains the subsequent reshoring EM. More in detail, firms adopting offshore insourcing entry modes tend to retain these modes in reshoring. Furthermore, we compare the determinants of EM between reshoring and offshoring. We find that reshoring EM is explained by industry- and project-specific factors, while offshoring EM is influenced by a broader set of industry-, country-, and firm-specific factors.

In addition, using a dataset including 529 cross-industry reshoring projects developed by companies headquartered in five countries (i.e., US, Germany, UK, France, and Italy), we find that these projects differ in terms of industry, entry mode, firm size and motivations. Thus, we highlight that reshoring turns out to be a phenomenon where each country has its peculiarities. We further shed light on the possible institutional, cultural/cognitive and industry/resource-related factors underlying these specificities. These empirical findings, together with future research directions proposed, have many theoretical and practical implications.

Keywords: Reshoring, Offshoring, Global Manufacturing, Global Value Chains (GVCs), Global Production Networks (GPNs), Entry Mode, Home country

LIST OF PUBLICATIONS

The empirical parts (Chapter 4, 5, 6) of this thesis entitled *Global Operations and Supply Chain Configurations: Reshoring Dynamics in Europe* are adapted from one report and two articles:

Report 1

Nassimbeni, G., Sartor, M., Wan, L., Ancarani, A., Di Mauro, C., Mascali, F., Barbieri, P., Di Stefano, C., Fratocchi, L., Lapadre, L. & Orzes, G. (2019). Reshoring in Europe: Overview 2015-2018, Publications Office of the European Union, Luxembourg.

Article 1

Wan, L., Orzes, G., Sartor, M., Di Mauro, C. & Nassimbeni, G. (2019). Entry modes in reshoring strategies: An empirical analysis. *Journal of Purchasing and Supply Management*, 25(3), 100522.

Article 2

Wan, L., Orzes, G., Sartor, M. & Nassimbeni, G. (2019). Reshoring: Does home country matter?. *Journal of Purchasing and Supply Management*, 25(4), 100551.

The early versions of those chapters in the empirical parts were presented at international and national academic conferences. The conference proceedings are displayed in the following list:

[1] Wan, L., Orzes, G., Sartor, M. & Nassimbeni, G. (2018). “Reshoring: Does home country matter?”, 25th Annual EurOMA Conference, “To Serve, to produce and to Servitize in the Era of Networks, Big Data and Analytics”, 24-26, June 2018, Budapest, Hungary.

[2] Wan, L., Orzes, G., Sartor, M. & Nassimbeni, G. (2018). “Reshoring: Does home country matter?”, 9th Annual EDSI Conference, “Decision Sciences for the New Global Economy”, 3-6, June 2018, Udine & Venice, Italy.

[3] Wan, L., Orzes, G., Sartor, M. & Nassimbeni, G. (2018). “Reshoring: Does home country matter?”, XXVIII Annual Scientific Meeting, “The challenge of management engineering in a changing manufacturing world”, Italian Association of Management Engineering (RSA AiIG 2018), 11-12, October 2018, Castellanza, Italy.

[4] Wan, L., Orzes, G., Sartor, M., Di Mauro, C. & Nassimbeni, G. (2017). “Entry modes in reshoring strategies: An empirical analysis”, XXVIII Annual Scientific Meeting, “The Digital Transformation of Business and Society”, Italian Association of Management Engineering (RSA AiIG 2017), 19-20, October 2017, Bari, Italy.

[5] Wan, L., Orzes, G., Sartor, M., Di Mauro, C. & Nassimbeni, G. (2017). “Entry modes in reshoring strategies: An empirical analysis”, 24th International Annual EurOMA Conference, “Inspiring Operations Management”, 3-5, July 2017, Edinburgh, Scotland, UK.

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ACKNOWLEDGEMENT

First and foremost, please allow me to express my highest respect to my supervisor Prof. Guido Nassimbeni. He is an inspiring and dedicated supervisor with great wisdom, vast knowledge, broad vision, rigorous logic and deep thoughts. He is diligent and modest. His excellent qualities have influenced me profoundly and rooted in my heart, prompting a thorough transformation of my life. I would like to sincerely thank my supervisor Prof. Guido Nassimbeni for his training of my scientific research abilities, for his infinite patient and encouragement, for his full support for my attendance at many international and national academic conferences, and for his meticulous care of my life. The examples of how he supports me are too many to list out. Words cannot adequately express my gratitude.

My sincere thanks also go to the other two professors in our research group: Prof. Marco Sartor and Dr. Guido Orzes. They have given me great support and help in my research and my life in Italy. I benefited significantly from their insights and experiences through many formal and informal discussion. In addition, Prof. Marco Sartor has outstanding ability in organising international academic conferences and big events. He has given me great opportunities to accumulate relevant organisational experiences. I have learnt a lot from him. I have also learnt a lot by working with Dr. Guido Orzes. He is an excellent young scholar with passion and enthusiasm. He has shared his academic experiences with me and taught me many things including theoretical knowledge and research methods.

I would like to thank all my co-authors. I particularly would like to thank Prof. Carmela Di Mauro for her insights, advice and encouragement.

I would like to thank the scholars who have provided comments and suggestions for the early versions of some chapters of this thesis at both international and national academic conferences, workshops and summer school.

I would like to thank my colleagues Margherita, Giovanna and Matteo, who gave me a lot of help and fun in life. I also would like to thank all the other colleagues I have met at the LABGEST during the past three years for their kindness and help.

I would like to thank all the leaders and faculties of the Management Engineering Department and some administrative staffs at the University of Udine for their help and support.

Last but not least, very special thanks go to my parents. They are my most powerful backing. In these one thousand days and nights, their care, thoughts, and wishes have

turned their hair white. Whenever I think of their love and dedication, I could not hold back my tears. Words cannot express how grateful I am for all their support.

Chapter 1 Introduction

1.1 Reshoring: an emerging topic

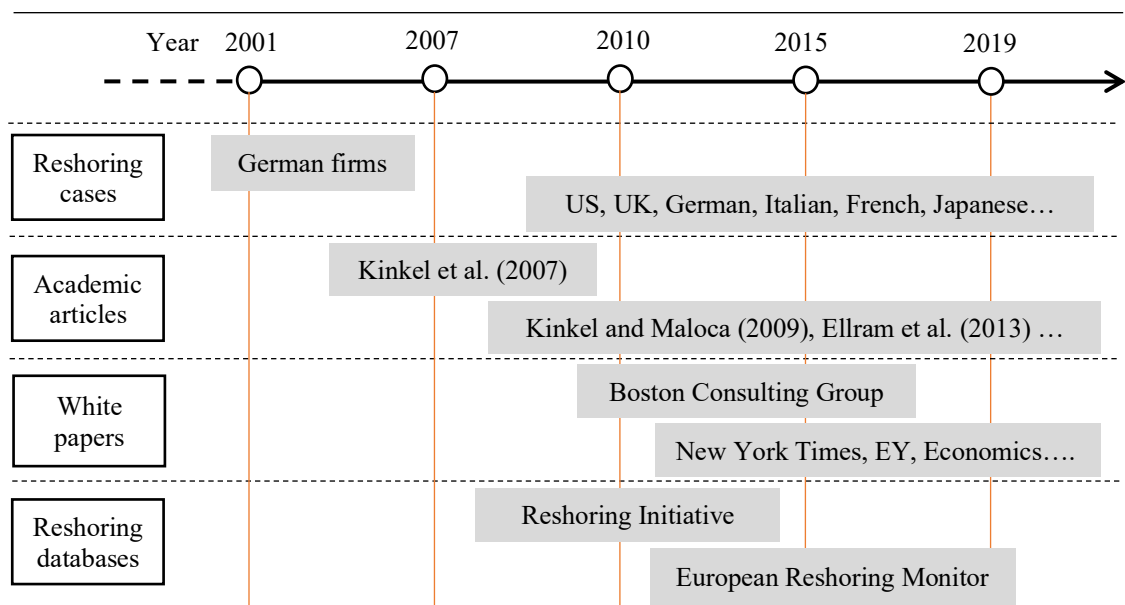
Over the past decades, offshoring strategy, i.e., the relocation of production processes to foreign countries, has been frequently undertaken by MNCs (multinational companies) in international business (Bals et al., 2013; Hätönen and Eriksson, 2009; Holcomb and Hitt, 2007; Lewin and Peeters, 2006). Although it is still ongoing, MNCs have begun to rethink their offshoring decisions by reconsidering the best place to produce their products. Previously offshored operations have been relocated to countries closer to the companies' headquarters or even to the domestic context. This reverse phenomenon is referred to as "reshoring", i.e., "a voluntary corporate strategy regarding the home country's partial or total relocation of (in-sourced or out-sourced) production" (Fratocchi et al., 2014, p.56). Although other labels have also been applied (e.g., back-shoring, back-reshoring), the term "reshoring" will be adopted in this thesis.

Concerning the emergence of this phenomenon, a widely accepted idea is lacking. Although we believe that reshoring is not a new phenomenon in the context of global operations, reshoring, as an emerging topic, has been attracting increasing attention from academia, industries, and governments in recent years. With an attempt to map out the development of this topic, based on the online data, we collect and summarise the publication time of some early works including reshoring cases, academic articles, white papers, and reshoring databases (see Figure 1.1). As illustrated in Figure 1.1, Kinkel et al. (2007), as the first academic article¹, report that "...4.4% of all companies have back-sourced parts of their production between 2001 and 2003..." based on a survey of 1450 companies in the German manufacturing industry. Since 2010, reshoring has increasingly gained momentum. For example, the database Reshoring Initiative was founded in early 2010, aiming at helping manufacturers realise that America is an advantageous place to produce goods and the local production, in some cases, reduces their total cost of ownership of purchased parts (Reshoring Initiative, 2019). In 2011, the Boston Consulting Group (BCG) began to talk about the reason why manufacturing returns to the US (BCG, 2011). In 2015, the database European Reshoring Monitor

¹ This finding is based on a systematic literature review on reshoring literature conducted by the research group (see Chapter 2).

(ERM)² was founded. As part of a multi-annual research (2015-18) project on the “Future of manufacturing in Europe”, ERM aims to identify, analyse and summarise evidence on the reshoring of manufacturing and other value-chain activities to the EU (European Reshoring Monitor, 2019). In the past four years, with strong calls from the governments of developed countries (the US in particular) to revive the domestic manufacturing, the growing awareness of the “total cost” of offshoring, and the increasing tensions in trade and investment between major developed countries (e.g., US) and leading developing countries (e.g., China), we have witnessed a new upsurge in reshoring. Nowadays, reshoring has become a very popular topic.

Figure 1.1 The development of reshoring topic



1.2 The importance of reshoring

How important is reshoring? Reshoring entails the organisational capabilities to geographically relocate specific tasks and coordinate dispersed production networks (Hernández and Pedersen, 2017). Thus, the emergence of the reshoring and, in particular, its growth may change the outlook of the global value chains (GVCs) (Gereffi et al., 2005) or global production networks (GPNs) (Coe et al., 2004) in the coming years, which in turn affects both country and company development (Gereffi, 2019).

² For more details of the ERM, please visit: <https://reshoring.eurofound.europa.eu/>

Concerning the social and policy relevance of reshoring, it has been widely recognised that the relocation of manufacturing plays fundamental roles in economies and employment in the global era (Vanchan et al., 2018). The key activities of the geographical restructuring of manufacturing are offshoring and, more recently, reshoring. The current debate on “re-industrialisation”, “manufacturing revitalisation”, and the “future of manufacturing” to a certain extent is based on the expectation that reshoring could influence a country in terms of employment, industrial upgrading, and innovation. For example, the latest report of the Reshoring Initiative (2018) indicates that the combined reshoring and related foreign direct investment (FDI) announcements of US companies remained strong in 2018, which adds more than 145,000 jobs.

From the individual company’s point of view, reshoring companies are shaping and shaped by GVCs. On the one hand, companies orchestrate their value/supply chains on a global scale to gain competitive advantages and to achieve strategic objectives. Reshoring, as one of the steps of internationalisation, holds a considerable potential to create values lie in cost reduction, quality improvement, and performance optimisation (e.g., Brandon-Jones et al., 2017; Johansson and Olhager, 2018). This potential is in line with the findings that reshoring is triggered by a myriad of motivations involving transaction costs and strategic intents (Bals et al., 2016; Di Mauro et al., 2018; Fratocchi et al., 2015; Grandinetti and Tabacco, 2015; Huq et al., 2016; Robinson and Hsieh, 2016). On the other hand, the changing GVCs that result from the reshoring require the companies to constantly reconfigure their (global) value chains (e.g., cooperation and supply chain integration) and reconsider their shoring strategies. During these processes, reshoring companies could further explore and/or exploit locational advantages to strategically adapt to the local and global business environment.

1.3 Reshoring in Europe: A central focus of the study

Reshoring is a global trend; however, based on the data we collected and the findings of our studies, we tend to believe that it is primarily a US and European phenomenon. It may be due to the fact that the US and European manufacturers have been much more aggressive about offshoring than their Asian counterparts. The policy debate on reshoring seems to have been greater in the US than it has in Europe (De Backer et al., 2016; Leibl et al., 2011; Wiesmann et al., 2017) particularly since Donald Trump was elected US

president in 2016. However, there is evidence that many European companies are bringing their manufacturing activities back to their home countries (Bailey and De Propris, 2014; Di Mauro et al., 2018; Kinkel, 2014; Srai and Ané, 2016). The governments have also facilitated reshoring by launching national policies. For example, in the UK, the government agency UK Trade & Investment and the Manufacturing Advisory Service (MAS) have launched a project called “Reshore UK”, which aims to help companies to bring production back home (GOV.UK, 2014). The German government has developed the “Industry 4.0” program and offered national incentives in order to strengthen manufacturing sectors, which indirectly facilitates reshoring (Federal Ministry of Education and Research, 2015). Despite the growing interest in the process by which European companies reshore (e.g., Arlbjørn and Mikkelsen, 2014; Baraldi et al., 2018; Gylling et al., 2015; Heikkilä et al., 2018; Martínez-Mora and Merino, 2014; Stentoft et al., 2016), our understanding of reshoring in Europe is highly fragmented. Given the importance of European manufacturers, it is imperative to obtain an in-depth and comprehensive understanding of the reshoring dynamics in Europe. In addition, unlike the reshoring practices in the US where the home country environment at the national level is homogenous, the reshoring practices in Europe reflect the heterogeneity of the countries. European countries vary in many aspects such as national industrial strategies, skilled labour, infrastructures, and manufacturing systems, which may lead to different reshoring patterns. In this regard, reshoring practices in Europe serve as a valuable natural experiment for probing many critical issues including reshoring trends (e.g., number of reshoring case), features (e.g., motivations, industry, firm size), companies’ behaviours (e.g., decision making process, supply chain reconfiguration approach) and performance (e.g., financial performance, innovation). Thus, this thesis primarily focuses on reshoring in Europe. Studying reshoring in Europe includes not only analyses of European reshoring companies but also comparisons of the behaviours of European and US reshoring companies, which may reveal which features of reshoring are truly unique and which are common to all reshoring companies regardless of their home country.

1.4 Research objectives

Examining the reshoring phenomenon with multidimensional perspectives is particularly needed. Although we acknowledge that this task is challenging due to the complexity and

dynamism of the global operations and supply chain configurations, by setting precise objectives, we believe that this thesis significantly advances our understanding of reshoring dynamics. The five objectives are elaborated as follows:

Objective 1: provide a systematic understanding of the reshoring literature

Reshoring is generating growing interest among scholars and practitioners. As mentioned above, the first academic article on this subject was published in 2007 by Kinkel et al. (2007). After 12 years, more than 100 papers indexed in the Elsevier Scopus dataset have been published. Although existing literature reviews (i.e., Bals et al., 2016; Barbieri et al., 2018; Foerstl et al., 2016; Moradlou and Backhouse, 2016; Stentoft et al., 2016, Wiesmann et al., 2017) on reshoring help to summarise the main findings in this field, we argue that a systematic investigation is still needed. There are three reasons. First, the latest literature review by Barbieri et al. (2018) includes 57 papers published from 2007 to 2017. With a significant increase in the number of publications in 2018 and 2019³, we think the understanding of the state-of-the-art in this field should be updated. Second, the main analytical frameworks adopted in existing reviews focus more on the antecedents of reshoring (e.g., Foerstl et al., 2016; Wiesmann et al., 2017). As a result, the extant contributions concerning the processes and outcomes of reshoring may not be addressed adequately. Third, the latest systemic literature review guides our empirical research design and future research.

Objective 2: analyse dynamics and evolutionary trajectories of reshoring in Europe

Some predict that reshoring will continue to increase (Reshoring Initiative, 2018), while others believe that only a small number of companies that are bringing production activities and jobs home (The New York Times, 2019). Concerning reshoring in Europe, there are some conflict views, disagreement and confusion regarding reshoring trends, patterns, characteristics and impact. So far, the in-depth and comprehensive understating of what is going on in Europe is lacking, which may slow down the research progress. Therefore, it is particularly important to have an overview of reshoring in Europe, offering clues to generate insightful research questions or propositions which could be tested.

³ The initial search through Scopus using the keywords shown in Table 2.1 in Chapter 2 yield 37 reshoring literature published in 2018 and 2019 (the search was conducted in June 2019). We think it is a significant number and we need to review these papers.

Objective 3: investigate the determinants of reshoring entry modes

To explore and exploit global operations opportunities always requires the companies to make a set of strategic decisions. As far as reshoring is concerned, although managers need to consider many strategic questions such as *whether* reshore or not (propensity), *when* to reshore (timing), and *where* to produce (location), the decision of *who* is performing the manufacturing activities (i.e., entry mode) should be fundamentally concerned with *where* manufacturing activities are to be performed. Entry modes (EM) choices, as a critical issue, should be analysed. Despite the importance, no study has investigated the factors affecting the reshoring entry mode and its relationship with the offshoring entry mode. Therefore, we attempt to fill this gap by examining the determinants of EM choices in reshoring initiatives.

Objective 4: compare reshoring practices and analyse how the home country matters

Unlike the offshoring where the host country is a central focus, reshoring, as a reverse phenomenon, has largely shifted the focus from the host country to the home country in which the MNCs are relocated. Given the heterogeneity of home countries, the relevant question raised first is whether these heterogeneities lead to different reshoring patterns. Existing literature on reshoring has highlighted some differences between countries in terms of main reshoring motivations and industries, which, to some extent, reflects home country-specific advantages. However, it mainly shows “descriptive” pictures. In other words, whether reshoring projects differ across countries and how country specificities matter are unknown. Therefore, we attempt to probe the peculiarities of reshoring projects of different countries (if any) and the underlying home country-related factors contributing to these peculiarities.

Objective 5: articulate frontier issues and propose future research directions

We acknowledge that there has been considerable progress in understanding reshoring on a number of issues in the last five years. However, reshoring is still a relatively new topic and the research on this topic is currently in its infancy stage. The unparalleled and continued growth of major offshoring and reshoring countries have revolutionised the global business landscape, generating massive opportunities and an array of challenges confronting reshoring companies. There are many aspects we think warrants more attention. Therefore, based on the findings of a systematic literature review and our

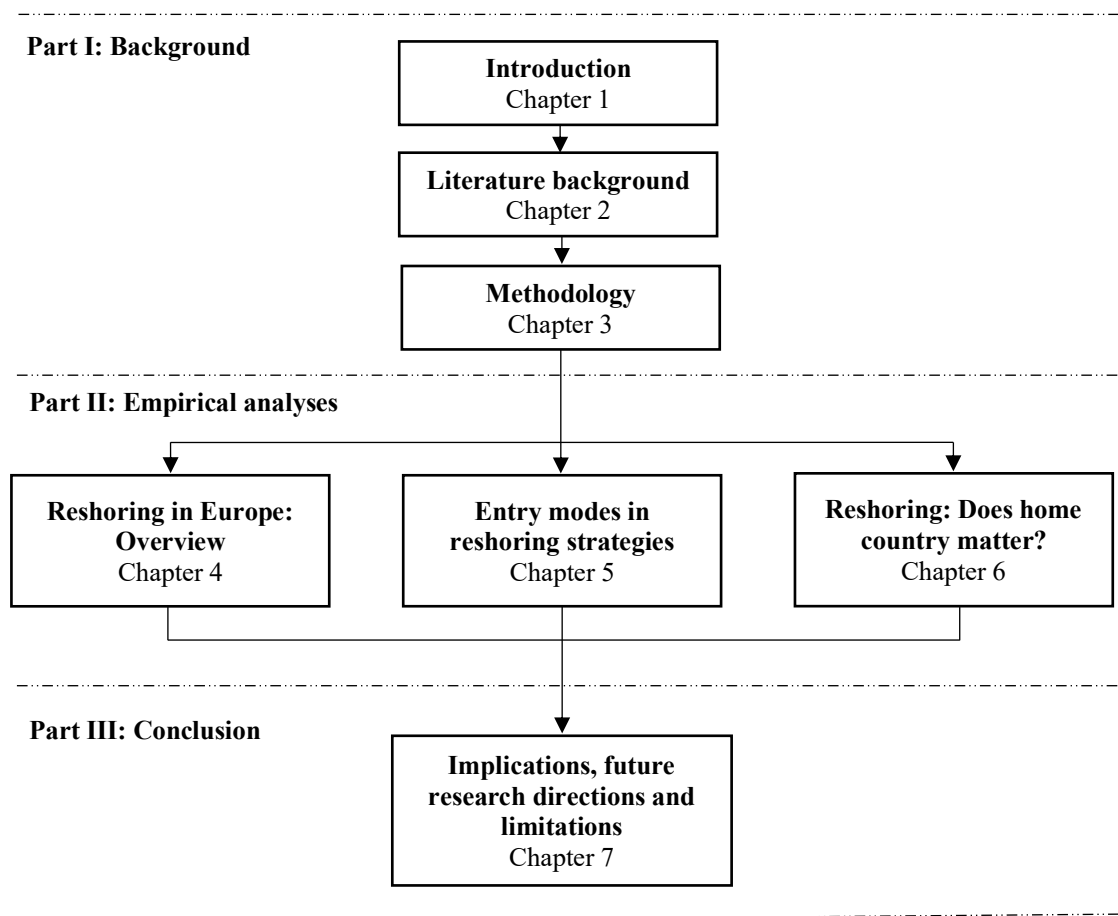
empirical analyses, we attempt to provide prospective insights into future research directions and articulate frontier issues that are understudied but critical to both theorisation and practice.

1.5 Thesis design

As illustrated in Figure 1.2, the thesis consists of seven chapters, which are grouped into three parts: background, empirical analyses, and conclusion.

Part I includes three chapters, illustrating why we study reshoring, what we have known about reshoring, and the methods we adopted. More in detail, *Chapter 1* introduces the emergence of this topic, the importance of reshoring in GVCs, the central focus of this thesis, as well as five research objectives. *Chapter 2* presents the state-of-the-art of the reshoring literature and proposes future research directions. *Chapter 3* articulates the methods adopted in this thesis.

Figure 1.2 Structure of the thesis



Part II includes three chapters, providing empirical analyses of reshoring. Specifically, **Chapter 4** unveils the trends, characteristics and evolutionary trajectories of reshoring in Europe by analysing 253 reshoring projects recorded in the ERM database. This chapter is adapted from the publication: Nassimbeni, G., Sartor, M., Wan, L., Ancarani, A., Di Mauro, C., Mascali, F., Barbieri, P., Di Stefano, C., Fratocchi, L., Lapadre, L. & Orzes, G. (2019) Reshoring in Europe: Overview 2015-2018, Publications Office of the European Union, Luxembourg. **Chapter 5** reveals the determinants of reshoring entry mode (EM) choice by analysing a sample of 677 reshoring projects. This chapter is adapted from the article: Wan, L., Orzes, G., Sartor, M., Di Mauro, C. & Nassimbeni, G. (2019) Entry modes in reshoring strategies: An empirical analysis. *Journal of Purchasing and Supply Management*, 25(3), 100522. **Chapter 6** illustrates the peculiarities of the reshoring projects among five countries and highlights the underlying home country-related factors contributing to reshoring peculiarities using a dataset including 529 reshoring projects. This chapter is adapted from the article: Wan, L., Orzes, G., Sartor, M. & Nassimbeni, G. (2019) Reshoring: Does home country matter?. *Journal of Purchasing and Supply Management*, 25(4), 100551.

Part III (Chapter 7) concludes this thesis by presenting implications, limitations and future research directions.

1.6 Main theoretical and practical implications

The implications are broadly discussed in the following sections. The full discussion is presented in Chapter 7.

Concerning **theoretical implications**, this thesis contributes to the reshoring literature, and more broadly International Business (IB) literature at least in five ways. *First*, this thesis articulates how the discourse on reshoring evolves with a holistic view and presents the latest research progresses. *Second*, this thesis provides an overview of reshoring in Europe (2014-2018), which largely advances the understanding of the reshoring phenomenon and dynamics. *Third*, this thesis, as the first attempt, points out the determinants of entry modes in reshoring processes. *Fourth*, this thesis is the first to provide in-depth evidence that the behaviours of reshoring projects do differ across countries. *Finally*, this thesis identifies research gaps that are understudied yet critical to both theorisation and practice.

As regard to **policy implications**, *first*, the public institutions need to be fully aware of the driving role of incentives in reshoring process and provide more direct support (e.g., tax reduction, financial aids) based on their country conditions. *Second*, we encourage policymakers to evaluate reshoring and design policies with a co-evolutionary perspective, allowing to make policies which are effective and truly beneficial for both governments and reshoring companies. *Third*, policymakers need to recognise the potential effect of entry modes on country development (e.g., employment) and think about how to influence companies' entry modes towards their interests. *Fourth*, policymakers are suggested to design the targeted policies by considering the heterogeneity of companies and industries. *Finally*, policymakers need to be aware of the boundary conditions of government intervention.

As far as **managerial implications** are concerned, *first*, managers are encouraged to pay attention to this phenomenon and its impact on their global value chains with evolutionary and dynamic views. *Second*, managers should realise that countries are differently *receptive* to reshoring choices, i.e., they offer differently *conducive* environments for the repatriation of manufacturing. *Third*, managers should carefully take into account the specialisation of business, the interdependency between business and local policies when planning reshoring EM strategy. *Fourth*, managers are encouraged to consider the home country conditions (e.g., institutions, culture, and industries) and to be fully aware of their importance, which could suggest different reshoring development paths. *Finally*, managers need to explore and exploit the advantages of government support with a co-evolutionary view.

Chapter 2 Literature background

2.1 Purpose

The aim of this chapter is twofold. First, it aims to provide a systematic understanding of the reshoring literature using a systematic literature review (SLR) and qualitative content analysis approaches. Second, it aims to articulate frontier issues and future research directions that have implications for both theorisation and practice.

2.2 Literature review approach

This study adopts a systematic literature review (SLR) and qualitative content analysis approaches which have been widely used by the previous studies (e.g., Denyer et al., 2008; Macpherson and Jones, 2010; Seuring and Gold, 2012; Tranfield et al., 2003). The content analysis, as a research technique, should follow a rigorous and purposeful process structure (Kassarjian, 1977, Seuring and Gold, 2012). Following the process model derived from Mayring (2008) and further developed by Seuring and Gold (2012), this study was developed along with four main steps, i.e., 1) material collection, 2) descriptive analysis, 3) category selection and 4) material evaluation, ensuring the reliability and validity of the content analysis. Each step has been elaborated in the following sections. *Step 1 Material collection.* Since we recognise that various terminologies and definitions are used to describe the reshoring phenomenon, the research group formed a review panel and discussed key search terms collectively. Defined keywords focused on two strings (see Table 2.1).

Table 2.1 Defined keywords

Search strings	Keywords
Reshoring-related	“Reshoring” OR “Re-shoring” OR “Backshoring” OR “Backshoring” OR “Back-reshoring” OR “Reshore”
Relocation-related	“Inshoring” OR “In-shoring” OR “Nearshoring” OR “Near-reshoring” OR “Onshoring” OR “On-shoring” OR “Production relocation” OR “Production repatriation” OR “Relocalisation”

Documents were identified by applying the aforementioned keywords (“reshoring-related” OR “relocation-related”) in “Article Title, Abstract, Keywords” field in the “Elsevier

Scopus” database which is recognised as one of the top business and management databases (Greenwood, 2011). In order to trace back to the origin of research on reshoring and to build a complete sampling, we did not put any restriction in the time frame of the potential articles during the initial search, which yielded 667 articles. The last search was carried out in June 2019.

Concerning article selection, Table 2.2 unveils the detailed criteria. After the first-round selection, we had a general idea about our potential sample. Then we carefully read the full text of these articles, which yielded 75 articles. Whenever there were doubts about the inclusion/exclusion of an article, group meetings took place until a common conclusion was reached. We also adopted a cross-reference check approach to ensure that no relevant article was missed. By doing this, we added two contributions which are qualified for final review but not identified initially. The final literature sample includes 77 articles.

Step 2 Descriptive analysis. We analysed the distribution of the journal, time period, and article types and methodologies, providing essential information about the literature sample. The descriptive findings are presented in Section 2.3.

Step 3 Category selection. In order to provide a comprehensive understanding of reshoring literature, we used the overarching organising framework, i.e., antecedent-process-outcome, as the main analytic categories for structuring and synthesising the content (e.g., Deng 2012; Paul and Benito, 2018). Notably, additional themes beyond the aforementioned framework were also identified. The six key themes are presented in Section 2.5.

Table 2.2 Inclusion/exclusion criteria

	Inclusion/exclusion criteria	Rationale
Selection of journal	Only peer-reviewed English language journals were included The ‘grey literature’ (i.e., books, book chapters, conference proceedings, dissertations and working papers) were excluded	There is a good number of articles identified (i.e., 667) in the initial search. Grey literature is less rigorous in general and reduces the validity of the findings generated
Selection of time period	Open time period	To build a comprehensive database of articles of potential interests
Selection of the article	Articles focused on reshoring activities Empirical and theoretical studies All types of industries and firms	To fit for the research purpose and to ensure the coverage of relevant research in IB and OM fields

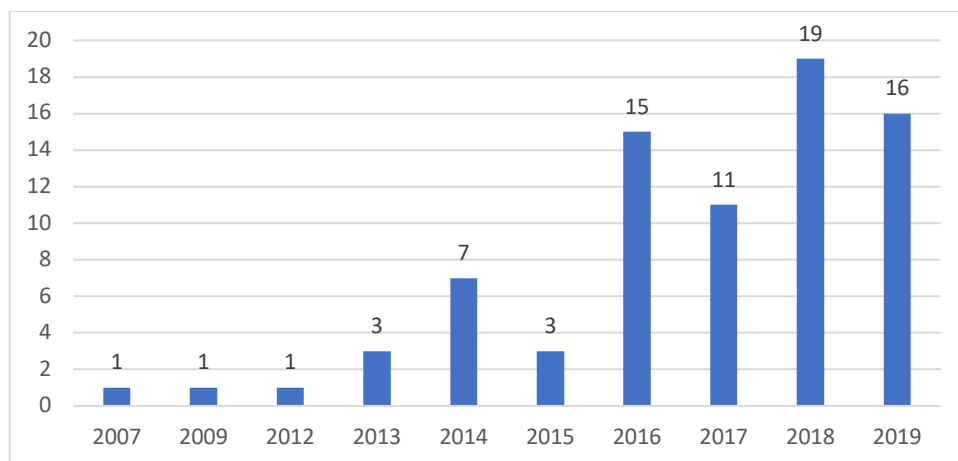
Step 4 Material evaluation. We evaluated the articles based on the categories/sub-categories identified. During the entire coding and evaluation process, the panel discussion was conducted whenever there were doubts in analysing articles or presenting results until an agreement was reached, ensuring rigour, objectivity, and transparency of the analysis (Duriiau et al., 2007).

2.3 Descriptive findings

2.3.1 The distribution of the year

The yearly distribution of the articles is presented in Figure 2.1. Accordingly, the research on this topic has been increasing over the years, especially after 2015. In the last four years (i.e., 2016-2019), we have seen that there is a significant increase in the number of articles, demonstrating the growing scholarly interest in this topic.

Figure 2.1 Distribution of the year



2.3.2 The distribution of the journal

Table 2.3 presents the number of articles published in each journal. This table only displays 16 journals where at least two articles are published. Despite the fact that the reshoring topic involves multiple fields (e.g., International Economics, International Business, Strategic Management, Operations Management, Marketing), as shown in Table 2.3, we find that the majority of the articles are published in Operations Management journals. Among these journals, the Journal of Purchasing and Supply Management (n=12, 16% of articles) has the highest number of publications, which is followed by the Operations Management Research (n=8, 10% of articles).

Table 2.3 Distribution of articles by journal outlet

Journals	Number of articles (n)	Percentage of articles (%)
Journal of Purchasing and Supply Management	12	16
Operations Management Research	8	10
International Journal of Physical Distribution and Logistics Management	4	5
International Journal of Production Economics	4	5
Journal of World Business	4	5
Supply Chain Forum: An International Journal	4	5
Journal of Manufacturing Technology Management	3	4
Journal of Global Operations and Strategic Sourcing	3	4
European Business Review	2	3
Growth and Change	2	3
IEEE Engineering Management Review	2	3
International Journal of Production Research	2	3
Journal of Operations Management	2	3
Journal of Supply Chain Management	2	3
Manufacturing and Service Operations Management	2	3
World Review of Intermodal Transportation Research	2	3
Other journals	19	25

2.3.3 Article types and methods

Table 2.4 articulates the article types and methods. Accordingly, 78% (60 out of 77) of articles are empirical studies, whereas 22% (17 out of 77) are theoretical studies. Among empirical studies (n=60), our results display that both quantitative and qualitative methods are used frequently (n=35, n=25, respectively). 32% of articles use surveys, whereas 13% use secondary data. The articles using a multiple case study approach (n=13) are more than those using a single case study approach (n=6) and the focus group method (n=6)

Table 2.4 Article types and methods

	Number of articles (n)	Percentage of articles (%)
Article type		
Theoretical study	17	22
Empirical study	60	78
Methodology		
Quantitative	35	45
Survey	25	32
Secondary data	10	13
Qualitative	25	32
Multiple case	13	17
Single case	6	8
Focus group	6	8

2.4 Reshoring: beyond a definition

What is reshoring? The definition of reshoring has been illustrated extensively in existing literature (see Table 2.5). Despite this, our understanding of what this concept means and how the conceptual status evolves is fragmented. In this section, we provide a nuanced understanding of reshoring concept by discussing terminology and definition, typology, unit of analysis and value chain activity.

2.4.1 Terminology and definition

Reshoring has often been described as a reversal of an offshoring initiative. While the term “reshoring” has been used most commonly in existing literature, scholars have proposed other terms and definitions (see Table 2.5).

Table 2.5 Terminologies and definitions

Terminology	Definition	Reference
Reshoring	Reshoring is 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, p.28)
	As an increase in production volume in the region where the business unit's headquarters is located	Cohen et al. (2018, p.3)
Backshoring	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, p. 56).
	Re-concentration of parts of production from own foreign locations as well as from foreign suppliers to the domestic production site of the company	Kinkel and Maloca (2009, p.155)
Nearshoring	Locating manufacturing plant within one's region	Ellram et al. (2013, p.15)
	A relocation closer to the home country but not necessarily a repatriation	Bailey and De Propis (2014, p. 382).
Right-shoring	Companies are starting to focus on those areas that make sense	Tate et al. (2014, p.67)
Best-shoring	Firms' location choices are mostly driven by strategic choices that maximise their competitiveness without predefined scale considerations	Bailey and De Propis (2014, p. 382).
In-sourcing	Moving activities previously sourced from an external supplier back in-house	Gylling et al. (2015, p.93)

In Operations Management, most would accept the idea that “reshoring” or “backshoring”, in broad terms, is a location decision (Gray et al., 2013), which changes an earlier implemented production in offshoring countries by (re)establishing production activities in the home country. Fratocchi et al. (2014, p.56) highlight three elements of “reshoring” : a) it is a voluntary decision that it is not determined by nationalisation and expropriation by host country governments, hence it is part of the firm's strategy; b) it may involve some specific production activities or the entire production of a foreign plant;

c) it may concern both out-sourced and in-sourced activities, irrespective of the ownership mode.

2.4.2 Typology of reshoring

As shown in Table 2.6, existing studies have classified reshoring practices using different approaches. According to Table 2.6, geographic direction and governance mode are the most important dimensions which have been used to categorise reshoring (e.g., Bals et al., 2016; Foerstl et al., 2016; Gray et al., 2013; Vanchan et al., 2018). However, it is interesting to see that scholars have classified reshoring based on strategic aims of firms (e.g., Joubioux and Vanpoucke, 2016) and market orientation (e.g., Zhai et al., 2016).

Table 2.6 Typologies of reshoring

Authors	Dimensions/Classification criteria	Specific types
Gray et al. (2013)	<ul style="list-style-type: none"> Geographical direction (home, host country) Governance mode (in-sourcing, out-sourcing) 	Outsourced reshoring In-house reshoring Reshoring for outsourcing Reshoring for insourcing
Bals et al. (2016) Foerstl et al. (2016)	<ul style="list-style-type: none"> Geographical direction (domestic, nearshore, offshore) Governance mode (make, hybrid, buy) 	Domestic/Nearshore/offshore sourcing Domestic/Nearshore/offshore partnership Domestic/Nearshore/offshore inhouse production
Joubioux and Vanpoucke (2016)	<ul style="list-style-type: none"> Strategic aims of firms 	Home reshoring Tactical reshoring Development reshoring
Zhai et al. (2016)	<ul style="list-style-type: none"> Market orientation 	Offshore manufacturing serves the home market/host market/the regions markets around the host market
Vanchan et al. (2018)	<ul style="list-style-type: none"> Geographical direction (home, host country) Governance mode (in-sourcing, out-sourcing) 	Investment in onshore production capability Repatriation of in-house production Repatriation of offshored production to in-house Component sourcing via contract manufacturers Component sourcing via intermediary manufacturer, production remains far-sourced Temporary repatriation of component sourcing

2.4.3 Unit of analysis

The unit of analysis is an important issue in reshoring practices; however, it is not always clear in extant studies. As highlighted by Fratocchi et al. (2014), reshoring may involve

some specific production activities or the entire production of a foreign plant. In other words, the unit of analysis could either be a specific task within a value chain or the whole value chain. Some scholars use a single reshoring project as a unit of analysis (e.g., Ancarani et al., 2015; Fratocchi et al., 2015). That is, if the same company reshores production from two different host countries, this is considered as two reshoring projects.

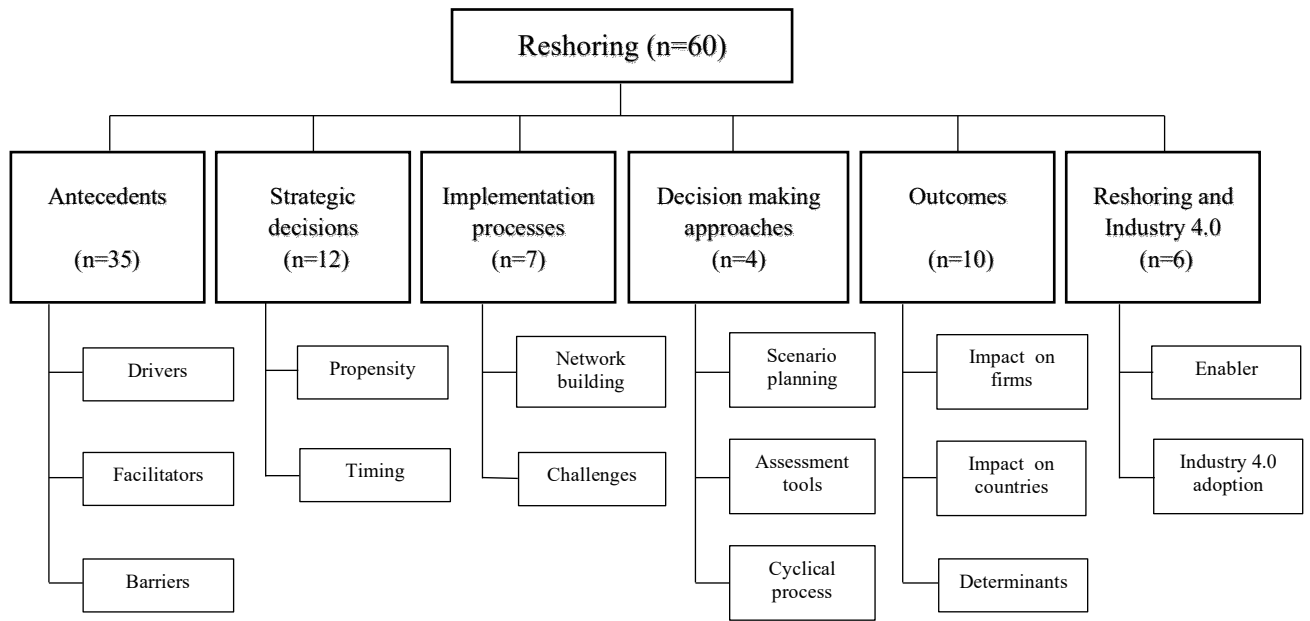
2.4.4 Value chain activity

Although extant study primarily focuses on manufacturing companies (e.g., Ellram et al., 2013; Tate et al., 2014; Kinkel, 2014), it is worth to note that reshoring is not limited to the manufacturing/production activities (Vanchan et al., 2018). There are a few studies which focus on service companies. For example, based on data from the Offshoring Research Network, Albertoni et al. (2017) reveal that reshoring of business services is the result of company response to performance shortcomings of the initiative offshored and is motivated by persisting with original offshoring strategies (i.e., disintegration advantages, accessing new markets and cost-saving), regardless of offshoring performance. Concerning the specific activities/tasks rooted in the value chains, extant studies dominantly focus on production activities. The relocation of other value chain activities (e.g. planning, sourcing, research and development) has attracted little attention.

2.5 Thematic findings

Focusing on empirical studies (n=60), Figure 2.2 unveils the six main themes and the number of articles addressing each, allowing us to see the evolution of the literature. Accordingly, the largest theme is the *antecedents*, which has accounted for 45% of (35 out of 77) articles reviewed. The second largest theme is the *strategic decisions*, accounting for 15% (12 out of 77) of articles, which is followed by *outcomes* (n=10), *implementation processes* (n=7), *reshoring and industry 4.0* (n=6), and *decision making approaches* (n=4). Although it is not surprising to see that the existing studies primarily focus on antecedents, the findings clearly demonstrate that the dialogue on reshoring has gradually shifted from motivations towards a wider scope involving processes and outcomes. Interestingly, very recent studies have started to investigate the relationship between industry 4.0 and reshoring. The rest of the articles dealing with issues beyond the aforementioned themes are categorised into “other issues” (see Section 2.5.7).

Figure 2.2 Six main themes



Note: some articles address more than one theme.

2.5.1 Antecedents

Antecedents can be roughly categorised into three groups: drivers, facilitators, and barriers (Quintens et al., 2006). Extant literature has put much emphasis on the antecedents of reshoring. However, among them, the drivers of the reshoring have attracted most scholarly attention since 2007. For example, based on a survey of 1450 companies in the German manufacturing industry, Kinkel et al. (2007) illustrate that ‘cost’ is the most important driver. In the subsequent studies, scholars have identified an array of drivers and grouped them according to different criteria (see Table 2.7).

As illustrated in Table 2.7, existing literature has highlighted the heterogeneity of reshoring drivers. Unlike offshoring where cost-related factors usually play a dominant role in driving offshoring (Ferreira and Prokopets, 2009; Johansson et al., 2019; Lewin and Peeters, 2006), reshoring decisions could not be completely explained by changes in relative costs between the offshore country and home country. Rather, it has been driven by a myriad of factors such as companies’ business strategies (e.g., Bals et al., 2016; Benstead et al., 2017; Di Mauro et al., 2018), consumer demand (e.g., Arlbjörn and Mikkelsen, 2014; Harrington, 2011; Tate et al., 2014), the correction of mistakes occurred in offshoring places (e.g., Gray et al., 2013), global competitive dynamics (e.g., changes

in the global economy, political risk, and tax rate) (e.g., Wiesmann et al., 2017), and infrastructure (e.g., Benstead et al., 2017).

Table 2.7 Overview of the existing framework of reshoring antecedents

Authors	Dimensions	Data source
Ancarani et al. (2015)	<ul style="list-style-type: none"> • Efficiency seeking • Market seeking • Resource seeking • Strategic asset seeking 	Secondary data
Foerstl et al. (2016)	<ul style="list-style-type: none"> • Human and behavioural factors • Transactional factors 	Literature review
Fratocchi et al. (2016)	<ul style="list-style-type: none"> • Value-driven internal/external • Efficiency-driven internal/external 	Secondary data
Srai and Ané (2016)	<ul style="list-style-type: none"> • Quality & brand image • Country factor costs • Reconfiguration and restructured cost • Enhanced innovation • Responsiveness and resource efficiency • Risk management and dependability • Institution 	Literature review
Stentoft et al. (2016)	<ul style="list-style-type: none"> • Cost • Quality • Time and flexibility • Access to skills and knowledge • Risk • Market • Other (e.g., government incentives) 	Literature review
Benstead et al. (2017)	<ul style="list-style-type: none"> • Cost-related • Competitive priorities • Infrastructure-related • Risk, uncertainty and ease of doing business 	Literature review
Wiesmann et al. (2017)	<ul style="list-style-type: none"> • Global competitive dynamics • Host country • Home country • Supply chain • Firm specific 	Literature review
Barbieri et al. (2018)	<ul style="list-style-type: none"> • Managerial mistake • External environment (six subcategories) • Internal environment (six subcategories) 	Literature review
Heikkilä et al. (2018)	<ul style="list-style-type: none"> • Changing costs of operations • Quality • Time and flexibility • Access to skills and knowledge • Other 	Literature review
Ancarani et al. (2019)	<ul style="list-style-type: none"> • Flexibility priority • Cost priority • Quality priority 	Secondary data
Johansson et al. (2019)	<ul style="list-style-type: none"> • Cost • Development • Quality • Market proximity • External influence • Trade policy 	Survey

Despite this, it is widely believed that cost-related factors (e.g., Kinkel et al., 2007) and quality issues play critical roles in driving reshoring (e.g., Dachs et al., 2019; Johansson

et al., 2019, Leisner and Nielsen, 2019). For example, Fratocchi et al. (2016) identify 26 motivations based on the secondary data of 377 reshoring projects and point out the top three motivations: ‘the pursuit of lower logistics costs’, ‘made-in effect in the home country’, and ‘poor quality of offshored product’.

In addition to the drivers, extant study has shed light on the barriers of reshoring (e.g., Arlbjørn and Mikkelsen, 2014; Bailey and De Propris, 2014; Canham and Hamilton, 2013; Ellram et al., 2013; Engström et al., 2018; Kinkel and Maloca, 2009; Tate et al., 2014). It has been argued that “barriers to reshoring are reasonably more prominent in practice than drivers” (Wiesmann et al., 2017, p.34). Wiesmann et al. (2017) categorise the barriers into five categories, i.e., global competitive dynamics, host country, home country, supply chain, and firm specific. Accordingly, no barriers to reshoring were identified in the category of supply chain, whereas more barriers than drivers are found within the category of firm specific (Wiesmann et al., 2017). By using the similar categories, Engström et al. (2018) compare the barriers identified from the four Swedish manufacturing companies with the barriers identified from the literature. They find three barriers, i.e., ‘capacity’, ‘calculation’ and ‘labour market in home country’, in all examined companies and identify some new barriers: ‘labour in host country’, ‘supplier partnership’ and ‘ownership of product blueprint’.

2.5.2 Strategic decisions

To explore and exploit relocation opportunities requires the company to make a set of strategic decisions including *whether* reshore or not, *when* to reshore and *how* to reshore. What are the determinants of these decisions? So far, extant literature has only shed light on the determinants of reshoring propensity (whether) (e.g., Canham and Hamilton, 2013; Dachs et al., 2019) and reshoring timing (when) (e.g., Ancarani et al., 2015). Among them, most of the efforts are devoted to analysing the determinants of reshoring propensity.

Reshoring propensity When companies reconsider their global manufacturing footprint, they usually have three options: maintain their current offshoring strategy, further offshoring and reshoring. These options are not mutually exclusive. In order to identify the determinants of reshoring propensity, scholars adopt two main approaches. One body of literature compares companies which have already implemented reshoring strategy to those they do not reshore (e.g., Canham and Hamilton, 2013; Dachs et al., 2019; Delis et

al., 2017; Kinkel, 2012; Uluskan et al., 2017). Another body of research contributes to this debate by comparing the reshoring companies to those they have implemented other shoring strategies (e.g., further offshoring, maintain at home) (e.g., Albertoni et al., 2017; Barbieri et al., 2019; Ellram et al., 2013; Heikkilä et al., 2019; Tate et al., 2014). The latter provides more insights into the determinants of location choice in global manufacturing in a broad sense.

Concerning the results, extant literature reveals that reshoring propensity is associated with multi-dimensional factors involving firm-level factors (e.g., products of the firm, past experiences, offshoring motivations) (e.g., Albertoni et al., 2017; Canham et al., 2016; Dachs et al., 2019; Delis et al., 2017, Kinkel, 2012; Uluskan et al., 2016), industry-level factors (e.g., hi-tech firms) (e.g., Canham and Hamilton, 2013; Dachs et al., 2019; Heikkilä et al., 2018), and country-level factors (e.g., global financial crisis) (e.g., Delis et al., 2017; Kinkel, 2012). Within each level, the results are mixed and inconclusive.

Among them, the *firm-level factors* have been paid much more attention than the other two levels. There are three notable factors: firm size, previous reshoring experience and previous offshoring experience. Surprisingly, prior studies have shown that the firm size does not affect companies' reshoring propensity (e.g., Canham and Hamilton, 2013; Kinkel, 2012). By contrast, the past experiences of the firm, either reshoring or offshoring, play a critical role in affecting reshoring propensity (e.g., Albertoni et al., 2017; Delis et al., 2017; Kinkel, 2012). For example, scholars have demonstrated that past reshoring experiences positively influence reshoring propensity (e.g., Delis et al., 2017; Kinkel, 2012), underscoring the learning effects in reshoring. Concerning offshoring experience, the results are mixed. Albertoni et al. (2017) reveal that companies are likely to relocate when their offshoring had been motivated by access to new markets, whereas the unsatisfactory performance of activities offshored for efficiency reasons or search of talent does not necessarily lead companies to relocate elsewhere. More recently, using data from the European Restructuring Monitor, Barbieri et al., (2019) find that when a previous offshoring investment is driven by market-seeking location advantage, companies are more likely to opt for a "relocation to the home country" (RHC), except during the economic crisis where market-seeking European companies seem to prefer "relocation to a third country (RTC)".

Concerning *industry-level factors*, existing studies provide mixed results. For example, based on the survey of 229 Finnish manufacturing firms, Heikkilä et al. (2018) reveal that

companies had transferred their production back to Finland are more common in industries with relatively higher technology intensity. By contrast, based on the data of 151 New Zealand manufacturers, Canham and Hamilton (2013) demonstrate that there is a higher occurrence of reshoring among consumer companies.

Turning to the *country-level factors*, one notable factor is ‘global economic crisis’. Based on a large data set of 1,484 German manufacturing companies as part of the European Manufacturing Survey (EMS), Kinkel (2012) find that companies which are engaged in customer-specific product development have been less active in production backshoring before the emergence of the global economic downturn (1999-2006). Similarly, based on 3683 MNCs from 14 developed countries investing in 66 host countries over the period 2006-2013, Delis et al. (2017) find a strong relationship between the onset of the financial crisis and the firm level propensity to reshore.

Reshoring timing In International Business (IB), the duration of specific foreign ventures (e.g., joint ventures, licensing agreements, plants, subsidiaries) (Habib and Mella-Barral, 2007; Mata and Portugal, 2000; Wren and Jones, 2009) is an important issue. Reshoring, by definition, is the location choice that follows offshoring. Thus, it is important to understand the duration of offshoring/reshoring. So far, there is only one study that explicitly examines the determinants of the duration of manufacturing offshoring prior to reshoring. Specifically, by applying survival analysis to a dataset of 249 offshoring experiences terminated with a relocation to the home country/region, Ancarani et al. (2015) highlight that contextual factors such as the industry, the home country, the host country, and the firm size significantly affect the duration of offshoring. Specifically, the likelihood of termination is in fact higher for the electronics and automotive industries, for small firms, for firms headquartered in Europe, and for offshoring to Asia. Moreover, they also find that ‘quality’ issues experienced offshore emerge as the key factor giving rise to shorter offshore stays. Based on their empirical findings, they further propose that the likelihood of termination of offshore manufacturing and the return to the home country may be accelerated by technology-based industries, small firm sizes, shrinking cost differentials and the psychic distance between home and host country, the organisational archetypes, and quality-related motivations.

2.5.3 Reshoring implementation processes

The process of reshoring implementation is inherently fraught with complexity, involving many aspects such as supply chain integration, information sharing, capabilities exploitation, and network building. Although extant research on this issue is scarce, some studies adopting a case study approach have thrown some light on how companies implement their reshoring strategies with different focuses. For example, based on a single UK case of captive reshoring in the textiles industry, Benstead et al. (2017) present how the decision to reshore is operationalized with a particular focus on the reshoring drivers, implementation factors and contingency factors. Joubioux and Vanpoucke (2016) advance the understanding of the interconnections among offshoring and reshoring decisions and the dimensions for ‘right-shoring’ by analysing six offshoring/reshoring cases in the aeronautic industry. From a network perspective, Baraldi et al. (2018) illustrate that reshoring is a process that involves decisions as well as changes not only in the network structures of the host country but also in those of the home country by analysing an Italian manufacturing firm. Boffelli et al. (2018) demonstrate the challenges that emerged during the implementation processes by examining four Italian reshoring firms.

2.5.4 Decision making approaches

Decision making processes are complex. In addition to examining the determinants of the key strategic decisions, existing studies have started to look at the approaches of making decisions. Scholars argue that having an appropriate decision making models (e.g., Presley et al., 2016), frameworks (e.g., Boffelli et al., 2018), and assessment tools (e.g., Tate et al., 2014) can assist managers to make an optimal and resilient decisions (Hartman et al., 2017; Kinkel, 2012; Stentoft et al., 2016), highlighting the importance of planning and assessment. For example, Tate et al. (2014) suggest the scenario planning approach by emphasising the importance of ‘what if’ questions. They point out that “assessing the total cost of doing business in a region goes hand-in-hand with scenario planning”. They further argue that companies need to assess their manufacturing locations in a dynamic and constant manner. That is, the operations after reshoring must be continuously reviewed and updated. Based on experts and practitioners’ inputs and literature, Presley et al. (2016) explain how to evaluate and justify various decisions related to reshoring by introducing the Strategic Sourcing Evaluation Methodology (SSEM). This is a tool which

can be used to incorporate multiple quantitative and qualitative factors when making reshoring decisions. In the same vein, through the lens of Heuristic decision-making, Gray et al. (2017) highlight the decision tools that facilitate the development of better heuristics which incorporate richer information. By interviewing CEOs and Operations Managers of four Italian companies of the apparel and accessories industry, Boffelli et al. (2018) reveal that decision making and implementation process are a cyclical process, which is made of loops, trials and errors. The study develops a conceptual framework on the reshoring decision making and implementation process and argues that reshoring firms tend to adopt flexible and adaptable processes that allow them to deal with uncertainty.

2.5.5 Reshoring outcomes

Scholars have started to look at the outcomes of reshoring since 2016 (e.g., Brandon-Jones et al., 2017; Johansson and Olhager, 2018). Concerning the outcomes of reshoring, they are easily related to social/country development since reshoring has been considered as a useful tool to revive national manufacturing. However, existing studies (see Table 2.8) have mainly examined the impact of reshoring on companies' operational performance and financial performance. The results are mixed and inconclusive.

Concerning the operational performance, based on large-scale survey on manufacturing relocation projects among the manufacturing industries of Denmark, Finland, and Sweden, Johansson and Olhager (2018) analyse the relationship between location factors (i.e., low-cost operations, market proximity, development competences) and post-relocation operational performance. They reveal that offshoring firms had enjoyed cost benefits, whereas reshoring firms had enjoyed both cost and QDF (short for quality, delivery, and flexibility) benefits. Similarly, Johansson et al. (2019) examine the relationship between driving factors of the relocation decision (i.e., cost, development, quality, market proximity, external influence, trade policy) and performance effects (i.e., cost benefits, quality benefits). They reveal that the cost benefits for backshoring projects were found to be positively and significantly associated with cost factors and market factors but not related to development, quality, or external influence factors and trade policy.

As far as financial performance is concerned, Brandon-Jones et al. (2018) indicate that reshoring announcements result in positive abnormal stock returns by analysing the

shareholder wealth effects of 37 reshoring decisions announced by US firms during 2006-2015. By contrast, Stentoft et al. (2018) articulate that there are no differences in productivity among companies that have offshored, backshored, or maintained manufacturing at home. They also find that no significant level of difference in unit costs among companies that have backshored manufacturing and companies that have maintained manufacturing at home.

Table 2.8 Key literature on reshoring firms' performance

Author	Journal	Outcomes dimension	Data collection	Country	Main findings
Johansson et al. (2019)	JPSM	Cost benefits, QDF benefits (short for quality, delivery, and flexibility)	Survey	Denmark, Finland, and Sweden manufacturing plants	Backshoring firms had enjoyed both cost and QDF benefits.
Johansson and Olhager (2018)	IJPE	Operational performance (cost, quality, delivery, and flexibility measures)	Survey	Swedish manufacturing plant	The low-cost location factor did not show any association with QDF benefits. Cost benefits as the only benefits achieved when relocation is based on cost factors.
Stentoft et al. (2018)	IJPE	Cost performance, Operational performance, Cost, Accounting capabilities	Survey & Secondary data	Danish companies	No differences in productivity among companies that have offshored, backshored, or maintained manufacturing at home.
Brandon-Jones et al. (2017)	JOM	Shareholder wealth	Secondary data	US reshoring companies	Reshoring announcements result in positive abnormal stock returns.

Existing studies provide insights into the factors influencing the outcomes of reshoring. For example, Robinson and Hsieh (2016) highlight the role of supply chain strategy in enhancing value and firm competitiveness based on a case study of a UK clothing company (i.e., Burberry). Johansson and Olhager (2018) indicate that alignment between the type of production and drivers is important to achieve the expected benefits. Johansson et al. (2019) find that being close to the customer is clearly beneficial for logistics costs, lead times, and flexibility.

2.5.6 Reshoring and Industry 4.0

The role of advanced technologies belonging to the so-called 'fourth industrial revolution' (Industry 4.0) in shaping MNCs' internationalisation has been a very popular topic in recent years (Brynjolfsson and McAfee, 2014; Hannibal and Knight, 2018; Strange and

Zucchella, 2017). The relationship between industry 4.0 and reshoring has increasingly attracted scholars' attention (e.g., Ancarani and Di Mauro, 2018, Ancarani et al., 2019, Dachs et al., 2019; Fratocchi et al., 2018; Moradlou and Tate, 2018; Stentoft and Rajkumar, 2019). Existing studies have thrown light on three aspects: (1) industry 4.0 (I4.0) technologies enable/drive reshoring, (2) I4.0 technologies influence strategy implementation, and (3) the characteristics of reshoring companies that have adopted I4.0. Concerning the enabling role of I4.0, scholars tend to believe that I4.0 could enable or drive companies' reshoring activities. For example, Fratocchi et al. (2018) provide evidence that additive manufacturing technologies (AMTs) enable manufacturing reshoring based on the data of eleven cases of relocation of production activities supported by AMTs. Similarly, Bernhard et al. (2019) demonstrate that there is a positive correlation between the adoption of I4.0 technologies and companies' backshoring propensity based on a large dataset of 1700 manufacturing firms from Austria, Germany, and Switzerland.

With regard to the role of I4.0 in strategy implementation, Moradlou and Tate (2018) investigate whether the new generation of technologies such as additive manufacturing (AM) can help the manufacturing location decision. They argue that reshoring provides a great platform to implement the concept of postponement through the utilisation of AM technologies.

As far as the characteristics of reshoring companies are concerned, Ancarani and Di Mauro (2019) demonstrate that the adoption of I4.0 technologies after backshoring would significantly vary across firms with different competitive priorities. Specifically, they find that the adoption of I4.0 is significantly related to two factors: quality and the reduction of costs tied to non-conformance. By contrast, backshoring initiatives prioritising the reduction of direct costs or responsiveness are not significantly tied to I4.0 adoption.

2.5.7 Other issues

In addition to the six main themes identified, there are some studies that deal with other issues. For example, Stentoft et al. (2016) examine whether and how companies pursuing different globalisation strategies work differently with the supply chain innovation components by comparing offshoring and reshoring practices. Pal et al. (2018) identify and prioritise the success factors and challenges related to competitive manufacturing (CM) capabilities in a high-cost environment and identify their potential to support future

reshoring in textile and clothing (T&C) supply chains. Moore et al., (2018) examine the relationships between contingency factors (e.g., firm size, industry) and reshoring drivers in the textile and apparel industry. Recently, Gadde and Jonsson (2019) describe and analyse the expected future changes with regard to offshoring and reshoring and identify the reasons behind such changes. Nujen et al. (2019) delineate key aspects of reshoring readiness and discuss how such aspects contribute to a smooth shift-back from global sourcing operations.

2.6 Future research directions

We have discussed the findings and conclusions of prior studies, thus providing a systematic understanding of what is known. Reshoring, as a nonlinear internationalisation process (Fratocchi et al., 2015), is complex, dynamic and evolutionary, resulting in a myriad of areas that we think warrant further attention. We propose four future research directions.

2.6.1 Institutions and reshoring

Institution theory suggests that institutions influence the behaviors of both individuals and organisations by establishing the “rules of the game” (Narayanan and Fahey 2005; Shinkle and Kriauciunas, 2010). In International Business, it is widely believed that the institution-based view is particularly important for explaining the internationalisation of emerging country multinational companies (EMNCs), since it brings the distinctive characteristics of the institutional environment from which EMNCs originate to the front (Chen et al., 2018). Reshoring companies, in most cases, has moved their production from developing countries to developed countries. The critical question raised here is whether the differences of institutional conditions between developed and developing countries matter. Surprisingly, there are few empirical studies that explicitly probe the role of institutions and more broadly, the role of a country’s conditions in shaping reshoring companies’ behaviours. Extant studies reveal that the government incentives play a critical role in driving reshoring; however, they fail to specify the conditions of this effect. It is also unclear whether the government intervention still plays a critical role in the implementation processes. With growing tensions in trade between major countries (e.g., US and China), we suspect that institutional forces stemmed from these tensions may

significantly affect the next wave of reshoring. Therefore, we argue that lacking attention on the institutions may easily lead to a superficial interpretation of reshoring. Future research needs to look at how country-level institutions in both offshoring countries and home countries shape reshoring.

Concerning the institutions at the organisational-level, it is also very interesting to know how the institutional isomorphic pressures, i.e., the shared rules, beliefs, and norms that affect the legitimacy of behaviours in terms of their acceptance by the environment (DiMaggio and Powell, 1991), matter in reshoring. For example, with the increased pressures to act environmentally and socially responsible, reshoring may be triggered by the home country pressures that challenge their labour and environmental practices in offshoring. Strong pressures may also arise from competitors. For example, clothing companies may face the pressure raised from the competitors who have reshored and enjoyed the benefits of the “made-in effect” which is considered to be a potential source of competitive advantages. In addition, for subsidiaries, the parent companies may become more articulate in expressing their norms, and hence, increase the isomorphism. It seems that the isomorphic pressures are not the main driver in the first wave of reshoring based on the findings of extant studies. This may be because scholars have overlooked this element. Thus, we encourage scholars to pay more attention to the organisational-level institutions in future research.

2.6.2 Operations reorganisation and reconfiguration

Reshoring companies are reconfiguring their global operations by at least changing the geographies of production. It is evident that companies also change their previous entry modes or switch their suppliers when they move back to their home country (e.g., Uluskan et al., 2016). Although extant studies have shed some light on the determinants of reshoring propensity and timing, the understanding of how companies reconfigure their operations by adjusting their strategic decisions is very limited. In general, a lot of research is needed to probe the antecedents and contingencies of strategic decisions including where to go (location), how to (re)entry the home market (entry mode), how much to reshore (intensity) and how long the company will stay (timing).

Once strategic decisions are made, companies are required to reorganise many activities within the supply chain (e.g., research and development, planning, production, sourcing, delivery, distribution, and marketing). For example, the location changes may require

companies to build new manufacturing bases, find new suppliers, and hire new workforces. Existing studies have thrown some light on how companies implement reshoring (e.g., Baraldi et al., 2018; Benstead et al., 2017; Joubioux and Vanpoucke, 2016; Stentoft et al., 2015); however, they far short at articulating the reconfiguration process of the supply chain. We believe that additional light needs to be thrown on the specific tasks/functions reorganised by companies after they re-enter home country. There is a myriad of questions that need to be investigated. For example, what tasks do companies reorganise? What specific activities do they employ? To what extent are the operations (e.g., logistics) reconfigured? What are the key challenges and barriers that the companies face during the supply chain integration?

In addition, future research can delve into the (re)configuration issues by taking companies' typology or taxonomy into consideration. Existing studies have informed us that reshoring is triggered by both firm-level (internal) and country-level (external) factors (e.g., Fratocchi et al., 2016). The heterogeneity of the motivation may lead to distinctive configuration approaches. For example, the rising labour costs in offshoring countries (e.g., China) may lead companies to relocate their plants and distribution centres to seek efficiency. The increased pressure on the time-to-market or order-to-delivery may drive the company to reconsider the geographic distances of plants and the structure of their distribution centres. Thus, it is interesting to know how companies reconfigure their supply chains to achieve distinctive strategic objectives, whether companies with the same motivations deploy common practices, and whether a relationship exists between certain motivations and configuration approaches.

Future research might also look at the effect of country-specific factors on companies' reconfiguration patterns (if any). For example, for those countries investing in advanced technologies (i.e., industry 4.0) (e.g., Germany), it is very interesting to know in which aspect, to what extent, by which form, and through which mechanism the technological profile of the local context affects the supply chain reconfigurations. It would be interesting to compare companies' operations reconfiguration approaches among different countries.

Another issue that deserves attention is how firms coordinate the efforts of the individual manufacturing base in a home country and across other countries. This issue applies to the reshoring companies where only part of the production activities has been reshored. In this case, the reshoring strategy and offshoring strategy co-exist within a company.

Research should explore how companies maintain or create competitiveness by reconfiguring their supply chains at the global level, how companies reconcile the tensions between localisation and globalisation, and how reconfigurations can be successfully implemented.

2.6.3 Relevant resources and dynamic capabilities

The RBV and related theories (e.g., resource dependency theory, resource orchestration perspective) (Wernerfelt, 1984; Barney, 1991), as well as the dynamic capabilities view (Luo, 2000) suggest that the resources and capabilities are of strategic importance and are necessary conditions for sustained success in a complex business environment. Like any other internationalisation strategy, reshoring companies are confronting challenges and disadvantages (Nujen et al., 2018; Wiesmann et al., 2017), which may lead to failures in their post-reshoring stages. In this regard, which resources and capabilities can help companies to survive and succeed has become a fundamental question. Nujen et al. (2019) highlight that intangible resources, technological resources and supplier resources are critical for reshoring and develop a framework that guides reshoring readiness assessment. Despite these findings, we still do not know what resources and capabilities the reshoring companies need during the whole reshoring process.

The dynamic capabilities perspective (Luo et al., 2000) suggests that the competitive advantages of firms stem not only from their strong bases of established capabilities or resources (capabilities possession) but also from the manners in which they are deployed (Teece, 1998) (capabilities deployment) and upgraded/developed (capability upgrading). In this sense, whether reshoring companies can maintain or rebuild their competitiveness depends not only on what resources and capabilities they possess but also on how they manage and develop them (Luo et al., 2000). However, extant studies do not provide knowledge on this issue. Future research needs to explore how reshoring companies exploit their existing resources and what contingencies may affect the efficiency of such deployments. For example, they could address questions such as the following. What are the relevant resources and capabilities the companies possess? How do reshoring companies leverage their internal resources and capabilities to respond to institutional pressures? Are the effects of certain resources and capabilities contingent upon other factors? What are the key challenges for deploying the existing resources?

In addition, it is also necessary to understand how reshoring companies build new capabilities or create new bundles of distinct resources. In this regard, the questions concerning how reshoring companies learn become very important because the organisational learning capability is the key for capability upgrading through acquiring knowledge. Existing studies have recognised the role of learning in reshoring by arguing that a firm's past (offshoring or reshoring) experiences have strong implications for subsequent reshoring (e.g., Delis et al., 2017; Kinkel, 2012). However, they do not provide an adequate understanding of the mechanisms through which the companies learn from previous shoring experiences and how the learning outcomes are translated to the new capabilities.

2.6.4 Value creation and value capture

What values does reshoring create? The existing study starts to probe the value creation of reshoring by examining companies' financial (e.g., productivity) and operational performance (e.g., quality benefits) (e.g., Brandon-Jones et al., 2017; Johansson and Olhager, 2018). However, knowledge about reshoring companies' performance is very limited. In general, research needs to further examine post-reshoring performance and its determinants. Undoubtedly, this objective assessment is valuable. It is worth to note that the value creation of reshoring is not limited to the company's financial performance, but it also depends on the value that is subjectively realised by a target user (or buyer) involved in reshoring (Lepak and Smith, 2007). That is, the stakeholders with different expectations and goals may have different views on "what" is valuable (Lepak and Smith, 2007). Given that our central focus is the company, we suggest scholars to assess other (potential) values that reshoring creates by taking the managers' expectations/judgements into consideration.

How is value created? Reshoring companies can create value through various ways within the production and distribution processes of goods and services including innovation, knowledge creation, marketing, branding, and management. For example, Fjellstrom et al. (2019) reveal that a case company FM Mattsson significantly improved its logistics, supply chain, and sourcing strategies to meet the new customer demand. Robinson and Hsieh (2016) reveal that the case company Burberry renewed and realigned its supply chain strategy to support its brand repositioning. Despite these contributions, the

understanding of the processes and the mechanisms through which companies create value is scarce. Therefore, more attention needs to be paid to these issues.

Moving to the value capture, a simple but very important question raised here is whether companies capture the (primary) values that they perceive. This is a critical issue since reshoring is largely triggered by the government policies in some countries (the US in particular) that seek to fulfil their goals. As time goes by, the government may reformulate their measures and actions based on the real impact of reshoring on the country. We posit that, in the long-term, the companies may become reluctant to reshore and are more likely to consider the other shoring strategies (e.g., further offshoring and nearshoring) when the companies fail to capture the majority of the value. In this sense, it is useful to know how the value that is created by reshoring is shared and whether there are certain targets that are more or less important for capturing value. We believe that there are abundant win-win solutions. Therefore, it would also be interesting to explore how value creators (e.g., governments) balance the potential tensions of different value capturers (e.g., government and companies) and how companies work towards common benefits without losing their key interests. This field would also benefit from future research that investigates in more detail the underlying mechanisms in which the companies capture the value. For instance, given that reshoring companies are simultaneously co-evolving with rivals and partners at home or other countries, it is interesting to know which factors, resources, and capabilities are likely to influence the value capture of the companies.

Chapter 3 Methodology

3.1 Purpose

The purpose of this chapter is to illustrate the research methods adopted, data source, data collection, data analysis and the validity and reliability of this study.

3.2 Research methods

This thesis mainly uses quantitative methods which emphasise the measurement and analysis of causal relationships between variables (Denzin and Lincoln, 1998; Guba and Lincoln, 1994). Specifically, we applied chi-square analysis, binary regression analysis, and multinomial regression analysis, allowing to test the hypotheses generated (Golafshani, 2003).

3.3 Data source

In this thesis, we use secondary data extracted from the two databases: European Reshoring Monitor (ERM) and Uni-CLUB MoRe Back-reshoring (Uni-club).

Secondary data can include “any data that are examined to answer a research question other than the question(s) for which the data were initially collected” (Vartanian, 2010, p.3). Secondary data has been acknowledged as an appropriate source of information for research and used widely both in International Business (IB) and in Operations Management (OM) fields (Roth et al., 2008; Yang et al., 2006).

While secondary data present many advantages for researchers, one of the main disadvantages of using secondary data is lack of control over the data collection. This, on the one hand, means that the dataset cannot adequately answer the research questions. On the other hand, the data collected may lack depth or accuracy (Randall and Fernandes, 1991; Vartanian, 2010). Notably, given the fact that the databases used in this thesis were created and managed by the research group including the writer of the thesis, we believe that we have enhanced the accuracy, the sufficiency and the appropriateness of the data recorded to the greatest degree.

In addition, secondary data has been argued to be particularly useful when no other sources are available (Cowton, 1998; Franzosi, 1987; Mazzola and Perrone, 2013), as it is often the case for the reshoring phenomenon (Ancarani et al., 2015). It is worth to note

that collecting data on reshoring is difficult at both aggregated and firm levels, in particular the primary data. The concerned reasons are mainly related to four aspects: (1) emerging topic, (2) geography scope, (3) firms' unwillingness, and (4) unit of analysis. First, reshoring has just gained momentum in recent years; thus, there are not enough data available. Second, the global geography of reshoring is complex, which creates considerable challenges for researchers to collect data on a global scale. So far, there is no centralised agency collecting data on reshoring at the global level and no public comprehensive dataset (Gray et al., 2013). Third, in some cases, the revision of location decisions is perceived as a negative experience, making practitioners reluctant to discuss this topic or their reshoring strategies with researchers (Hennart et al., 2002). Finally, the information regarding partial/whole reshoring is not always publicly reported, leading to an ambiguity of the unit of analysis at the data collection stage.

3.4 Data collection

3.4.1 European Reshoring Monitor (ERM)

European Reshoring Monitor⁴ (ERM) is a Eurofound initiative whose goal is to identify, analyse and summarise evidence on the reshoring of manufacturing and other value-chain activities to the EU. It is a pilot initiative undertaken as part of a multi-annual research (2015-18) project on the "Future of manufacturing in Europe". ERM project is based on a collaboration between Eurofound and a consortium of Italian universities with an active interest in tracking reshoring activities. The lead university in the consortium is the University of Udine. The writer of this thesis has been deeply involved in this project since its inception and has undertaken database creation and management tasks.

The data collection in the ERM database includes three main areas: **media monitoring** of reshoring cases, **research monitoring** of relevant research articles/reports, and **policy monitoring** of policy initiatives of European countries. Notably, although the majority of the data on reshoring cases come from media monitoring activities, the research monitoring and policy monitoring activities also provide data on reshoring cases.

⁴ The results from the monitoring activities are published on the ERM website at the URL <https://reshoring.eurofound.europa.eu/>.

Therefore, the data collection procedures of three monitoring activities are explained in the following sections.

Media monitoring aims at finding evidence of reshoring decisions implemented by EU companies and this process involves two steps. The first step encompasses the screening of a wide set (over 7,500) of media sources (i.e., press releases, major daily national newspapers, local papers, specialist trade journals, broadcaster websites and news agencies) in different languages of the European Union, and the identification of reshoring decisions. This stage is mainly carried out by M-Brain, a company specialised in media monitoring, and the research group. M-Brain identifies possible eligible reshoring cases through a combination of human intelligence, keyword search and tagging using their digital editorial platform and a team of analysts. M-Brain weekly searches for, captures and writes English language abstracts of news on global manufacturing activity in multiple languages. These abstracts are coded using M-Brain's in-house taxonomy (identifying for example cases of merger and acquisition, countries involved, industrial relations, new plants, expansion, etc.). The report profile also looks for abstracts containing the keywords "Reshoring", "Back-reshoring", "Backshoring", "Back-shoring", "Inshoring", "In-shoring", "Nearshoring", "Near-reshoring", "Onshoring", "On-shoring", "Production relocation", "Production repatriation", and "Relocalisation" in addition to the in-house taxonomy. A basic multi-language glossary (see Appendix A) has been built of the main phrases and search keywords. A Reshoring report profile uses M-Brain tagging to identify news items on a weekly basis. The resulting report is then read and edited by M-Brain to provide a weekly Reshoring report delivered to the project consortium. Each abstract includes as much relevant information (e.g., motivations for reshoring, year of earlier implemented offshoring decision) as is available in the original article, and a web-link (if available) for each piece of news.

The second step performed by the project consortium, which consists of three activities: a) the careful selection of reshoring cases among those sent by M-Brain and information searched by the project consortium, based on the project definition of reshoring; b) the search for any additional information available (e.g., details of the previous offshoring decision, NACE code for the firm's industry, impact on employment when not provided in the news)(see Appendix B). The search is always expanded to sources other than the one used by M-Brain, in order to get a more detailed knowledge of the case. As one or more cases shortlisted by M-Brain may not relate to a reshoring initiative, but to a

different kind of relocation or restructuring decision, the consortium collects more data also with the aim of verifying that the case is suitable for inclusion in the reshoring database. Information was searched from the historical archives of the following business newspapers, national-level newspapers, and business magazines: Wall Street Journal, Financial Times, Forbes, USA Today, The Economist, Time, Bloomberg Business Week, ABC news, BBC news, Spiegel online, Il Sole 14 Ore. In addition, white papers from major consulting firms (Boston Consulting Group, McKinsey, Accenture, Grand Thornton, AlixPartners, Pambianco, Pricewaterhouse Coopers, Stanton Chase) were also searched and analysed. Finally, c) advanced online searches were performed through the Google search engine adopting the same keywords, in order to ensure that no news of reshoring projects was omitted and to improve and supplement information from other sources.

The development of the record has to be included in the reshoring cases database. Once the record is completed, it is saved in the database as a draft by a junior member of the research team. The draft proposal of record contents is submitted – on a weekly basis – to a senior researcher. Following verification by a senior research member, the record is transferred to approved status. After internal approval, the record is sent to the Project Quality Manager for the quality check and is finally published to the database.

Research monitoring aims at monitoring research documents, i.e., academic articles and other documents (e.g., reports, white papers) produced by international and national organisations (e.g., Eurostat, OECD, UNCTAD, US Federal Reserve), consulting companies (e.g., Boston Consulting Group, McKinsey) and other practitioner organisations. There are five steps: (1) the keyword search (based on English keyword reported in Appendix A) in the most important academic electronic databases (e.g., Elsevier's Scopus, ISI Web of Knowledge, Google Scholar), (2) the analysis of the proceedings of the most relevant conferences in international business (e.g., AIB-Academy of International Business, EIBA-European International Business Academy) and operations management (e.g., EurOMA-European Operation Management Association, IPSERA-International Purchasing and Supply Education and Research Association), (3) the keyword search applied in internet search engines (e.g., Google) using English keywords jointly with company names of major consulting companies (e.g., Boston Consulting Group, McKinsey, Deloitte) and institutions (e.g., US Federal Reserve, World Bank, UNCTAD, OECD, European Union), and (4) the analysis of the following

internet sites, focused on reshoring: Reshore UK (<https://www.gov.uk/reshore-uk>), Relocaliser (FR) (<http://www.entreprises.gouv.fr/relocaliser>) and Reshore Initiative (USA) (<http://www.reshorenw.org/>), and (5) a snowballing approach is adopted for all the sources retrieved in the steps above (i.e., the list of references is checked to identify further relevant contributions). Based on the material identified, records are included in the reference material database.

Policy monitoring aims at finding and analysing policies, i.e., legislation and regulations implemented either at the national or EU level, having direct or indirect relevance for reshoring. This monitoring activity relies on the press monitoring undertaken by M-Brain and on the analysis of research documents.

3.4.2 Uni-CLUB MoRe Back-reshoring (Uni-club)

Moving to the database Uni-club, it is a database built by Italian researchers in 2011, aiming at monitoring the cross-country and cross-industry reshoring decisions/projects using secondary data extracted from several sources (e.g., newspapers, magazines, articles, white papers). The data used in this thesis were collected from 2011 to 2017. The research group applied the same data collection methods in both databases. In the case that a reshoring project was presented in more than one source, the information was compared, and, in case of discrepancy, the case was eliminated from the database.

3.5 Unit of analysis in two databases

In both databases, the unit of analysis (UOA) was the individual reshoring project. That is, if a company repatriates production activity from two different host countries, it is considered as two reshoring projects. The single reshoring project/decision, as UOA, has been used in reshoring studies (e.g., Ancarani et al., 2015, 2019; Fratocchi et al., 2015, 2016).

For each reshoring case, we collected data on firm size, industry, headquarters location, offshoring and reshoring countries, year of offshoring and of reshoring, duration of stay abroad, offshoring and reshoring EMs (i.e., out-sourcing vs. in-sourcing) and reshoring motivations (if available). As far as firm size is concerned, we classified companies into two categories (i.e., small and medium vs. large) based on the number of employees and revenues, following a recommendation of the European Union Commission (2003/361/EC). With regard to the industry, we classified firms into seven groups based

on Standard Industrial Classification (SIC) codes: clothing, electronics, mechanical, automotive, home appliance, furniture, food and other sectors. The information on both offshoring and reshoring entry mode was coded into two groups: in-sourcing (equity) vs. out-sourcing (non-equity) (see Pan and Tse, 2000).

3.6 Data analysis

As discussed at the beginning of this chapter, the statistical analyses were applied in this thesis. The statistic model design is elaborated in Chapter 5 and Chapter 6 respectively (Section 5.3.3; Section 6.3.3).

3.7 Validity and reliability

The issues of validity and reliability are of central concern for researchers. Validity is often understood as the extent to which an instrument measures what it purports to measure (Kimberlin and Winterstein, 2008, p.2278). In other words, the validity looks at whether the means of measurement are accurate and whether they are actually measuring what they are intended to measure (Golafshani, 2003, p.602). There are different types of validity including content validity, construct validity, external validity and internal validity (Fitzner, 2007). By contrast, reliability concerns the extent to which an experiment, test or any measuring procedure yields the same results on repeated trials (Carmines and Zeller, p.11). Although the types of reliability are different (e.g., test-retest reliability, interterm consistency, internal consistency reliability, interrater and intrarater reliability) (Fitzner, 2007; Kimberlin and Winterstein, 2008; Kirk and Miller, 1986), the key element of the reliability is the replicability and consistency. Concerning the general categories of validity and reliability (Heale and Twycross, 2015; Kidder and Judd, 1986; Seuring and Gold, 2012), i.e., content validity, construct validity, internal validity, external validity and reliability, we have adopted several strategies and actions to ensure and enhance the quality of our study. The details are presented in the corresponding chapters (Chapter 5 and Chapter 6).

Chapter 4 Reshoring in Europe: Overview 2014-2018

4.1 Purpose

The aim of this chapter⁵ is to provide a comprehensive and in-depth understanding of reshoring in Europe (2014-2018) by examining (1) the trends, patterns, characteristics and (2) the evolutionary trajectories of reshoring projects.

4.2 Reshoring projects

In the following sections, we analyse reshoring projects in terms of eight aspects: reshoring strategies, home country of reshoring, the relationship between reshoring and home country profile, offshoring countries, firm size, industries, motivations, and employment impact.

4.2.1 Key findings

In total, 253 reshoring projects collected by the ERM up to the end of December 2018, 46 of which took place in 2018. Large differences in the number of cases were found across the years, with about 60% of all cases taking place in 2016 and 2017.

As far as the **reshoring case frequency** (i.e., number of projects per year) is concerned, there has been an upward trend since 2014, but a drop in 2018. Concerning **home country**, in 2018, the two countries with the highest number of projects were Denmark and Sweden (seven and six projects respectively). France, the United Kingdom and Italy (five, four and four projects respectively) remain the three most important Member States in terms of evidence of reshoring over the entire period of the project. In terms of **company size**, large companies account for the majority of projects (around 60% of all cases). Although reshoring initiatives take place in a wide range of **industries** from the Nomenclature statistique des activités économiques dans la Communauté européenne (NACE) classification system (see Appendix B), manufacturing projects predominate (around 85% of the total). Within manufacturing, differences among **sub-sectors** are evident, with the

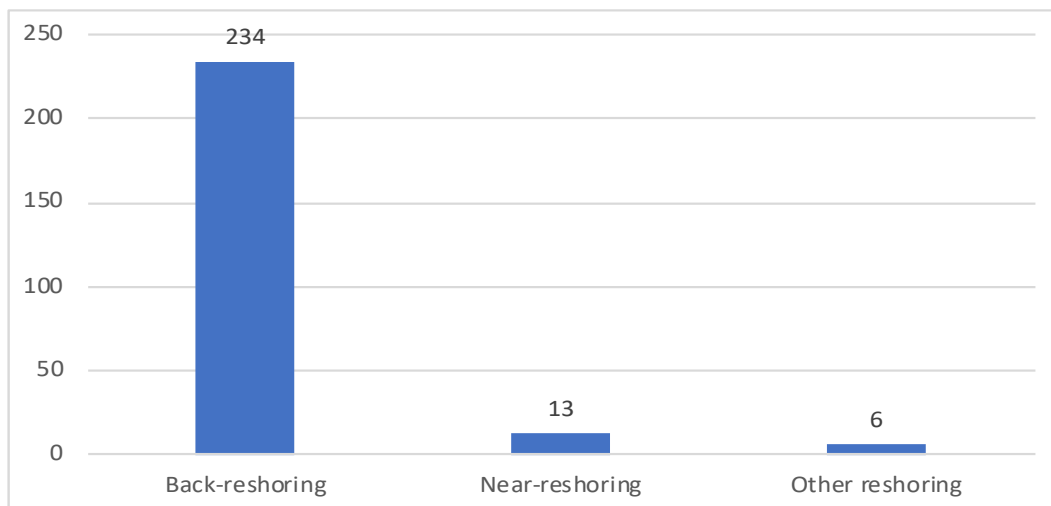
⁵ Chapter 4 is adapted from the report: Nassimbeni, G., Sartor, M., Wan, L., Ancarani, A., Di Mauro, C., Mascali, F., Barbieri, P., Di Stefano, C., Fratocchi, L., Lapadre, L. & Orzes, G. (2019). Reshoring in Europe: Overview 2015–2018, Publications Office of the European Union, Luxembourg”. For more details, please visit <https://www.eurofound.europa.eu/publications/report/2019/reshoring-in-europe-overview-2015-2018>

wearing apparel sector (around 11%) remaining the most affected sector. As far as the **motivations** for reshoring decisions are concerned (see Appendix C), the two most frequent reasons given between 2015 and 2018 were ‘global reorganisation of the company’ and ‘delivery times’. However, in 2018 the most cited motivation was ‘poor quality of offshored production’ (nine instances), while the ‘made-in’ effect totally disappeared as a motivation. The research team attempted to estimate the **job gains** resulting from the reshoring decisions – despite the scarcity of data on this issue – indicating the creation of 12,840 new jobs during the study period.

4.2.2 Reshoring strategies

The database contains three different definitions of reshoring: (1) backshooting projects: activities previously offshored (by a European firm) and relocated to the home country in the EU, (2) nearshoring projects: activities previously offshored (by a European firm) to a non-EU host country and relocated to an EU Member State different from the home country, and (3) other reshoring strategy⁶: activities previously offshored (by a non-European firm) to a non-EU host country and relocated to an EU Member State. Figure 4.1 shows the frequency of each of them among the 253 projects.

Figure 4.1 Reshoring strategies



Source: European Reshoring Monitor

Accordingly, backshoring represents the dominant strategy for companies in the dataset (92.4%), where nearshoring strategies account for only 5.1% of the projects. Therefore,

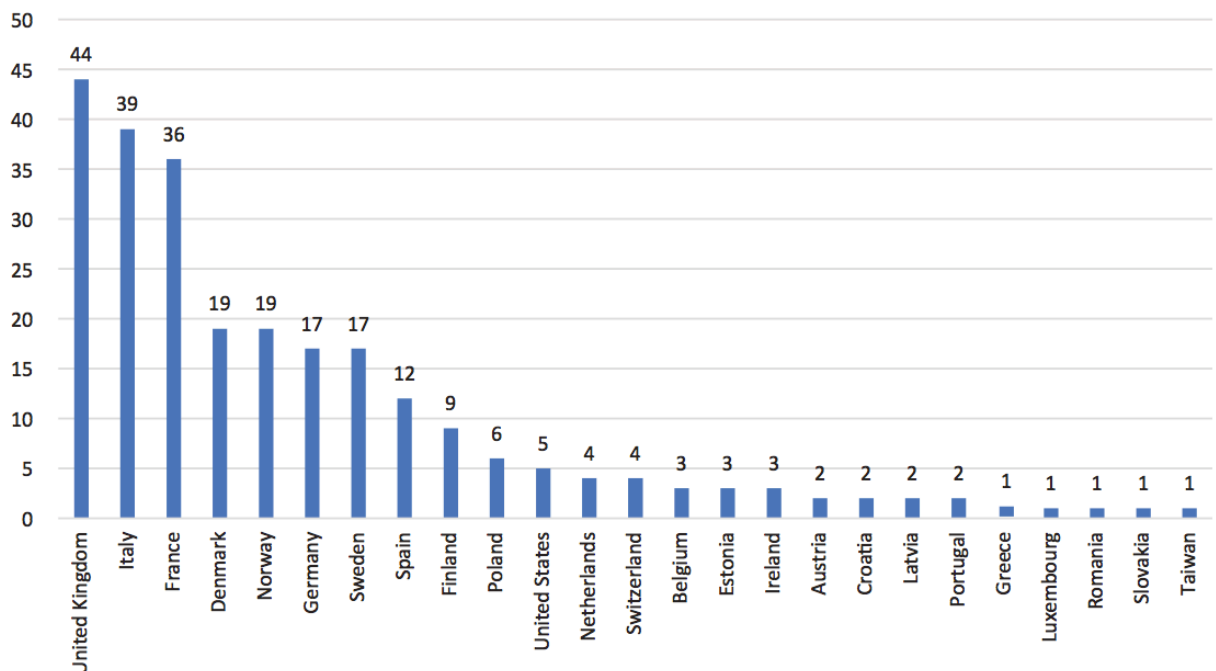
⁶ US and Taiwan reshoring projects (~0.02% of the full sample) within this category are included in our analyses.

it seems that companies prefer to reshore directly to their home country rather than to a nearby country. This can be explained by twofold reasoning. On the one hand, the ‘made-in’ effect is one of the most important reshoring motivations (see Section 4.2.8). For example, Di Mauro et al. (2018) clearly show that Italian companies in the fashion industry prefer backshoring to nearshoring, since they want to leverage the ‘made-in Italy’ label. On the other hand, the ‘emotional’ factors or ‘local roots’ of the entrepreneurs/managers often play a significant role in reshoring decisions (Baraldi et al., 2018; Di Mauro et al., 2018; Fratocchi et al., 2016). In this respect, a specific role may be played by industrial districts/clusters (Bettioli et al., 2017a, 2017b).

4.2.3 Home country of reshoring

As illustrated in Figure 4.2, the data collected suggest that the level of reshoring activity varies significantly across countries, confirming the results of the previous reshoring monitor reports.

Figure 4.2 Number of reshoring projects per country/regions (2014-2018)



Source: European Reshoring Monitor

Note: US and Taiwanese data refer to the ‘other reshoring’ category

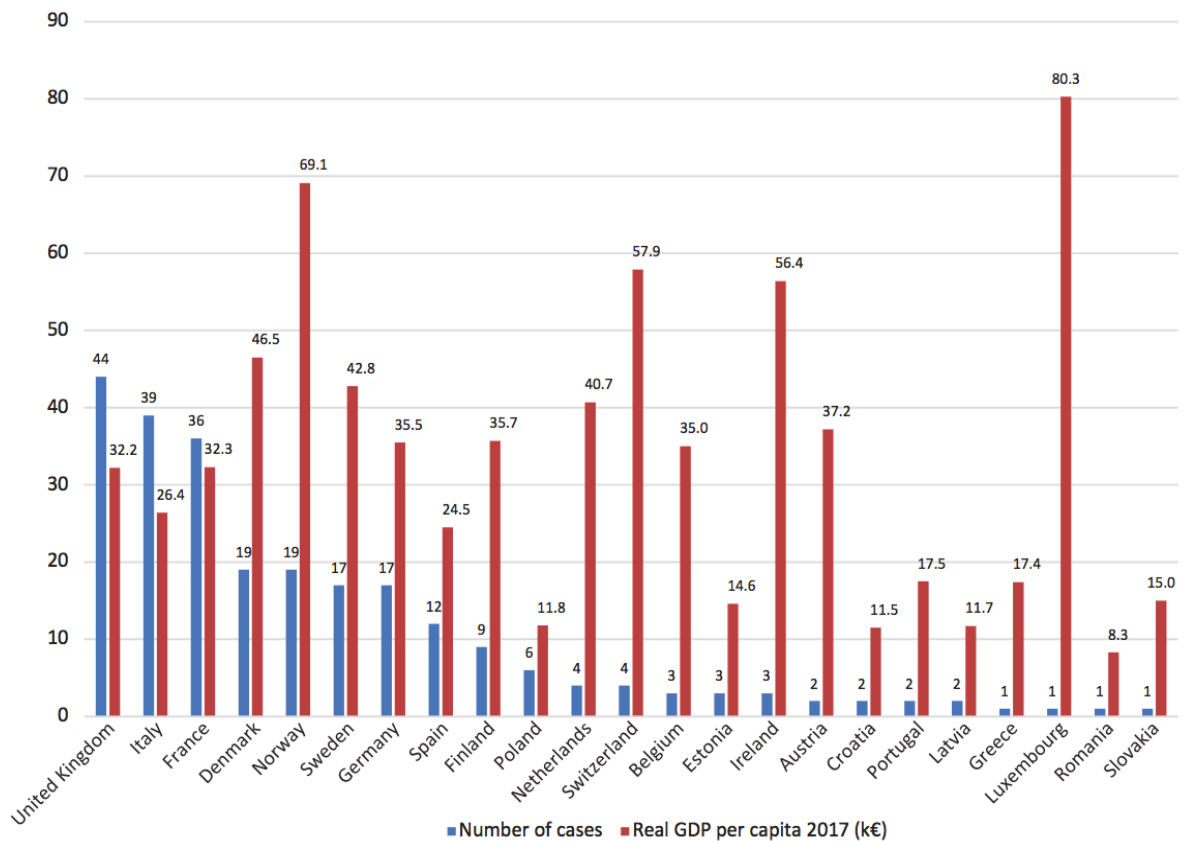
Accordingly, the UK, Italy and France remain the three countries with the highest number of reshoring projects. Despite its strong manufacturing tradition, Germany ranks only sixth among the reshoring countries. This is less surprising in light of the fact that

Kinkel's (2014) study already identified that German manufacturing was starting to weaken. The performance of Nordic countries is also noteworthy; they rank among the top 10, in each case with a higher number of reported reshoring projects than Germany.

4.2.4 Relationship between reshoring and home country profile

The number of projects per country has been compared with two economic indicators at the country level: GDP per capita and value added. Figure 4.3 unveils the relationship between the number of reshoring projects and GDP per capita – i.e., the ratio of the country's total GDP to the number of inhabitants. Accordingly, no clear relationship is revealed between the number of reshoring projects and GDP per capita.

Figure 4.3 Comparison between reshoring projects numbers (2014-2018) and GDP per capita



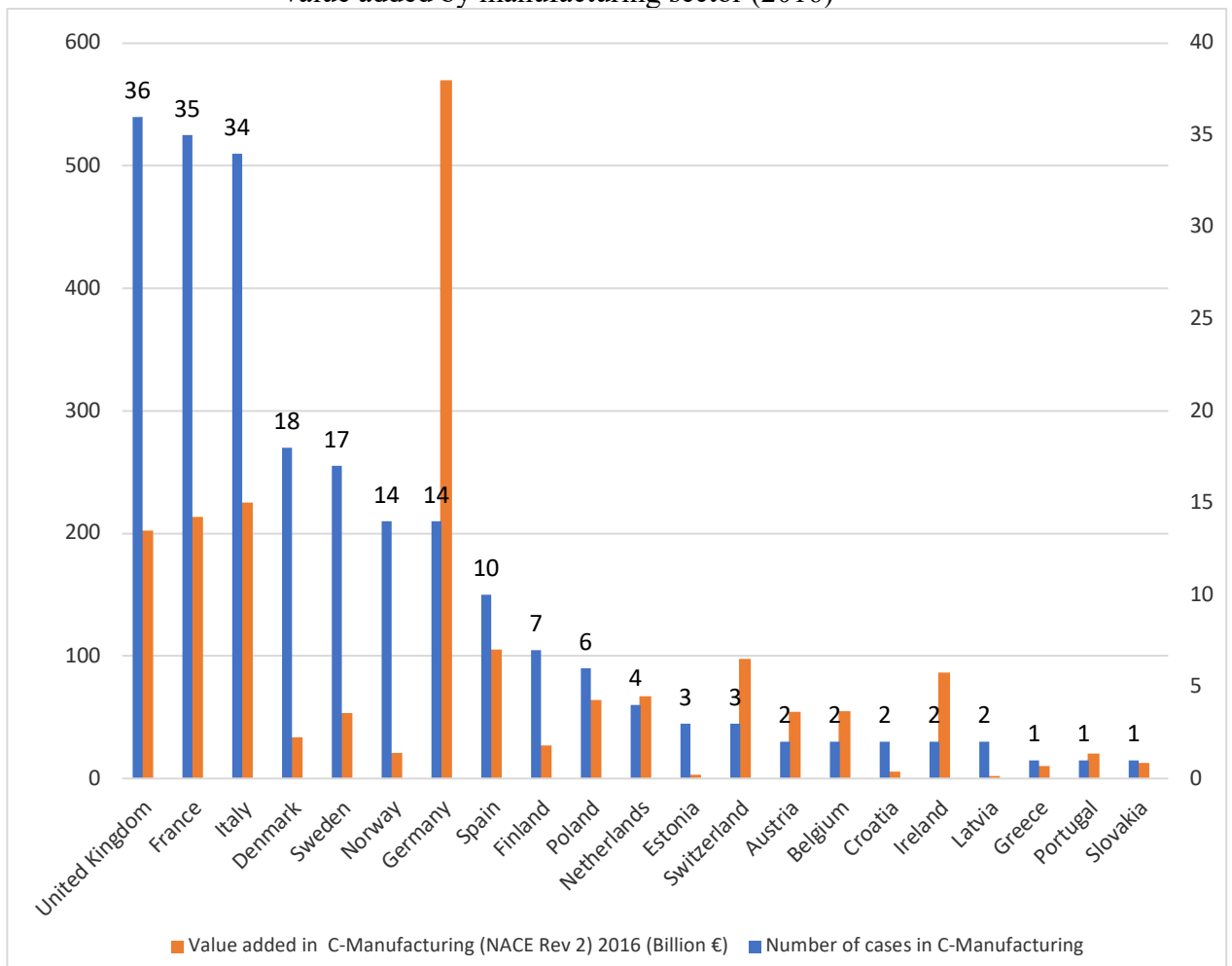
Source: European Reshoring Monitor and Eurostat.

Note: GDP per capita (2017 data) except Switzerland (2016 data); France, Greece, the Netherlands, Portugal, Romania and Spain (expected 2017 data).

Since the majority of reshoring decisions concern the manufacturing sector, the second economic indicator selected to better understand the phenomenon was the value added – i.e., the difference between the value of what is produced and intermediate consumption

entering production, less subsidies on production and costs, taxes and levies. Figure 4.4 unveils the comparison between the number of manufacturing reshoring projects and value added. The value added of the manufacturing sector (NACE code group C) was used. Accordingly, there seems to be a clearer correlation between the number of manufacturing reshoring projects and value added by the manufacturing industry than between the number of reshoring projects and GDP per capita, with the partial exception of Germany and the Nordic countries. Based on this analysis, reshoring appears not to be related to these economic characteristics of the home country. Finally, larger European countries (in terms of inhabitants), excluding Germany, account for a higher number of reshoring decisions.

Figure 4.4 Comparison between the number of manufacturing reshoring projects and value added by manufacturing sector (2016)

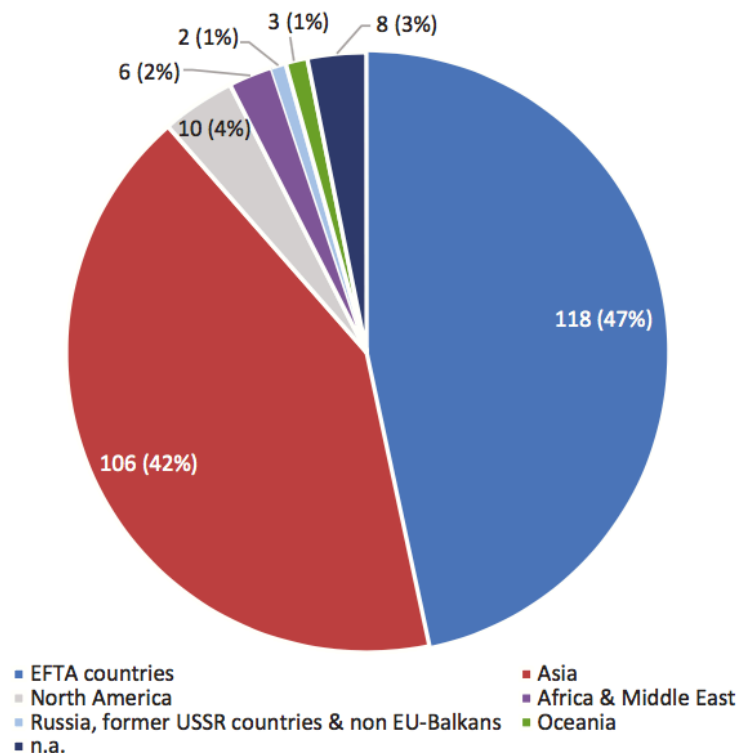


Source: European Reshoring Monitor, Eurostat.
 Note: 2017 data; Belgium and Slovakia data not available.

4.2.5 Offshoring regions/countries

Figure 4.5 shows the distribution of projects by host regions, that is the areas left after the reshoring decision. Projects are almost equally distributed between Asia and EFTA countries (42% and 47%, respectively). This finding is extremely interesting for both policymakers and scholars since the two areas have attracted offshoring for different reasons.

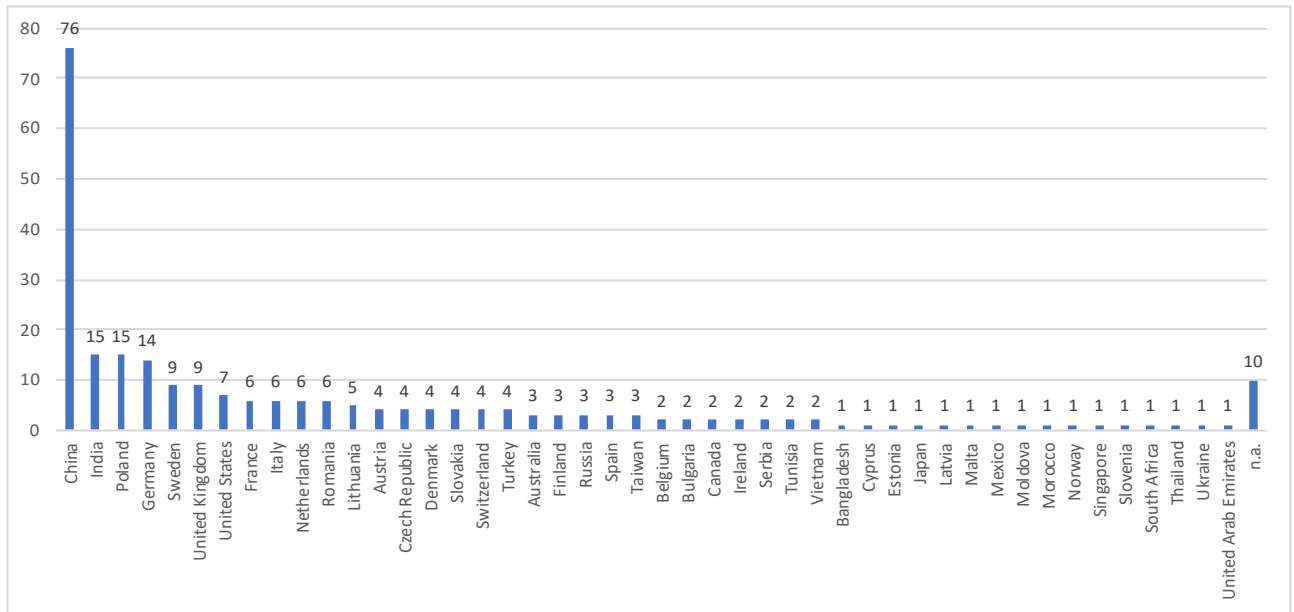
Figure 4.5 Breakdown by offshoring regions



Source: European Reshoring Monitor

When considering decisions to reshore from individual offshore countries or special regions within a country, Figure 4.6 presents an interesting picture. China occupies the top position (around 30% of projects). This can be explained by different factors: (1) China (often called ‘the world’s factory’) has traditionally been one of the most important offshoring countries; (2) Western companies sourcing or manufacturing in China have experienced some issues with product quality, IP rights and sustainability in recent years; and (3) production costs in China have significantly increased in recent years.

Figure 4.6 Breakdown by number decisions to reshore from host country

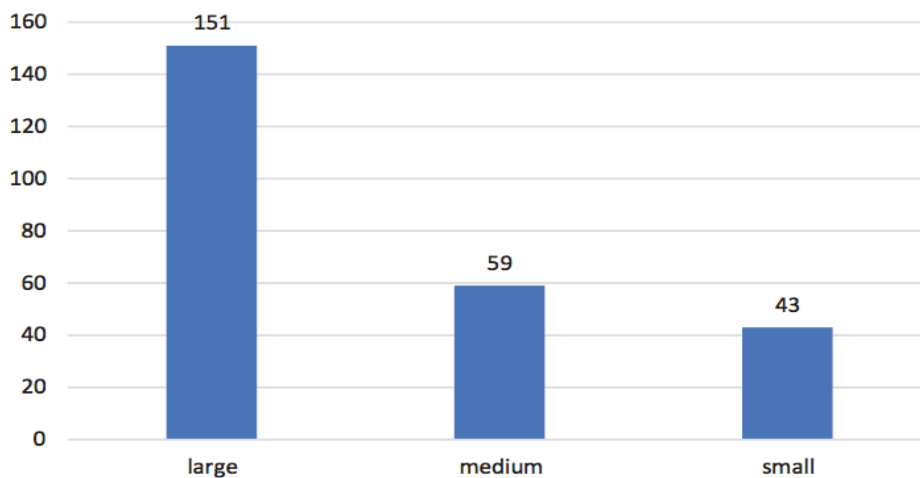


Source: European Reshoring Monitor

4.2.6 Firm size

Figure 4.7 presents the breakdown of reshoring projects by firm size. We classified firms into three categories according to the number of employees, adopting the EU definition (2003/361/EC): small (less than 50 employees), medium (between 50 and 250 employees) and large (more than 250 employees). Around 59% (151 out of 253) of reshoring projects involve large companies, while SME companies represent 41% (102 out of 253) of the collected projects.

Figure 4.7 Breakdown by number of reshoring projects and firm size



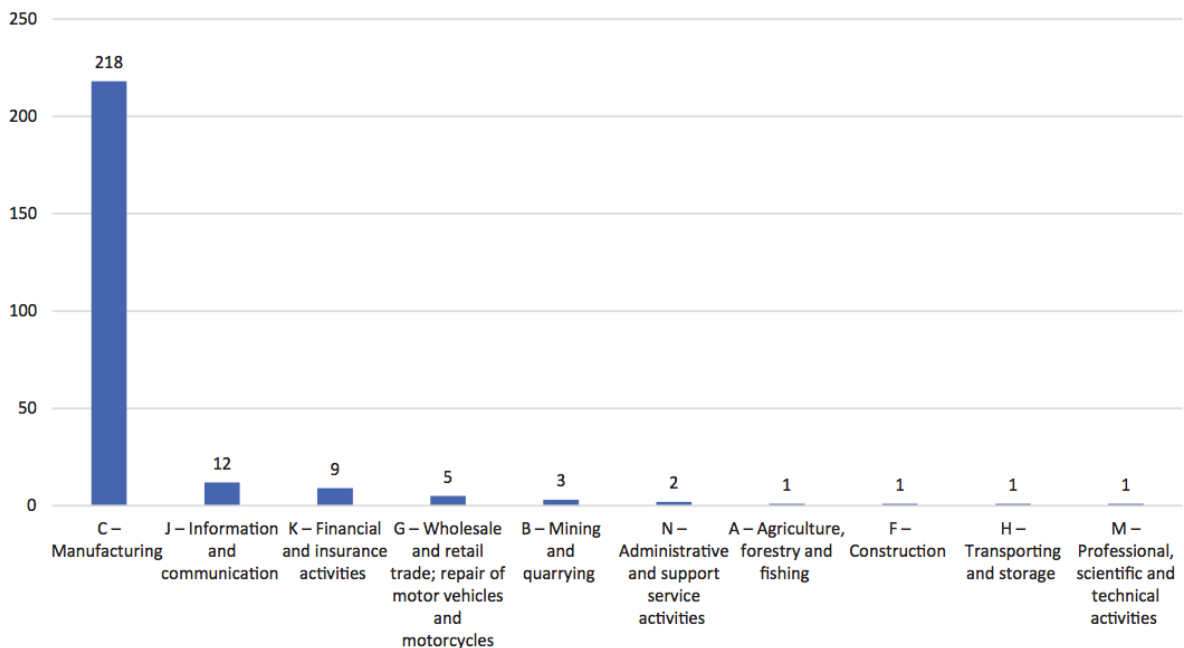
Source: European Reshoring Monitor

This result is consistent with recent findings for the Nordic countries (Heikkilä et al., 2018). This evidence, which also deserves attention in light of the prevalence of SMEs in the EU, can be explained in different ways. Small enterprises have greater difficulty in rethinking their business strategies (e.g. due to a lack of resources), in particular abroad. They were less active in offshoring trends, and consequently in reshoring initiatives. As regards activity, small firms usually receive less attention from the media; thus, their reshoring initiatives are less likely to be detected through the methodology of media monitoring adopted in this project.

4.2.7 Industries

As shown in Figure 4.8, more than 85% of reshoring projects occurred in ‘Manufacturing’ (218 projects), followed by ‘Information and communication’ (12 projects) and ‘Financial and insurance activities’ (9 projects). Despite the low number of reshoring projects in ‘Information and communication’, this industry had a significant impact in terms of employment gains (2,411 job gains, that is 18.7% of the total amount) though it should be noted that this data relates mainly to the 2,100 jobs created in a single project Vodafone.

Figure 4.8 Breakdown by number of reshoring projects and industries

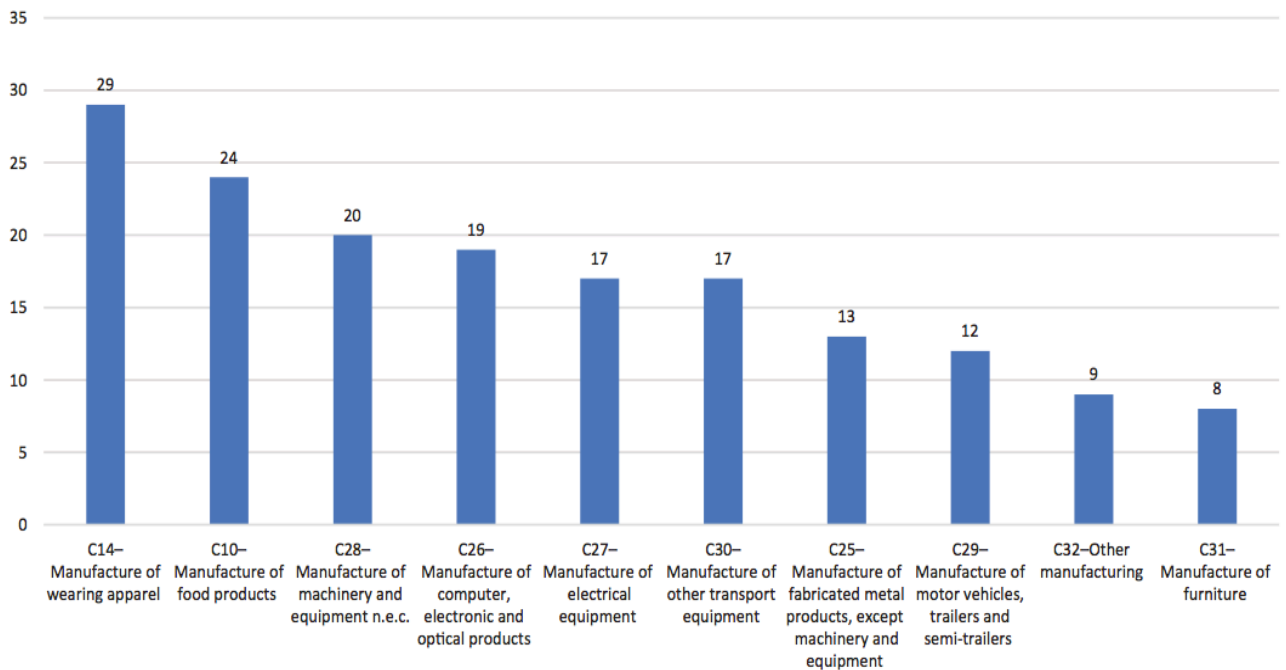


Source: European Reshoring Monitor

More in detail, Vodafone is a British mobile communications company operating in many countries around the world. In the UK it serves around 18 million customers and employs around 3,700 customer service operators, either directly or through contractors. As part of its GBP 2 billion investment programme over the 2016-2019 period aimed at improving the quality of its customer service, Vodafone announced the decision to relocate call centres previously offshored to South Africa back to the UK. According to BBC news coverage, the Vodafone decision would create 2,100 jobs in the UK, both in its own call centres (Manchester, Newark, Stoke-on-Trent and Glasgow) and in those of service providers (600 jobs in Newcastle, Cardiff and the west of Scotland).

Even within the manufacturing sector, the reshoring trends are different. As illustrated in Figure 4.9, the following five sub-sectors are the most relevant as regards reshoring activity: C14 – Manufacture of wearing apparel, C10 – Manufacture of food products, C28 – Manufacture of machinery and equipment n.e.c., C26 – Manufacture of computer, electronics and optical products, C27 – Manufacture of electrical equipment, C30 – Manufacture of other transport equipment. These sectors represent 47% of the projects and 43% of total manufacturing jobs gained. Manufacturing as a whole account for 79% of total job gains arising from reshoring.

Figure 4.9 Project frequency by sub-sectors within manufacturing



Source: European Reshoring Monitor

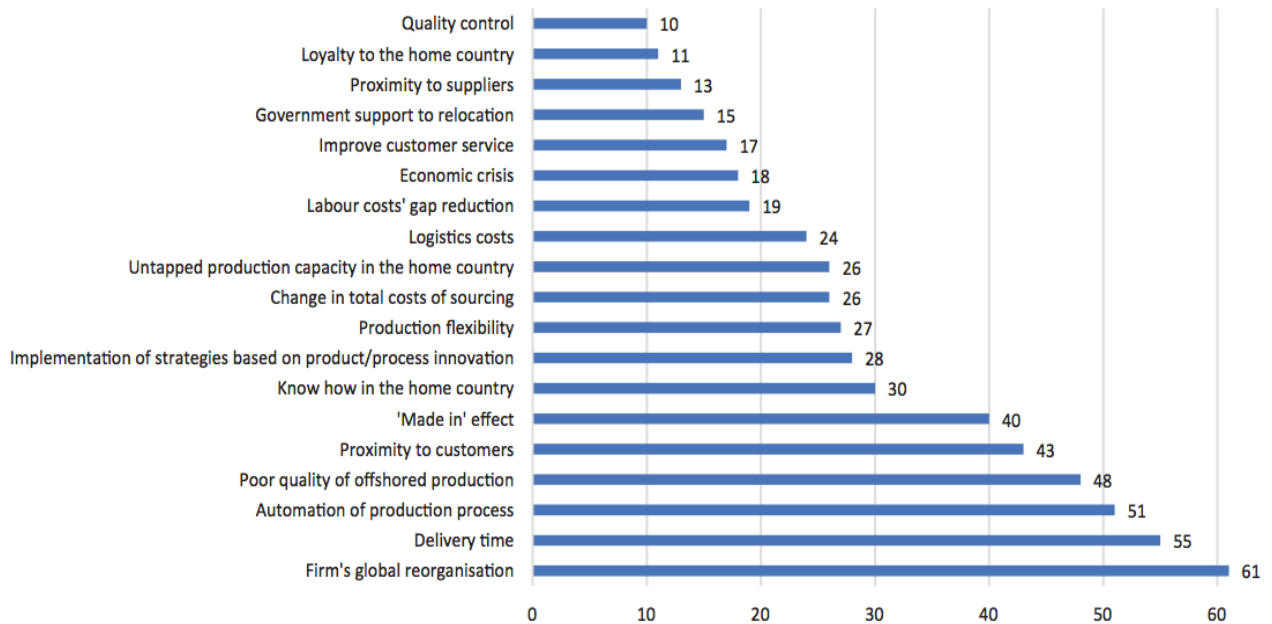
Note: Chart excludes industries with fewer than eight reshoring projects

4.2.8 Reshoring motivations

Most cited motivations

Figure 4.10 presents motivations distribution. Although we identified 56 reshoring drivers/motivations (see Appendix C), here only 19 motivations are listed. The most cited motivation is ‘firm’s global reorganisation’.

Figure 4.10 Reshoring motivations (only those declared at least ten times)



Source: European Reshoring Monitor

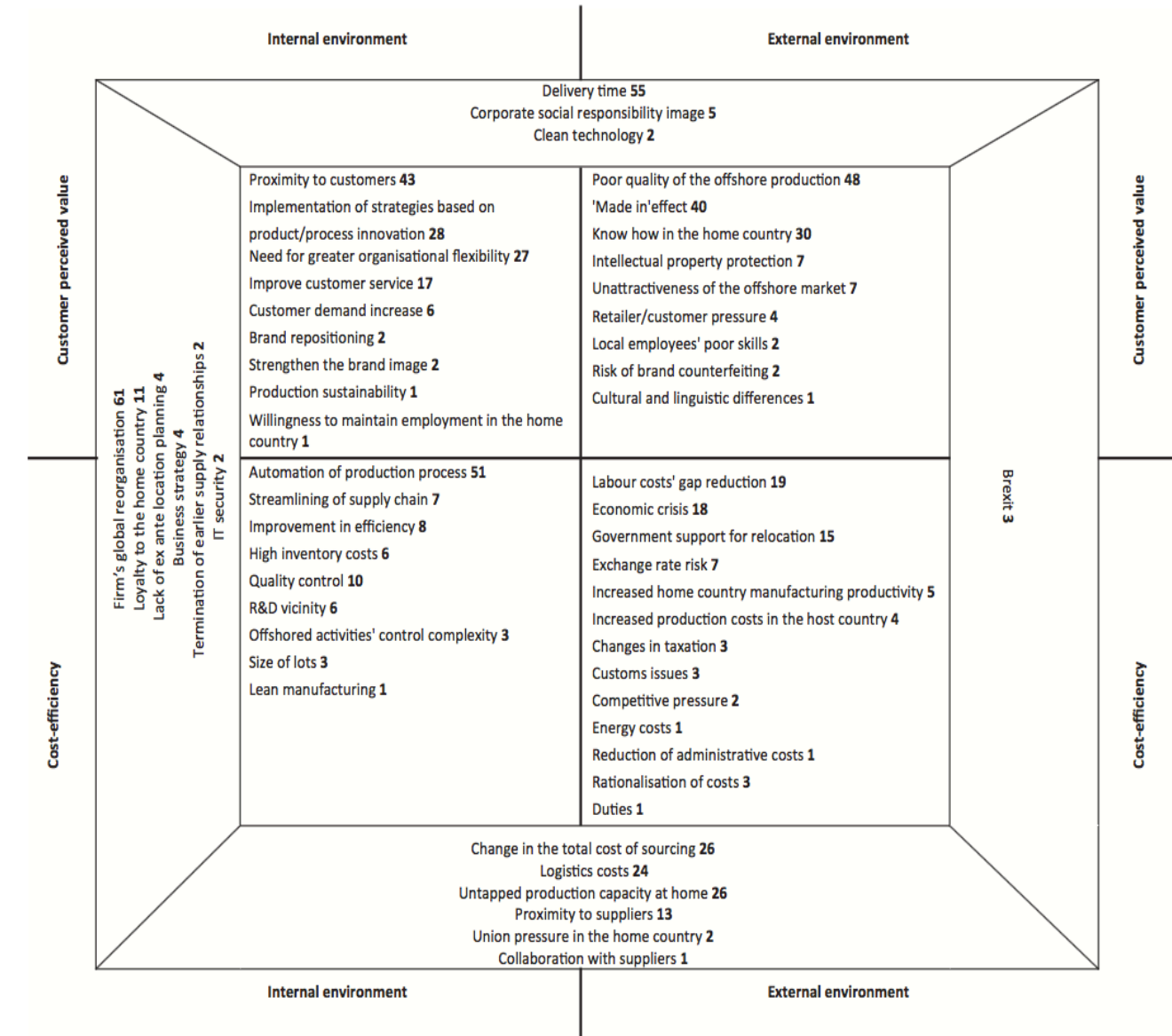
Note: multiple motivations can be indicated for a single reshoring project

Motivations classification

To understand whether these motivations are linked to specific models of reshoring, we make use of a theory-driven framework introduced by Fratocchi et al. (2016). This framework distinguishes reshoring motivations based on two main dimensions: the contextual factors affecting the decision (external vs. internal) and the strategic goals of the firm (customer perceived value vs. cost-efficiency). For illustration, external contextual factors include the home or host country legislation or culture, labour markets, availability of suppliers and intellectual property protection. Internal contextual factors refer for instance to production processes, integration of company functions, processes and product innovation. Concerning the two dimensions (goals and main contextual factors), reshoring motivations can be mapped in a 2x2 matrix according to their nature.

The matrix also includes four hybrid areas in which either one of the strategic goals or one of the factors becomes the dominating characteristic.

Figure 4.11 Framework for the analysis of reshoring motivations



Source: Our elaboration of European Reshoring Monitor data based on Fratocchi et al. (2016)

Figure 4.11 presents the distribution of the motivations by applying the aforementioned framework. The two upper quadrants (value-driven motivations) account for around 33% of the total reported motivations.

In the upper-right quadrant (external environment and customer perceived value), the most frequent motivations are the 'made-in' effect and 'poor quality of offshored production' (40 and 48 instances respectively). These two motivations are certainly

linked with high-end luxury production in which offshoring the production or part of the value chain could be risky, and which implies falling internal quality standards.

In the upper left quadrant (internal and customer perceived value), ‘proximity to customers’ and ‘implementation of strategies based on product/process innovation’ (43 and 28 instances respectively) are the most frequent motivations. ‘Proximity to customers’ refers to higher levels of service and reliability of a firm.

Concerning the lower-right quadrant, we find ‘labour cost gap reduction’ and ‘economic crisis’ (19 and 18 instances, respectively) are the most frequent motivations, highlighting the driving role of the cost-related factors.

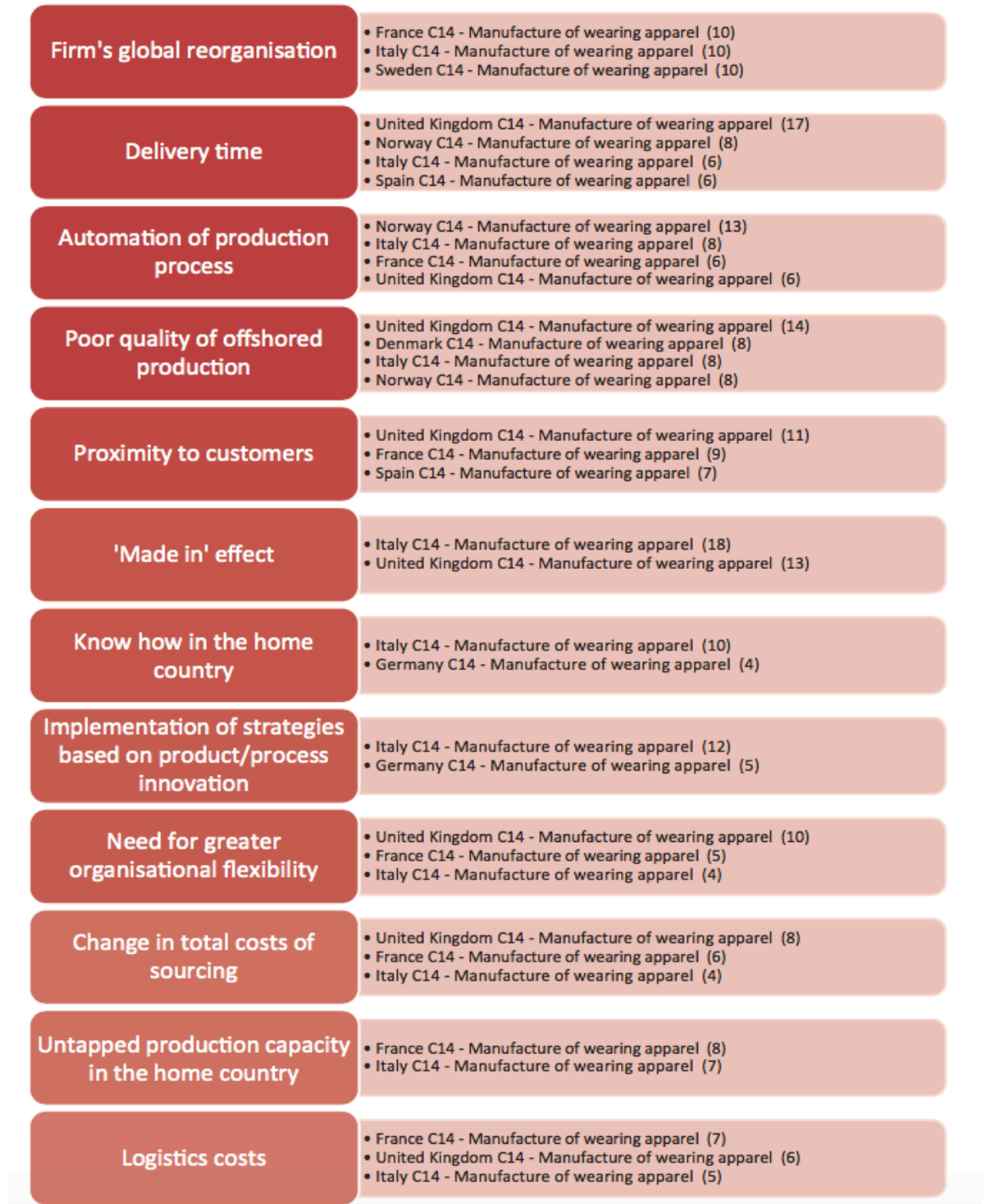
Moving to the lower-left quadrant, we find ‘automation of production process’ (51 instances), which has recorded a further significant increase in 2018 (7 more instances than in 2017). Investments in robotics and automation can reduce labour usage and in turn decrease cost differences between the offshore and domestic countries, thus fostering reshoring. However, as already pointed out, for this reason automation may limit the number of job gains in the home country after the implementation of reshoring decisions.

Motivations and reshoring country

Figure 4.12 unveils the frequency of cited motivations among countries. With respect to the first dimension (geography) (Figure 4.12), reshoring to the UK (the country with the largest amount of reshoring decisions, 44) is mainly driven by issues with ‘delivery time’ (17 citations of this driver out of a total of 56 within the entire dataset), ‘poor quality of offshored production’ (14 out of 48) and ‘proximity to customers’ (11 out of 43). Not surprisingly, Italy (39 decisions) is the leader of reshoring strategies driven by the ‘made in’ effect (18 out of 40), which is also a characteristic of UK reshoring initiatives (13 projects). These results should be seen in the light of Italy’s manufacturing specialisation, where the fashion industry (top of the reshoring ranking by industry) represents one of the most important manufacturing industries (Di Mauro et al., 2018). With respect to the adoption of automated production systems (the fourth reshoring driver by the number of projects, 51), Norway ranks first (13), followed by Italy (8), France and the UK (6 each). Italian reshoring projects are also characterised by the following other drivers: ‘firm’s global reorganisation’ (10 out of 61), ‘availability of know-how in the home country’ (10 out of 30) and ‘implementation of strategies based on product/process innovation’ (12 out

of 28). These findings suggest that reshoring drivers may be correlated with the economic and technological characteristics of the home country to some extent.

Figure 4.12 Frequency of cited motivations for reshoring by country

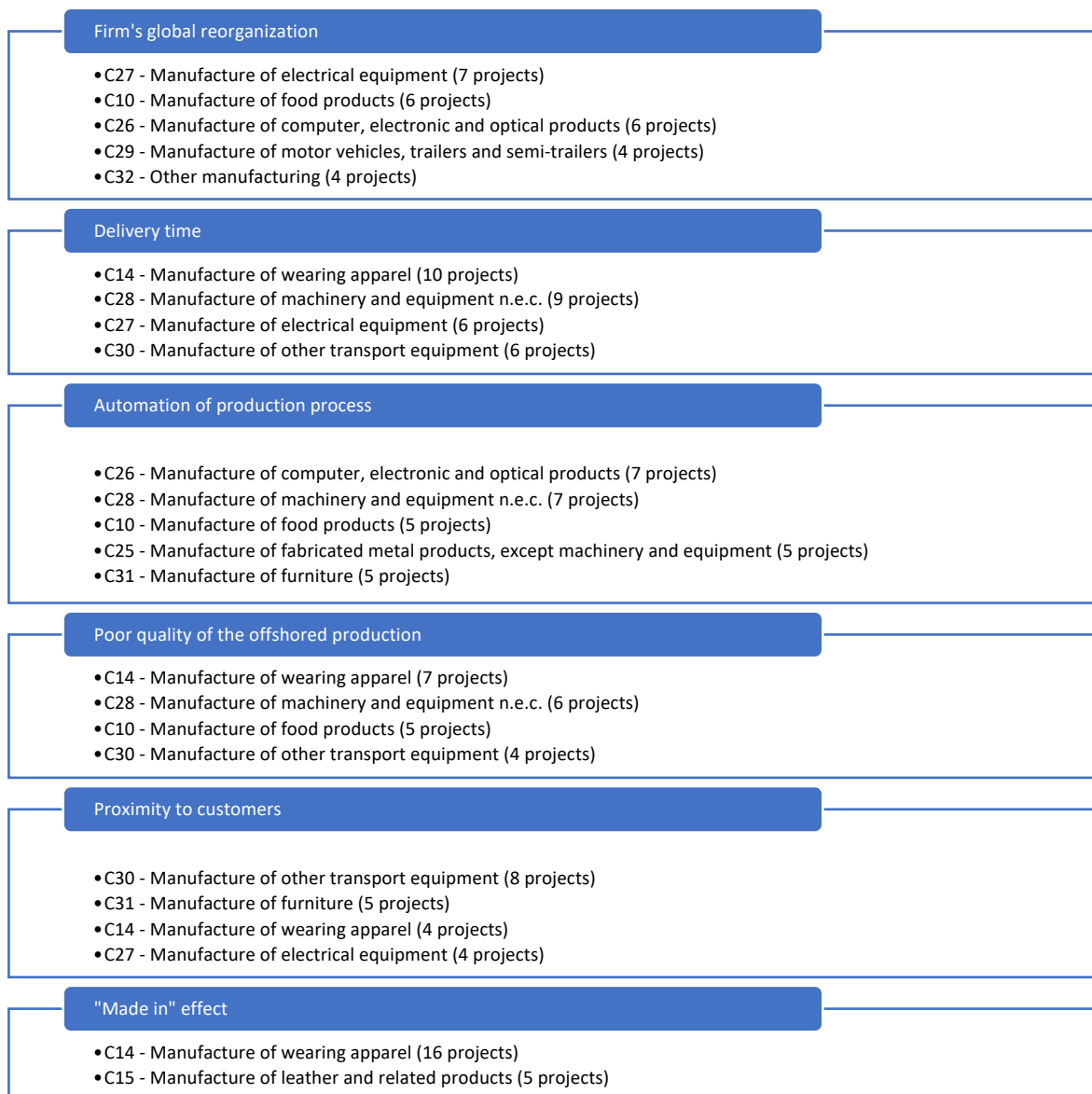


Source: *European Reshoring Monitor*

Motivations and sub-sectors within manufacturing

When breaking down reshoring motivations according to manufacturing sub-sector (Figure 4.13), it clearly emerges that only the 'made-in' effect motivation is strictly associated with a specific industry (the clothing industry with 16 out of 38 citations), while other drivers related to a variety of different industries.

Figure 4.13 Motivations for reshoring sorted by manufacturing sub-sector



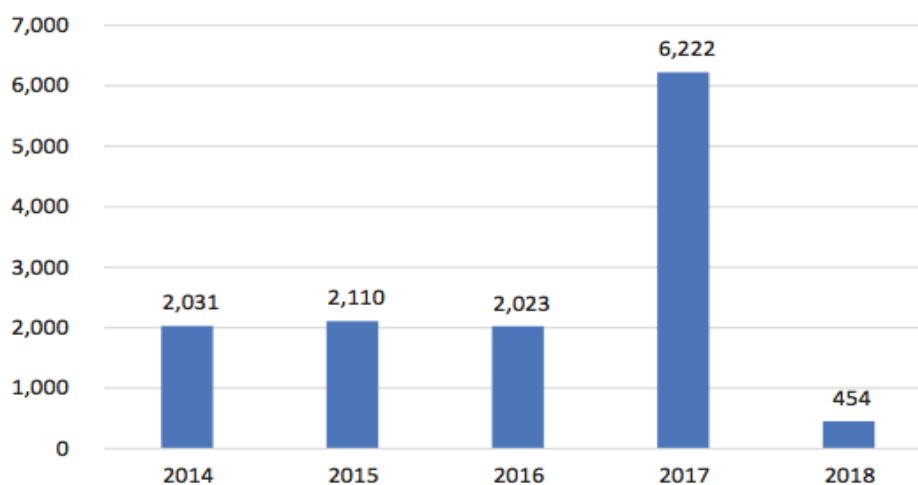
Source: *European Reshoring Monitor*

4.2.9 Impact on employment

The ERM dataset provides evidence of the employment impact of recent reshoring initiatives in Europe. Understanding the number of jobs lost because of offshoring initiatives and jobs gained in the home country thanks to reshoring initiatives is very important, especially for policymakers. Unfortunately, this information is available in the secondary data sources used by the reshoring monitor only for less than half of the projects (99, i.e., 40.4% of the sample). This finding may prompt the speculation that in the other 60% of analysed projects the employment gains were totally absent or at least not relevant enough to be highlighted by the reshoring company when communicating its own decision or by the media in reporting the project.

A total of 12,840 new jobs were linked to these 99 initiatives (Figure 4.14). In contrast to the 2017 data, in 2018 the number of new jobs greatly decreased both in total number (454 vs. 6,222) and in average job gains per project (86.4 vs. 11.3). As far as reported job gains are concerned, two further issues emerge from the analysis of the project studies. First, the growing relevance of automation, as a reshoring enabler (Ancarani and Di Mauro, 2018), implies a reduction of labour demand. Second, companies sometimes implement reshoring decisions based on a ‘defensive’ approach, which is leveraging untapped production capacity available in the home country. Analyses conducted especially among Italian companies clearly show that firms may reshore under the pressure of unions and local communities when there is a risk of plant closure and employee lay-offs in the home country.

Figure 4.14 Number of jobs created



Source: European Reshoring Monitor

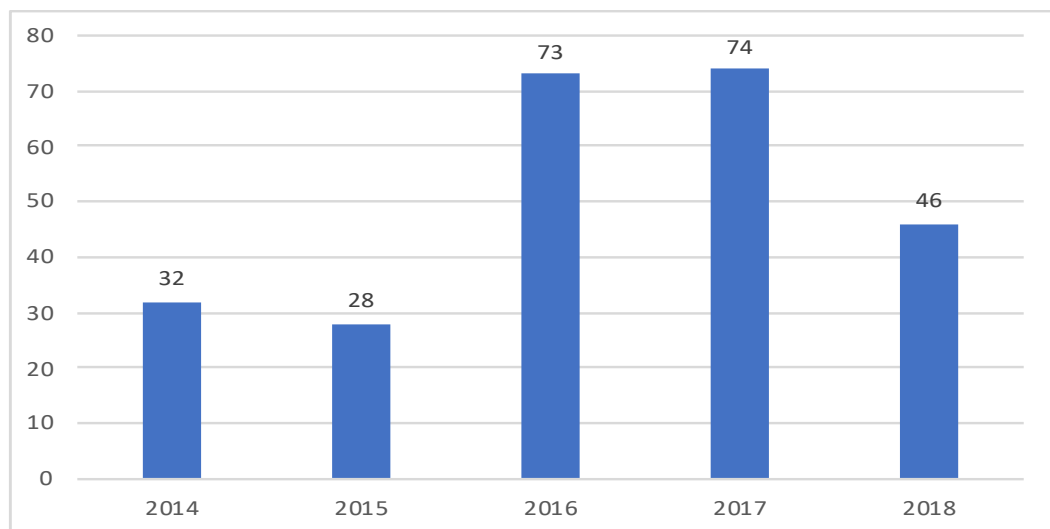
Of course, it should be taken into account that the real effect of reshoring on employment is probably much more significant than suggested by the reshoring monitor data, given the growing role of ‘indirect’ job creation, that is jobs created in companies that are part of the value chain of the reshoring company. Obviously, indirect job creation is more relevant when the reshoring companies relocate the manufacturing activity in the home country adopting the ‘reshoring for outsourcing’ alternative (Gray et al., 2013), that is outsourcing the reshored production to local suppliers.

4.3 Evolutionary trajectories of reshoring: Inter-annual comparison

4.3.1 What are the reshoring trends?

The number of reshoring projects increased from 2014 to 2017 (see Figure 4.15) but declined in 2018. This information should not be considered conclusive, given that news about a firm’s reshoring decision often appears in the press after a time lag. Therefore, the total number of 2018 projects are likely to increase during the first months of 2019 (data collection for this report concluded in December 2018).

Figure 4.15 Number of reshoring projects per year



Source: European Reshoring Monitor

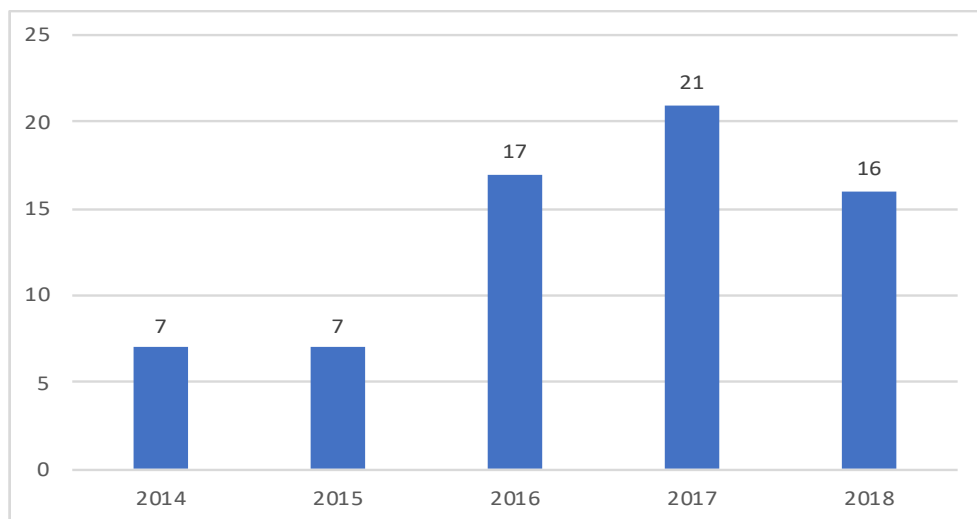
In establishing a trend, a caveat is necessary since a rigorous comparison of the annual data is difficult for the following reasons. First, M-Brain only started monitoring the news about reshoring projects at the beginning of 2016. Data referring to 2014 and 2015 have

been drawn from another database (the Uni-CLUB MoRe Reshoring database). Second, it is worth noting that a project of reshoring is sometimes associated with the ‘announcement date’ of the first reshoring project. New reshoring projects by the same company are sometimes not announced, or at least not reported by media. Third, media traditionally pay less attention to mature phenomena or phenomena that are no longer considered novel.

4.3.2 Which home countries are more active regarding reshoring?

Analysing data by home country, some substantial time-based differences of the reshoring phenomenon emerge. First of all, the number of home countries affected by the reshoring phenomenon greatly increased after the first two years (Figure 4.16), confirming that the phenomenon is spreading throughout Europe.

Figure 4.16 Number of home countries affected by reshoring decisions

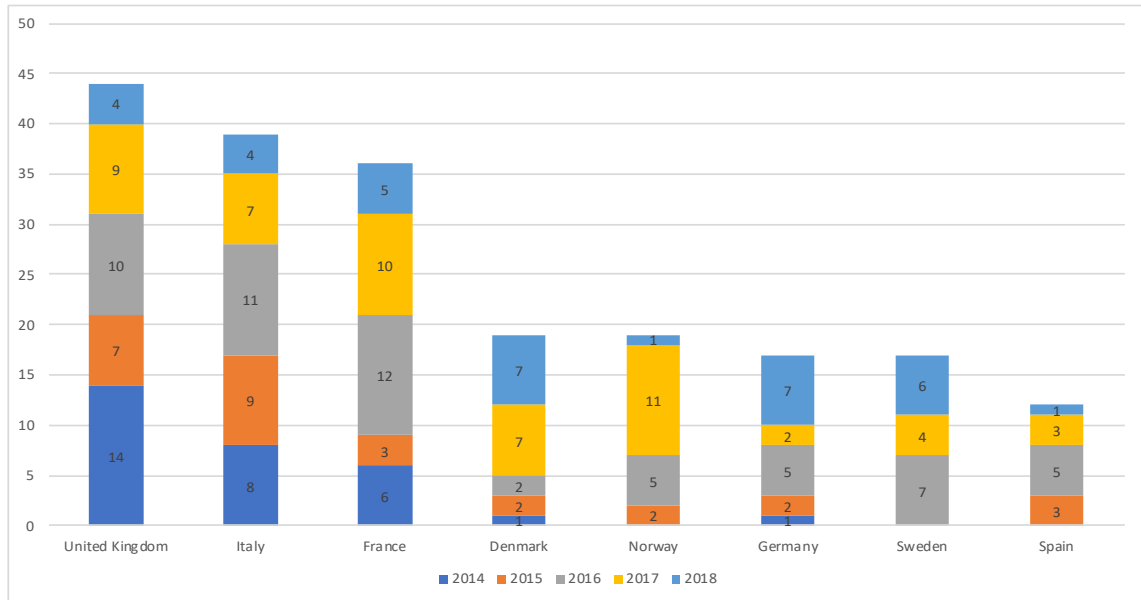


Source: European Reshoring Monitor

From a time-based breakdown at country level (Figure 4.17), three different patterns seem to emerge. ‘Early reshoring’ countries – in the project of the UK, one-third of reshoring initiatives were implemented in 2014, when the Reshore UK project was launched by UK Trade & Investment and the MAS. ‘Second mover’ countries – in the project of the three largest industrial countries in Europe (France, Germany and Italy) reshoring decisions peaked in 2016. ‘Late reshoring’ countries – primarily in the Nordic countries (Denmark, Norway and Sweden), most reshoring projects identified took place in the last two years. However, with respect to Norway, it ought to be noted that 4 out of the 11 projects found

in 2017 relate to the same firm (IP Huse AS) which backshored to Norway with different reshoring decisions from the Czech Republic, Poland, Russia and Ukraine.

Figure 4.17 Number of reshoring projects per home country (only >10 decisions)

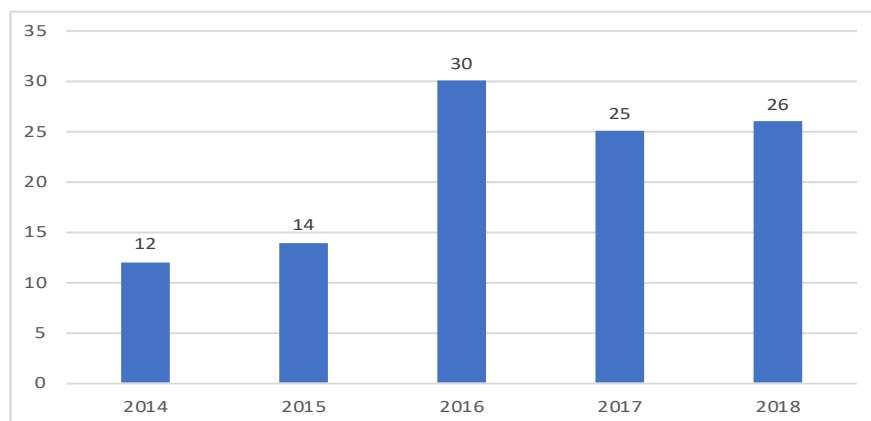


Source: European Reshoring Monitor

4.3.3 Which are the main countries from which companies reshore?

As shown in Figure 4.18, the number of countries from which reshoring took place increased after 2015 and remained quite high for the next two years. This finding, together with the number of involved home countries and the industries, clearly shows reshoring is becoming more widespread, even if the total number of projects has not increased sharply over the last five years.

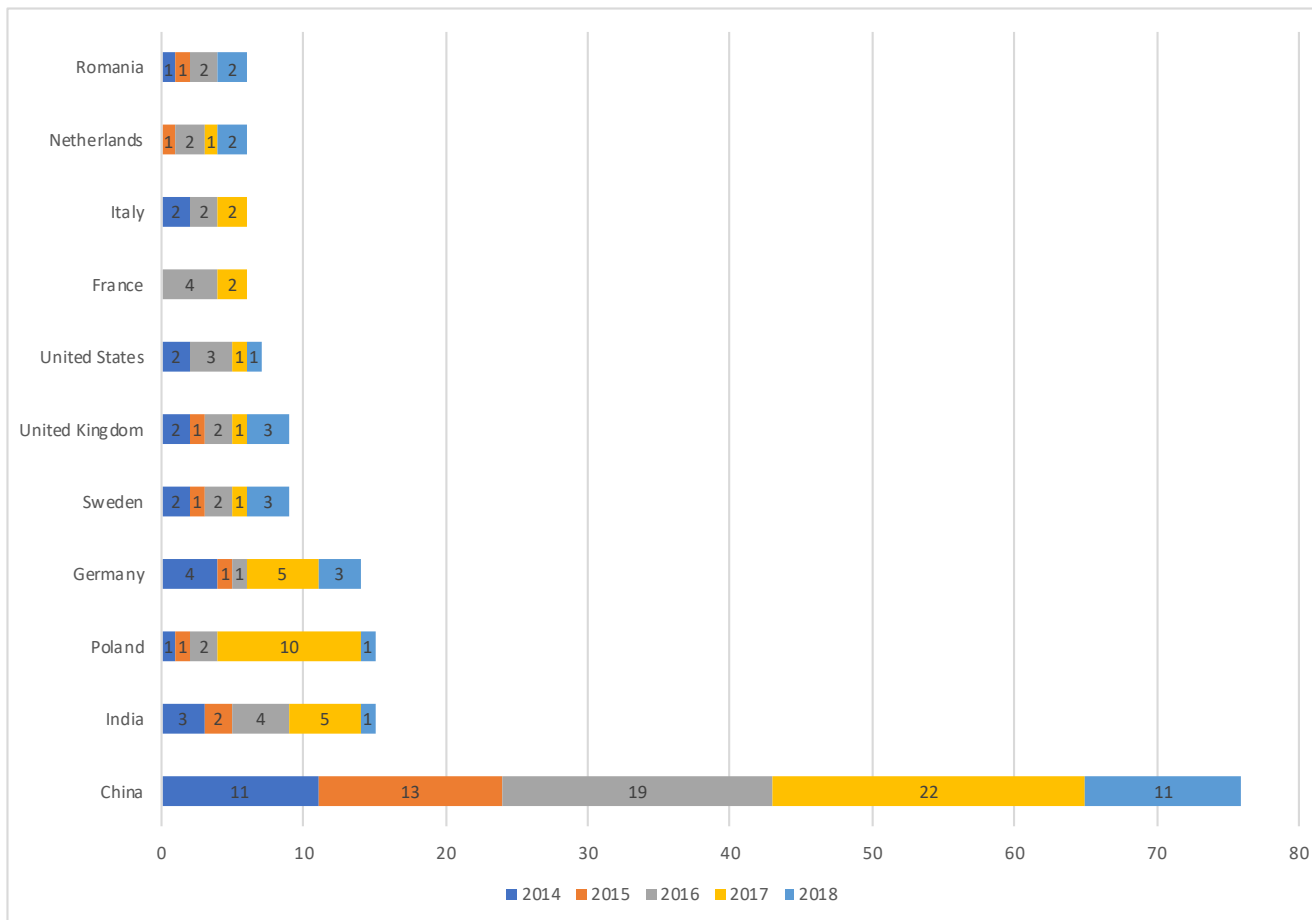
Figure 4.18 Number of offshoring countries affected by reshoring decisions



Source: European Reshoring Monitor

Breaking down by single host country and time period, it is evident that nearly half of all identified reshoring took place from China and that China's share remains quite stable over the period. There is evidence of increased reshoring from Poland, India and Germany in 2017 (Figure 4.19).

Figure 4.19 Number of reshoring decisions by offshoring country and year (>5 decisions)

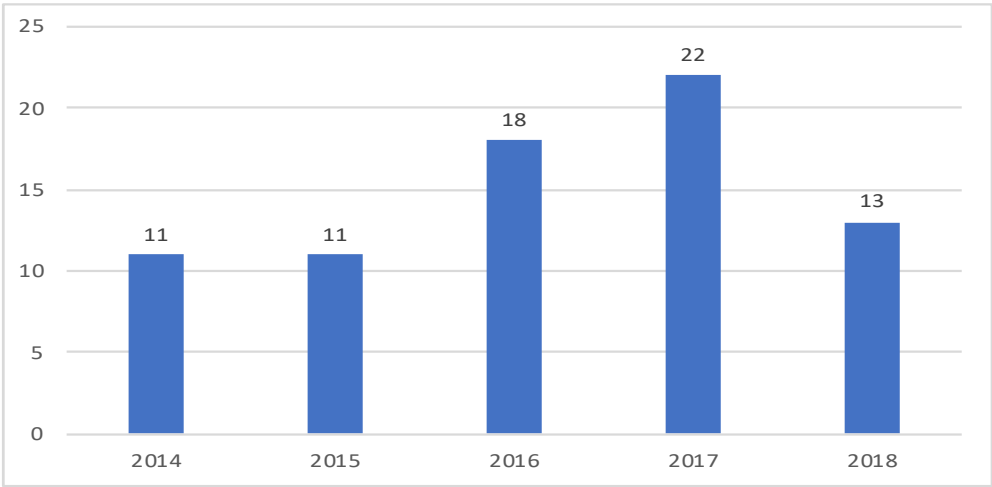


Source: *European Reshoring Monitor*

4.3.4 Which sectors are more active in reshoring?

Reshoring has occurred mainly in the manufacturing sector, which accounts for around 85% of total reshoring projects identified. Based on manufacturing projects only, Figure 4.20 clearly shows that the number of sub-sectors affected by reshoring has significantly increased over the period, rising from 11 in 2014 and 2015 to 22 in 2017 (out of a total of 25 manufacturing sub-sectors in the NACE classification)(see Appendix B).

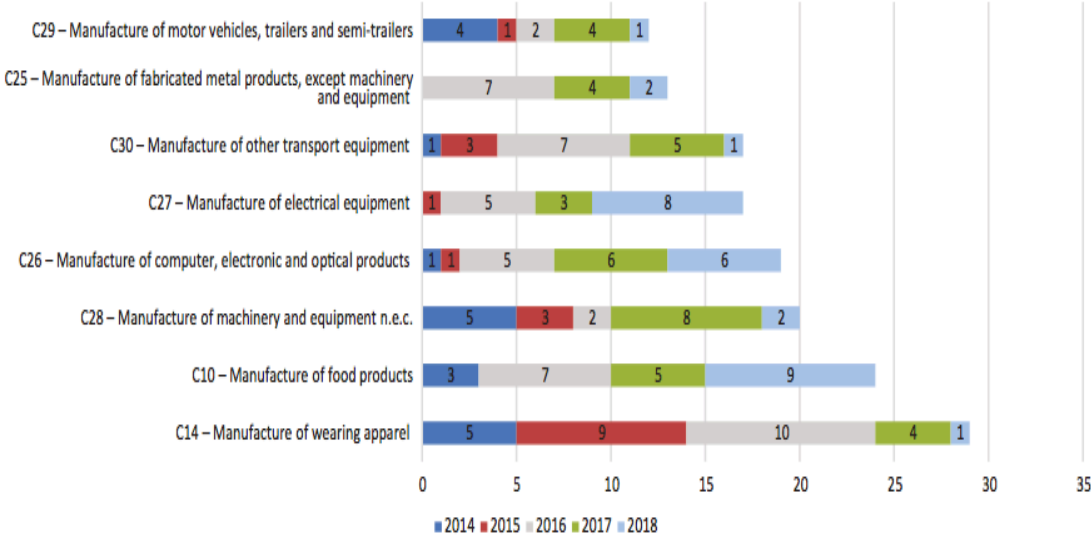
Figure 4.20 Number of sub-sectors affected by reshoring decisions (manufacturing projects)



Source: European Reshoring Monitor

When considering the breakdown of the manufacturing industry, Figure 4.21 clearly shows how the share of each industry in the total number of reshoring announcements has changed over time.

Figure 4.21 Number of reshoring projects per industry (only >10 decisions)



Source: European Reshoring Monitor

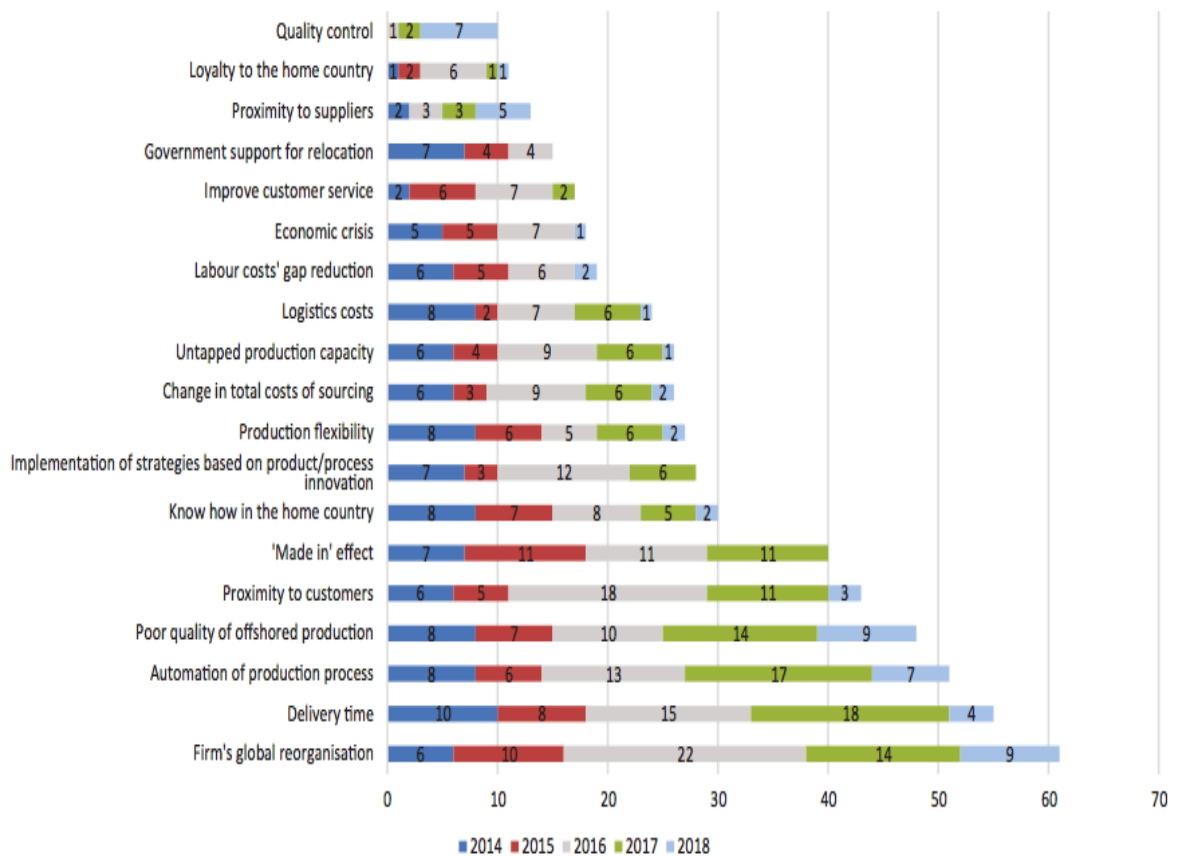
While in the last two years the number of reshoring projects in the clothing/apparel industry (the highest with 29 projects) reduced significantly, project numbers in food

products, electronic and optical products and electrical equipment show an increasing trend.

4.3.5 How are reshoring motivations changing?

Figure 4.22 summarises changes in the reshoring drivers' relevance within the period under investigation. While quality issues (both in terms of quality level and cost for quality audit) increased in relevance, the effect of the economic crisis declined as a motivation after 2016. At the same time, the adoption of automated production systems increased as a driving factor, while the 'made-in' effect almost disappeared in 2018, largely as a consequence of the sharp reduction of backshoring decisions in the fashion industry.

Figure 4.22 Inter-annual comparison of motivations



Source: *European Reshoring Monitor*

4.3.6 Summaries the main findings of the inter-annual comparison.

Table 4.1 summaries the main findings of seven aspects. In quantitative terms, reshoring appears to be essentially stable, while qualitatively significant changes emerge relative to the following features.

Table 4.1 Summary of main findings

Analysed issue	Main findings
Reshoring case frequency	The phenomenon increased between 2015 and 2017.
Home countries	A spreading phenomenon: the number of home countries has grown steadily since 2015.
Time periods	Three groups of reshoring countries were identified: ‘earlier reshoring’ (UK), ‘second movers’ (France and Italy) and ‘late reshoring’ (Denmark, Norway and Sweden).
Host countries	The number of host countries – i.e. the country to which production was originally offshored – has declined. China has been the leading host country in each of the last five years. The importance of reshoring from Poland and India increased in 2017.
Industries	The spread of industries affected by reshoring decisions also increased in 2016 and 2017. Manufacturing accounts for around 85% of all cases. Within manufacturing, the clothing industry has been the most affected over the period covered but, in 2018, case frequency fell sharply in this sub-sector. Reshoring in the food industry grew significantly in 2018.
Employment	Information on the employment effects of individual reshoring cases is partial and incomplete. Such effects are only made explicit in around 40% of media articles dealing with individual cases. In the cases covered, around 12,840 direct jobs were created over five years. Creation of ‘indirect employment’ is likely to be significant, although there is no research evidence of the reshoring multiplier effect.
Motivations	‘Firm’s global reorganisation’ is the most cited driver of reshoring decisions. Poor product quality in offshored production has been growing as a driver in more recent years, while automation and technology also emerged as important motivating factors in 2017 and 2018.

Concerning target countries – reshoring flows, which in the past predominantly affected developed western European manufacturing countries (France, Germany, Italy and the UK) have broadened to encompass northern and eastern Europe. Intra-regional flows have become more important.

As far as industry is considered, the variety of industries affected has grown significantly and the concentration in labour-intensive sectors observed in the past has declined.

Turning to the reshoring motivations – cost factors, and even quality factors to some extent, which dominated the first wave of the phenomenon, have today given way to

factors linked to the global reorganisation of value chain activities, the need for customer responsiveness (delivery times) and new technological trajectories (automation and digitalisation).

Even with all the caveats that the use of secondary data requires, the reshoring phenomenon that our data describe is quite different from that observed even in the recent past. Previously, reshoring was often in response to unmet expectations regarding a prior offshoring decision. Once the (total) costs of developing and managing a foreign manufacturing base became clear, some companies decided to bring production back. In the first decade of this century, the instability of the location advantages in some sourcing countries and the mounting global crisis helped tip the balance in favour of reshoring.

The results of the reshoring monitor are in line with recent research contributions. In particular, evidence has been offered of a relevant backshoring movement towards northern European countries, Poland and Spain. Furthermore, the global reorganisation of value chains has been increasingly acknowledged as driving backshoring, assisted by increasing investments in new technology in several industries.

In addition, companies are more aware of the fact that back- or nearshoring are just two of the possible options for international (re)configuration. Therefore, they should not be examined separately, but in the context of overall operations network design as well as companies' corporate strategies.

To strengthen their competitive position, many emerging countries are making important modernisation efforts, significantly improving their industrial profile in terms of quality and innovation. In doing so, they develop their comparative advantage and increase the probability of being selected for nearshoring and/or further offshoring strategies.

Also, many European countries are supporting company investments in new technologies. Until now, these efforts are only partially driving reshoring. Many of the challenges that firms faced offshore can be addressed by relocation to home countries. The new generation of technologies appears to be providing opportunities to increase productivity and to address product quality issues, thus suggesting that further reshoring cases can be expected in the near future, driven by the falling costs of new technologies and encouraged by national plans that support technological upgrading.

Analysis of the links between reshoring and technology remains scarce and is limited to northern European countries. Emerging research suggests that backshoring companies are among the most active in using new technologies, thus supporting the idea that this

phenomenon may be reinforced in the near future by process innovations tied to the adoption of new technologies.

The evidence that emerges tends to confirm the evolutionary hypotheses of the reshoring phenomenon described in the already mentioned OECD report (De Backer et al., 2016), in particular the fact that ‘after years of large-scale offshoring and outsourcing, companies increasingly look for more diversified sourcing strategies and consider more options in structuring their production processes’. Furthermore, De Backer et al. (2016) point out that it is reasonable to assume that changes in cost structures, demand factors and new technologies will promote the regional rebalancing of some global value chains as well as a growing concentration of manufacturing activities in regional or local hubs closer to end markets.

Chapter 5 Entry modes in reshoring strategies: An empirical analysis

5.1 Purpose

The purpose of this chapter⁷ is to examine which factors influence entry mode (EM) choice in reshoring initiatives. Specifically, we aim to answer the following two research questions:

- (1) Which factors influence the reshoring EM choice?
- (2) What are the differences between the factors affecting the reshoring EM choice and those affecting the offshoring EM choice?

5.2 Literature background and conceptual framework

Our starting point for developing the research questions set forth above is the contribution of Gray et al. (2013). By combining location decisions (off- vs. re-shoring) and make-buy decisions (in- vs. out-sourcing), Gray et al. (2013) trace back reshoring paths to the following four sequences of EM choices (Figure 5.1): a) *In-House reshoring*, when companies relocate manufacturing activities from offshore wholly owned facilities back to wholly owned facilities in the home country; b) *Reshoring for outsourcing*, when companies relocate manufacturing activities from offshore wholly owned facilities back to home based suppliers; c) *Reshoring for insourcing*, when companies relocate manufacturing outsourced to offshore suppliers back to wholly owned facilities in the home country; d) *Outsourced reshoring*, when companies relocate manufacturing activities performed by offshore suppliers back to home based suppliers.

What factors influence the adoption of the aforementioned four strategies (paths)? Since EMs represent a key field in International Business (Werner, 2002), this literature can shed light on the main factors that influence the EM choice, although its focus is on offshoring rather than reshoring decisions. The Section 5.2.1 provides a summary of this literature.

A second important stream of literature, mainly rooted in Operations Management, is that specifically devoted to reshoring. This literature focuses on the motivations for reshoring

⁷ Chapter 5 is adapted from the paper: Wan, L., Orzes, G., Sartor, M., Di Mauro, C., & Nassimbeni, G. (2019). Entry modes in reshoring strategies: An empirical analysis. *Journal of Purchasing and Supply Management*, 25(3), 100522.

and deals only marginally with the theme of EMs. However, motivations and EMs appear to be conceptually linked (Benito, 2015; Di Mauro et al., 2018). For example, when offshoring is motivated by the intention to exploit ownership advantages such as proprietary knowledge, the risk of infringements experienced in outsourcing agreements with foreign suppliers may lead to equity-based solutions. The Section 5.2.2 provides a summary of the literature on reshoring motivations.

Building on the findings of these two literature streams and on their theoretical underpinnings, Section 5.2.3 illustrates the “*conceptual framework*”.

Figure 5.1 Reshoring strategies (paths) (adapted from Gray et al., 2013)

		To: Reshore	
		In-House	Outsourced
From: Offshore	In-House	In-House Reshoring (IN-IN)	Reshoring for Outsourcing (IN-OUT)
	Outsourced	Reshoring for Insourcing (OUT-IN)	Outsourced Reshoring (OUT-OUT)

5.2.1 Antecedents/determinants of entry modes

The question of how firms enter and operate in foreign markets has been a mainstream topic in international business research for decades (Canabal and White, 2008; Hennart and Slangen, 2015; Schellenberg et al., 2017). Several authors have contributed to this debate by conceptualising/defining the different EMs and their main features, by shedding light on the antecedents/determinants of EMs and exploring the EM-performance relationship. Despite the wide and heterogeneous set of EMs, most studies analyse and compare antecedents/determinants of equity (i.e., insourcing) vs. non-equity (i.e., outsourcing) EMs (Canabal and White, 2008; Pan and Tse, 2000). In this section, we provide an overview of this literature and its theoretical underpinnings. A more detailed/systematic review of this research field can be found in the recent reviews/meta-analyses on antecedents/determinants of EMs (i.e., Brouthers and Hennart, 2007; Canabal

and White, 2008; Sarkar and Cavusgil, 1996; Schellenberg et al., 2017; Zhao et al., 2004) or on EM-performance relationship (Zhao et al., 2017).

Four groups of EM antecedents/determinants have been identified in the literature (Luo, 2001): *industry*- (e.g., market potential, technology specialisation), *firm*- (e.g., firm size, experience and capabilities), *country*- (e.g., cultural distance, political risk) and *project-specific* factors (e.g., motives of market entry). The theoretical frameworks most frequently adopted to explain the antecedents/determinants include transaction cost theory (TCT), resource-based view (RBV), institutional theory, eclectic paradigm, and the Uppsala internationalisation model (Schellenberg et al., 2017). We summarise these theoretical frameworks in Table 5.1, highlighting their key assumptions/concepts and their adoption in EM studies.

The main *industry*-specific antecedents/determinants of EMs analysed in the literature are asset specificity and industry concentration. Both TCT and empirical EM studies suggest that asset specificity significantly affects the EM choice (Brouthers and Brouthers, 2003). More specifically, non-equity EMs are preferred in low asset specificity sectors – such as clothing – since transaction costs created by potential opportunism are lower (Delios and Beamish, 1999; Gatignon and Anderson, 1988; Lane and Probert, 2006). Similarly, in a highly concentrated market, internalisation is more attractive, as transaction costs of external cooperation are higher than those of hierarchical coordination (Gomes-Casseres, 1990).

With regard to *firm*-specific antecedents/determinants, RBV theory predicts that firms that possess distinctive resources/capabilities (e.g., proprietary technologies, tacit know-how, specialised assets, reputation) tend to select EMs with higher level of control/equity. This hypothesis is empirically supported by some EM studies (e.g., Brown et al., 2003; Ekeledo and Sivakumar, 2004; Mutinelli and Piscitello, 1998). Similarly, SMEs, which are usually characterised by fewer resources/capabilities, tend to select non-equity entry modes, in particular when environmental uncertainty is high (Bradley and Gannon, 2000; Brouthers and Nakos, 2004; Li and Qian, 2008). However, Shrader et al. (2000) highlight that, consistent with Dunning's eclectic paradigm, SMEs will adopt equity EMs whenever they have significant ownership and/or locational advantages (e.g., proprietary technologies to be protected).

The predicted effects of *home and host country* on EM choice can be subdivided into host country influence, home country influence, and distance between the two countries. The

Table 5.1 Theoretical frameworks explaining the EM choice

(adapted from Andersen, 1997; Canabal and White, 2008; Schellenberg et al. 2017; Surdu and Mellahi, 2016)

Theory	Key assumptions / concepts	Adoption in EM studies (examples)
Transaction cost theory (TCT)	The rationality of actors is limited and their behaviour may be opportunistic. The proper form for governing transactions is influenced by assets specificity, uncertainty, and frequency.	Firms adopt EMs that minimise production and transaction costs. EM choice is affected by asset specificity, uncertainty, and need to protect brand name (Anderson and Gatignon, 1986; Zhao et al., 2004).
Resource-based view (RBV)	Firms are bundles of tangible and intangible resources/capabilities (assets, processes, knowledge, and capabilities). To provide sustainable competitive advantage, these resources/capabilities should be valuable, rare, imperfectly imitable, and non-substitutable.	Firms with distinctive resources/capabilities (e.g., proprietary technologies, tacit know-how, extensive geographic-industry experience) tend to adopt equity EMs (Brown et al., 2003; Ekeledo and Sivakumar, 2004; Mutinelli and Piscitello, 1998).
Institutional theory	Organisations must conform to the rules and beliefs prevailing in the environment. Coercive, mimetic and normative pressures generate institutional isomorphism.	EM decisions are affected by coercive, mimetic and normative forces (Canabal and White, 2008; Davis et al., 2000; Yiu and Makino, 2002).
Eclectic paradigm	The propensity of firms to engage in foreign production depends upon Ownership, Location, and Internalisation (OLI) advantages.	EM decisions are based on the analysis of Ownership (e.g., intangible assets, skills, new products), Location (e.g., institutional or productive factors available in a geographic area), and Internalisation (e.g., transaction and coordination costs) factors (Schellenberg et al., 2017).
Uppsala internationalisation model	Firms: a) tend to internationalise first to geographically close countries and gradually move to more psychically distant markets; b) start from a low resource-commitment mode and move to higher commitment modes as knowledge and experience rise.	EM decisions are affected by the experience of the company in the foreign country and the cultural distance between the home and host country (Arora and Fosfuri, 2000; Blomstermo et al., 2006; Mutinelli and Piscitello, 1998).
Path dependence	History matters: initial decisions can restrain present and future choices. Examples of self-reinforcing mechanisms that narrow the range of (managerial) discretion are: economies of scale and scope, network externalities, learning effects, durability of capital equipment, technical interrelatedness.	Firms tend to adopt the same EM adopted in previous locations (Amburgey and Miner, 1992).

host and home country influences are mainly due to institutions and legislation, industrial profile of the country, availability of a local supply basin, market attractiveness, and logistics infrastructures (Morschett et al., 2010; Schellenberg et al., 2017). With reference to the institutional setting, Uhlenbruck et al. (2006) highlight that if corruption in the host country is pervasive, firms tend to select non-equity EMs. Similarly, Brouthers (2002) shows that firms entering countries with legal restrictions on EMs (such as China) tend to use non-equity EMs. Although the main focus of the literature on EM determinants is on the effect of distance (cultural, psychic, or geographical) between the home and the host country, there is still open debate on this issue. Some scholars (Arora and Fosfuri, 2000; Hennart and Larimo, 1998; Kogut and Singh, 1988) find that firms tend to select non-equity EMs when distance is high. However, the significance of this effect is not confirmed by the meta-analysis of Tihanyi et al. (2005).

Some studies consider the motivations of market entry as *project-specific* antecedents/determinants of EMs. For instance, Dunning's (1988) eclectic paradigm identifies four main sets of motives for entering a foreign market: resource-seeking, market-seeking, efficiency-seeking, strategic-asset seeking. EM scholars find that global strategic motivations (such as setting up a strategic outpost for future international expansion, developing a global sourcing site, attacking actual or potential global competitors) increase the likelihood of equity EMs (e.g., Kim and Hwang, 1992; Rajan and Pangarkar, 2000). Similarly, Tsai and Cheng (2002) show that market-seeking motivations (in particular host sales market expansion) lead to equity EMs.

Finally, there is evidence that companies tend to replicate the same EM adopted in previous locations (e.g., Benito et al., 2009; Chang and Rosenzweig, 2001; Swoboda et al., 2015). This result aligns with the path dependence concept introduced by David (1985) and Arthur (1994) to explain the adoption and diffusion of technological standards, and subsequently frequently adopted in internationalisation studies (see among others, Araujo and Rezende, 2003; Eriksson et al., 2000; Hutzschenreuter et al., 2007). Path dependency – i.e., the tendency to repeat the initial choices in the future – is due to self-reinforcing (or positive feedback) mechanisms, such as economies of scale and scope, network externalities, learning effects, and coordination effects (Arthur, 1994; David, 1985). From a theoretical point of view, it can be traced back to the knowledge-based theory of the firm as well as to the institutional theory (Swoboda et al., 2015). As far as the former is concerned, Padmanabhan and Cho (1999) emphasise that positive EM experiences lead

to growing knowledge and confidence in the continued use of the same mode (mode learning). As for the latter, internal cognitive pressures, such as firms'/managers' habitual behaviours and repeated actions (Berger and Luckmann, 1967), encourage consistency in EM choices.

5.2.2 Reshoring drivers/motivations

As argued in the previous section, the motivations of market entry are often seen as a determinant of the offshoring EM choice (e.g., Kim and Hwang, 1992; Rajan and Pangarkar, 2000). Although studies on reshoring neglect the EM topic and therefore do not explicitly link reshoring motivations with EMs (with the exception of Di Mauro et al., 2018), it seems useful to consider the stream of literature focused on reshoring drivers/motivations.

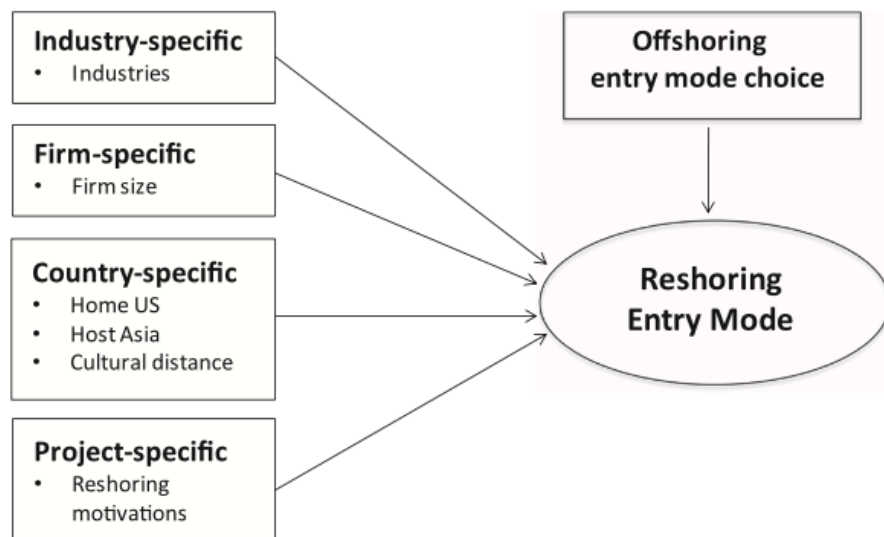
In their systematic review, Stentoft et al. (2016) identify seven categories of drivers: cost, e.g., labour costs, logistics costs, coordination/transaction costs, energy costs (Bailey and De Propriis, 2014; Pearce, 2014; Tate, 2014); quality (Canham and Hamilton, 2013; Gylling et al., 2015; Kinkel, 2014); time and flexibility, e.g., delivery lead-time, demand volatility, production and delivery reliability (Arlbjørn and Mikkelsen, 2014; Fratocchi et al. 2014; Martínez-Mora and Merino, 2014); access to skills and knowledge, e.g., proximity to R&D resources, availability of skilled labour (Kinkel, 2014); risks, e.g., threat of losing know-how and intellectual property, supply chain risks (Gray et al., 2013; Moser, 2013; Tate, 2014); market, e.g., loyalty/patriotism and “made-in” effect (Canham and Hamilton, 2013; Di Mauro et al., 2018); and other factors, e.g., government incentives, focus on core activities (Moser, 2013; Pearce, 2014; Tate et al., 2014). Fratocchi et al. (2016) propose, and subsequently empirically validate (Di Mauro et al., 2018), another classification of motivations grounded in TCT and RBV and based on two dimensions: the goal (i.e., cost efficiency vs. customer perceived value) and the level of analysis (internal environment vs. external environment). Similarly, Foerstl et al. (2016) classify reshoring drivers/motivations through a three-levels framework based on TCT and organisational buying behaviour (OBB). Wiesmann et al. (2017) identify five different sets of dynamics or clusters of reshoring drivers: global competitive dynamics, home country, host country, supply chain and firm-specific.

Conversely, the implementation of reshoring projects is significantly under-researched in the literature (Fratocchi et al., 2015; Wiesmann et al., 2017), providing for instance no indication of the antecedents/determinants of reshoring EMs.

5.2.3 Conceptual framework

Building on extant literature, we propose a conceptual framework to explore the antecedents/determinants of reshoring EMs. Specifically, we argue that reshoring EMs are determined by industry- (e.g., the industry in which the company operates), firm- (e.g., firm size), country- (e.g., home and host country, cultural distance), and project-specific factors (e.g., reshoring motivations), as well as by the EM adopted in the offshore location (Figure 5.2).

Figure 5.2 Conceptual Framework



5.3. Methodology

5.3.1 Data and measurement

The data collection, the classification of the firm size, the classification of the industry, and the unit of analysis have been presented in Chapter 3. Cultural distance between home and host countries was measured using Kogut and Singh's (1988) index, which measures the deviation along each of the six Hofstede's (1980) cultural dimensions (i.e., power distance, individualism, masculinity, uncertainty avoidance, long term orientation, indulgence). Despite criticism by some authors (e.g., Beugelsdijk et al., 2015; Shenkar, 2001), this index has been increasingly adopted (Harzing and Pudelko, 2015). Finally,

motivations were coded based on an extensive review of the reshoring literature (see Fratocchi et al., 2016). The original database contained 747 reshoring cases. In order to avoid misinterpretation, each observation was reviewed and cross-validated initially by two independent researchers within the group. A third researcher was involved in the few cases of disagreement (less than 5%). Due to missing data or unreliable information, 70 cases were removed. This led to a final database containing 677 cases having complete and reliable information about both the offshoring and reshoring EMs.

5.3.2 Descriptive statistics

As shown in Table 5.2, reshoring cases included in our dataset spread across a wide range of manufacturing sectors. The four sectors with the highest number of cases are clothing (16.7%), electronics (16.4%), mechanical (15.7%) and automotive (11.7%). Considering firm size, SMEs account for 263 out of 677 (38.8% of the cases), while large firms account for 352 out of 677 (52.0% of the cases). Regarding the home country, US- and EU-based companies are almost equally represented in our sample (46.2% and 50.2%, respectively). With regard to the host country, 58.5% of companies returned from Asia and among them 48.9% from China. While a set of 26 motivations were identified, we considered in Table 5.2 and in the subsequent analyses only those quoted by at least 67 cases (~10% of the sample).

5.3.3 Data analysis

The first goal of our paper was to shed light on the factors influencing the reshoring EM choice. To this end, we employed a binary logistic regression model to test the conceptual framework (Figure 5.2). The dependent variable (i.e., the reshoring EM) was operationalized through a binary variable, taking value zero for outsourcing (non-equity) and one for insourcing (equity). The independent variables were operationalized through binary variables too (*clothing*, *electronics*, *mechanical*, and *automotive* for industry; *large firms* for firm size; *home US* for home country; *host Asia* for host country; *logistic costs*, *made-in effect*, *quality issues*, *labour costs' gap reduction*, *delay in delivery*, *total costs*, *customer proximity*, and *government incentives* for reshoring motivations). Kogut and Singh's (1980) index was used to measure cultural distance. The resulting logit equation was:

$$Y_i = \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \beta_4 X_{i4} + \beta_5 X_{i5} + \beta_6 X_{i6} + \beta_7 X_{i7} + \varepsilon_i \quad (1)$$

(Y_i =reshoring EM, X_1 =industry, X_2 =firm size, X_3 =home country, X_4 =host country, X_5 =cultural distance, X_6 =reshoring motivations, X_7 =offshoring entry mode)

Likewise, the coefficients for the factors affecting the offshoring EM (i.e., insourcing vs. outsourcing) were estimated through a logit equation (eq. 2) analogous to the one for the reshoring EM, but for offshoring motivations and the previous EM, which were not available:

$$Z_i = \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \beta_4 X_{i4} + \beta_5 X_{i5} + \varepsilon_i \quad (2)$$

(Z_i = offshoring EM; X_1 =industry, X_2 =firm size, X_3 =home country, X_4 =host country, X_5 =cultural distance)

Table 5.2 Sample characteristics ^[a]

	All (N=677)		Offshoring – Reshoring entry mode							
			OUT-OUT (N=138)		OUT-IN (N=137)		IN-IN (N=399)		IN-OUT (N=3)	
Industry										
Clothing	113	16.7%	53	38.4%	30	21.9%	28	7.0%	2	66.7%
Electronics	111	16.4%	25	18.1%	18	13.1%	68	17.0%	-	-
Mechanical	106	15.7%	9	6.5%	18	13.1%	79	19.8%	-	-
Automotive	79	11.7%	11	8.0%	18	13.1%	50	12.5%	-	-
Home appliance	35	5.2%	3	2.2%	7	5.1%	25	6.3%	-	-
Furniture	34	5.0%	6	4.3%	10	7.3%	18	4.5%	-	-
Chemical	27	4.0%	1	0.7%	6	4.4%	20	5.0%	-	-
Food	26	3.8%	2	1.4%	2	1.5%	22	5.5%	-	-
Other	146	21.6%	28	20.3%	28	20.4%	89	22.3%	1	33.3%
Firm size										
Small and Medium	263	38.8%	67	48.6%	74	54.0%	121	30.3%	1	33.3%
Large	352	52.0%	46	33.3%	46	33.6%	259	64.9%	1	33.3%
Home country										
Home US	313	46.2%	75	54.3%	75	54.7%	162	40.6%	1	33.3%
Home EU	340	50.2%	63	45.7%	58	42.3%	217	54.4%	2	66.7%
Host country										
Host Asia (including China)	396	58.5%	118	85.5%	111	81.0%	165	41.1%	2	66.7%
Host China	331	48.9%	103	74.6%	90	65.7%	136	34.1%	2	66.7%
Reshoring motivations										
Logistic costs	134	19.8%	30	21.7%	32	23.4%	71	17.8%	1	33.3%
Quality issues	117	17.3%	39	28.3%	28	20.4%	49	12.3%	1	33.3%
Made-in effect	114	16.8%	27	19.6%	32	23.4%	54	13.5%	1	33.3%
Labour costs' gap reduction	100	14.8%	20	14.5%	18	13.1%	61	15.3%	1	33.3%
Customer proximity	99	14.6%	22	15.9%	23	16.8%	53	13.3%	1	33.3%
Total costs	98	14.5%	34	24.6%	17	12.4%	47	11.8%	-	-
Delay in delivery	93	13.7%	35	25.4%	27	19.7%	30	7.5%	1	33.3%
Government incentives	67	9.9%	2	1.4%	17	12.4%	47	11.8%	1	33.3%

^[a] In some cases, percentages do not sum up to 100% due to missing values or approximation. Furthermore, more than one reshoring motivation have been sometimes identified for each case.

5.4 Results

Table 5.3 shows the results of the binary logistic regression on the factors affecting the reshoring EM choice for the entire sample (N = 677). A step-wise approach was applied, whereby three different models were estimated: Model 1 encompasses only country-, industry-, and firm-specific variables; Model 2 adds project-specific variables, i.e., reshoring motivations. Finally, Model 3 brings in the effect of the offshore EM. The correlation matrix and variance inflation factors for Model 3 (all lower than 2) suggest that multi-collinearity is not an issue (Allison, 1977, 2012). The estimated logit model shows that in Model 1 and 2, there are significant effects for firm size (large firms are more likely to enter the reshoring location through a captive mode), country (firms that had offshored to an Asian country are more likely to use reshoring outsourcing), and project-specific variables (firms reshoring because of delivery problems seek external suppliers domestically while the provision of government incentives promotes in house production).

Table 5.3 Factors affecting the reshoring EM choice (outsourcing = 0; insourcing=1)

Reshoring entry mode (N = 677)						
	Model 1		Model 2		Model 3	
	Coefficient (b)	Std. error	Coefficient (b)	Std. error	Coefficient (b)	Std. error
Clothing	-1.465***	0.300	-1.572***	0.323	-0.923*	0.380
Electronics	-0.269	0.327	-0.171	0.345	-0.262	0.419
Mechanical	0.535	0.410	0.745	0.430	0.652	0.498
Automotive	0.041	0.436	-0.006	0.463	0.352	0.531
Large	0.482*	0.237	0.455	0.259	-0.076	0.309
Home US	-0.176	0.263	-0.323	0.279	-0.182	0.332
Host Asia	-1.679***	0.341	-1.597***	0.359	-0.394	0.436
Cultural distance	-0.010	0.020	-0.008	0.021	-0.027	0.028
Logistic costs	-	-	0.437	0.329	0.175	0.369
Made-in effect	-	-	0.104	0.315	0.197	0.352
Quality issues	-	-	-0.509	0.291	-0.491	0.336
Labour costs' gap reduction	-	-	0.441	0.363	-0.004	0.443
Delay in delivery	-	-	-0.811**	0.312	-0.436	0.354
Total costs	-	-	-0.510	0.321	-0.671	0.403
Customer proximity	-	-	0.379	0.331	0.001	0.393
Government incentives	-	-	1.943**	0.638	1.303	0.698
Offshoring entry mode	-	-	-	-	4.741***	0.740
Constant	2.985***	0.428	2.947***	0.455	1.300*	0.593
-2 log likelihood	485.874		452.991		315.915	
Cox and Snell R ²	0.151		0.195		0.356	
Nagelkerke R ²	0.245		0.317		0.579	

* p < 0.05, ** p < 0.01, *** p < 0.001

However, in Model 3 the choice of the reshoring EM is significantly affected only by the industry (clothing industry $\beta=-0.923$, $P<0.05$) and, above all, by the previous EM in the offshore location ($\beta=4.741$, $P<0.01$). All other explanatory variables are statistically insignificant. This result not only hints that the offshoring EM tends to be replicated, but also that the offshore EM may be linked to firm's and industry-specific characteristics. In order to get a deeper understanding of the effect of the previous offshoring EM, we mapped the offshoring and reshoring EMs of the analysed reshoring projects (Figure 5.3).

Figure 5.3 Reshoring strategies frequency distribution

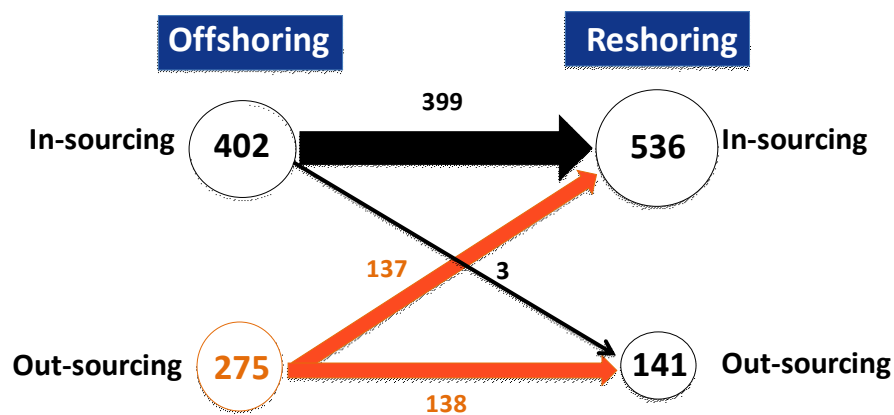


Figure 5.3 shows that, out of 402 cases that had selected offshore insourcing, 399 confirmed this EM in reshoring (*in-house reshoring strategy, IN-IN*). Only three firms switched from insourcing to outsourcing (*reshoring for outsourcing strategy, IN-OUT*). Conversely, companies that had chosen outsourcing in the offshore location almost equally distributed between *reshoring for insourcing strategy (OUT-IN, 137 cases)* and *outsourced reshoring strategy (OUT-OUT, 138 cases)*. A Chi-Square test (asymptotic significance $P=0.00$) shows a significant relationship between reshoring and offshoring EM. To shed light on the factors affecting the decision to switch from an outsourcing EM in the offshore location to an insourcing mode in reshoring (i.e., from *OUT-IN* to *OUT-OUT*), we restricted our sample to the 275 cases that had adopted an offshoring outsourcing EM, and re-estimated eq. (1) omitting the offshoring EM from the explanatory variables (Table 5.4). Multi-collinearity was not an issue also in this case. This analysis highlighted that companies belonging to the clothing industry ($\beta=-0.879$, $P<0.05$) are more likely to maintain an outsourcing EM also in reshoring (*OUT-OUT*).

As far as project variables are concerned, we found that when reshoring is due to government incentives, the *reshoring for insourcing (OUT-IN)* strategy tends to be selected ($\beta=1.831$, $P<0.05$). No other firm-specific, country-specific and cultural distance variables appear to have significant effects.

Table 5.4 Factors affecting the reshoring EM choice after offshore outsourcing
(outsourcing = 0; insourcing=1)

Reshoring entry mode		
Sub sample (N = 275)		
	Coefficient (b)	Std. error
Clothing	-0.879*	0.391
Electronics	-0.298	0.433
Mechanical	0.630	0.509
Automotive	0.298	0.545
Large	-0.080	0.316
Home US	-0.134	0.342
Host Asia	-0.435	0.454
Cultural distance	-0.031	0.030
Logistic costs	0.112	0.375
Made-in effect	0.260	0.359
Quality issues	-0.567	0.347
Labour costs' gap reduction	-0.009	0.456
Delay in delivery	-0.290	0.357
Total costs	-0.700	0.417
Customer proximity	0.108	0.404
Government incentives	1.831*	0.624
Constant	1.320*	0.624
-2 log likelihood	289.282	
Cox and Snell R ²	0.124	
Nagelkerke R ²	0.166	

* p < 0.05, ** p < 0.01, *** p < 0.001

Finally, eq. (2) was estimated to identify the factors affecting the offshoring EM choice (Table 5.5). This analysis shows that companies belonging to clothing and automotive industries are more likely to opt for offshore outsourcing rather than insourcing ($\beta=-1.656$, $P<0.01$ and $\beta=-0.647$, $P<0.05$, respectively). Considering firm-specific factors, large firms exhibit a higher propensity to select offshore insourcing EM ($\beta=0.864$, $P<0.01$). Companies that had offshored to Asian countries appear to be more likely to adopt offshore outsourcing ($\beta=-1.884$, $P<0.01$). Finally, cultural distance has no significant effect on the offshoring EM.

Table 5.5 Factors affecting the offshoring EM choice (outsourcing = 0; insourcing=1)

Offshoring entry mode		
(N = 677)		
	Coefficient (b)	Std. error
Clothing	-1.656**	0.300
Electronics	-0.111	0.278
Mechanical	0.352	0.303
Automotive	-0.647*	0.325
Large	0.864**	0.202
Home US	-0.100	0.224
Host Asia	-1.884**	0.256
Cultural distance	0.009	0.017
Constant	1.527***	0.312
-2 log likelihood	632.356	
Cox and Snell R ²	0.254	
Nagelkerke R ²	0.346	

* p < 0.05, ** p < 0.01, *** p < 0.001

5.5. Discussion

The discussion of empirical results will be organised around the following main points:

- (1) The factors explaining the reshoring EM
- (2) The comparison between factors influencing the offshoring and the reshoring EM

5.5.1 The reshoring EM determinants

Path dependency effects

Overall, our empirical results offer support for the reshoring EM's dependence on previous EM choices (Shaver, 2013), given that about $\frac{3}{4}$ of reshoring firms retain the same mode they had offshore, and only $\frac{1}{4}$ switch mode, as shown in Figure 5.3. However, inspection of Gray et al.'s (2013) matrix reveals that rather than a generalised stability of EMs, there is a "selective path dependency". This conclusion stems from the finding that a captive EM is very seldom changed, whereas offshore outsourcing is equally likely to be followed by reshoring outsourcing or insourcing. Out of 402 reshoring cases that adopted an equity EM in the offshore location, only three switched to a non-captive mode in reshoring.

The continuity of equity modes across locations may stem from the sunk costs of physical investment. In fact, equity EMs involve greater control but also greater fixed investment

with respect to non-equity modes (Anderson and Gatignon, 1986), especially in sectors characterised by physical asset intensity. However, more convincing explanations for the stability of the equity EM can be found in the idea of ownership and internalisation advantages provided by the OLI theory. In OLI, ownership advantages (grounded in RBV) reflect the resources and capabilities that confer competitive advantages to the firm (Dunning, 1980, 1988). Internalisation advantages persist whenever the equity EM allows protecting distinctive resources owned by the firm across different locations (e.g., patents, proprietary production processes). Further, linking OLI to the learning and organisational capabilities perspective and to dynamic resource accumulation (Dunning, 2000; Teece et al., 1997), one can argue that over time, foreign plants accumulate knowledge and experience in offshore locations, leading to the development of routines and internal processes that form the basis of the firm's skills and dynamic capabilities.

The dynamic resources discussed above explain why, in a relocation, the firm may envisage internalisation advantages that lead it to opt for an equity EM. Learned capabilities and routines cannot be emulated by markets and constitute advantages that would be lost if the EM is switched to outsourcing mode (Dunning, 2000). Therefore, these capabilities favour the persistence of insourcing, especially when they can be moved to the new location at low cost. Further, consistent with path-dependency theory (Hutzschenreuter et al., 2007), learned skills offshore may generate new distinctive competences embedded in firm's internal processes. While the above arguments apply to any generic relocation, one should question whether there are specific internalisation advantages that pertain to reshoring, and which may explain why not only firms that had chosen an equity EM offshore but also half of those who had adopted offshore outsourcing switch to insourcing mode in reshoring. Orthodox internalisation theory argues that coordination and transactional benefits in terms of scale/scope economies arise from jointly undertaking related value chain activities such as R&D, production or marketing. However, our data do not provide any evidence of a significant relationship between the motivation of relocating production closer to R&D and the reshoring entry mode. This might be due to the fact that this motivation might be difficult to be captured through secondary data, since companies tend to quote the main motivations for the relocation. To illustrate, companies most frequently quoted the improved design of products or the need to lower costs rather than the proximity between R&D and production, which might be seen as an intermediate outcome. Further, the data does not

allow considering other possible linkages of production (e.g., with R&D, marketing, suppliers, users) (Gassmann, 2006; Rothwell and Dodgson, 1991). Therefore, future research on these aspects is needed.

Very few firms switched from an offshore insourcing to a reshore outsourcing EM. Interestingly, they all represent cases of absence of in-house production capacity in the home country. For illustration, we discuss the reshoring EM strategies followed by two of them, Geox and Piombo. Geox, a well-known global brand in the footwear sector, though legally an Italian company, has never produced in own sites in Italy. Since its onset, the firm produced offshore either through external suppliers or in foreign plants, these latter often heavily subsidised by local governments (e.g., Serbia). Reshoring of some of the footwear lines back to Italy did not necessitate a strong degree of control and could be implemented through external suppliers, due to a longstanding footwear manufacturing tradition and the presence of several footwear industrial clusters. At the same time, lack of subsidies for the creation of own production sites may have also played a role in discouraging the adoption of an insourcing EM in Italy. In the same vein, Piombo, now a brand of the luxury fashion company Ermenegildo Zegna, is being relocated in Italy by exploiting the cluster economies of the Zegna's fashion district in Piedmont, Italy. As for Geox, Piombo had not previously produced in own plants in Italy. Therefore, both cases seem to suggest that the switch from offshore insourcing to reshore outsourcing is possible, though restricted to instances in which the company can leverage on the competences of specialised industrial clusters while not having an own production base at home.

Explanatory factors of the EM switch

Our empirical study has adopted a multi-level approach (Luo, 2001), in order to investigate the impact of country-, industry-, firm-, and project-specific variables on the likelihood that the offshore outsourcing EM is switched to insourcing (Table 5.4). While the insourcing mode in the offshore location is always replicated in the domestic location, outsourcing is more easily switched to insourcing. From the perspectives of TCT and RBV, the switch from outsourcing to insourcing is more likely when market transaction and coordination costs in the home country exceed those from internalisation. This may hold when finding suppliers in the home country is an issue, either because asset specificity is high (McIvor, 2009) or because competences sought are no longer available

in the domestic environment (Di Mauro et al., 2018). Further, as already argued in the previous section, insourcing production may minimise coordination costs whenever significant development-production or production-marketing linkages exist within the firm's value chain (Ketokivi et al., 2017).

In terms of industry-level effects, clothing is unlikely to switch to insourcing. This finding has both technological and market explanations. Clothing is traditionally a footloose industry that frequently changes the location of operations in response to lower production costs. The relatively low technological content, together with the wide diffusion of textile production technologies and competences, determines low asset specificity and makes it easy to find outsourcing solutions. At the same time, the short product life cycle and the need for mix and volume flexibility promote non-captive solutions. Apart from clothing, no other sector displays a specific tendency to stay or to switch from outsourcing to insourcing.

Concerning reshoring motivations, the only one associated with a switch from outsourcing to insourcing is the provision of government incentives. A possible explanation is that reshoring firms use subsidies to introduce new technologies (e.g., automation) (Ancarani and Di Mauro, 2018; Arlbjørn and Mikkelsen, 2014), which may lead to ownership and internalisation advantages. On the other hand, if governmental subsidies to companies are tied to employment creation, they may be granted only if new jobs are created in-house (Fratocchi et al., 2015).

Other reshoring key drivers identified in the literature – such as the rise of total costs in the offshore location, the need to increase proximity to customers, the need to improve production quality – are not significant in terms of internalisation advantages. In particular, although quality control issues have often been recognised as a key motivation of reshoring, especially in the textile industry (Robinson and Hsieh, 2016), we did not find any evidence that quality issues with offshore production determine a switch from outsourcing to insourcing. The quality gaps between productions seem to be linked to the location of the production sites, and not to their ownership. Tight control and insourcing may become necessary only when the quality improvement requires a close coordination between production and R&D, as shown by previous research (Di Mauro et al., 2018; Ketokivi et al., 2017).

5.5.2 Comparison of factors influencing the offshoring and the reshoring EM

By comparing statistically significant variables in the reshoring and offshoring EM equations (Tables 5.3 and 5.5 respectively), we are able to throw light on the differential impact of industry-, firm- and country-specific variables on the reshoring and offshoring EMs respectively. For the sake of comparability, we search for differences between Model 1 in Table 5.3 and Table 5.5, which include the same explanatory variables.

As far as the variables related to the offshoring EM are concerned, our results (Table 5.5) show significant sectoral influences: in the offshore location, outsourcing is favoured in automotive and clothing, a result in line with recent studies (e.g., Ciravegna et al., 2013). For clothing, as already argued, the relatively low technology content, value added at the production stage, and asset specificity jointly make for easiness of outsourcing solutions (Mudambi, 2008).

Outsourcing has heavily characterised the automotive sector ever since the eighties, when vehicle manufacturers began expanding the range of components outsourced following the diffusion of the Toyota model of manufacturing. Increasing collaboration between buyers and suppliers further entailed benefits from spatial proximity (Schmitt and Van Biesebroeck, 2013). Consequently, the relocation offshore of car manufacturers and the opening of new assembly plants was coupled with the extensive use of suppliers relocating offshore and the creation of geographic clusters of companies operating in the same supply chain (Bilbao-Ubillos and Camino-Beldarrain, 2008). Though the reshoring of some car manufacturers to the West has certainly not overturned the industry model of a vertical disintegrated supply chain, the strength of outsourcing processes has partly been offset by the availability of spare production capacity in Western (home) countries due to the post 2008 global crisis, and by rationalization and consolidation processes (Frigant and Zumpe, 2017).

Conversely, we find that only clothing is associated to non-captive solutions when the company relocates domestically. This persistence likely reflects the characteristic of many apparel and textile brands, which essentially provide design, styling, distribution and marketing for goods that are manufactured by external suppliers. The repatriation of production therefore entails de facto switching from offshore to domestic suppliers.

Results also reveal a significant firm size effect both in the offshoring and in the reshoring EM choice: SMEs tend to choose non-equity EMs because of the higher perceived environmental uncertainty (Bradley and Gannon, 2000; Brouthers and Nakos, 2004),

weaker capabilities and lower resource availability, when compared to large firms (Li and Qian, 2008).

As far as country-specific factors are concerned, the country where the company headquarter is located has no effect on the EM choice, despite relevant differences between US- and EU-based companies in terms of organisational archetypes have been highlighted in the literature (Bartlett and Ghoshal, 1989; Nurdin, 2011). As for the country where production was offshored, Asian locations are more likely to be associated with offshore outsourcing (Sturgeon, 2002). This finding is in line with Brouthers (2002), who shows that firms entering countries with legal restrictions on EMs (such as China) tend to use non-equity EMs. In addition, the preference for non-captive, lower commitment solutions may partly reflect the extent of the “liability of foreignness” that Western companies feel with respect to Asia (Zaheer, 1995). In fact, firms establishing their operations in China and the Far East may incur higher costs with respect to a local firm stemming from spatial distance (e.g., travel costs, transport, coordination and monitoring across time zones) and from lack of familiarity with the local business and institutional environment. From this perspective, our findings support previous research (Arora and Fosfuri, 2000; Hennart and Larimo, 1998; Kogut and Singh, 1988) that finds that firms tend to select non-equity EMs when perceived distance is high.

5.5.3 Is there a dominant reshoring entry mode?

Focusing on the frequency of the different reshoring EMs, our results show that over three quarters of reshoring firms adopt a captive mode, thereby prompting the question of whether reshored manufacturing requires a higher degree of control and vertical integration.

A first motivation for the dominance of the captive mode can be found in the availability of production capacity in the home country, in some instances enhanced by the untapped capacity created by the global economic crisis.

Next, according to internationalisation theory (Johanson and Vahlne, 1977), firms generally adopt more involved EMs as they gain international experience. As already argued above, learned skills and routines may explain why the insourcing entry mode is replicated at home (Teece et al., 1997), with the aim to expand the portfolio of capabilities of the company.

Another fact is that many reshoring projects are tied to product innovation strategies, involving coupled processes between production and development (Ketokivi et al., 2017). These linkages economies are often best exploited in an intra-firm mode, especially when the effort of finding a suitable new supplier has to be tackled alongside the other difficulties involved in relocating.

Finally, insourcing in reshoring may not be the result of managerial intentionality but may instead represent the only available choice when offshoring has led to the destruction of the supply chain at home.

Chapter 6 Reshoring: Does home country matter?

6.1 Purpose

The purpose of this chapter⁸ is to analyse whether and how reshoring projects are different across countries, thereby further exploring the underlying home country-related factors contributing to reshoring peculiarities. Specifically, we aim to answer the following research questions: *Do reshoring projects differ across countries? If so, how?*

6.2 Literature background

The country effects on a firm's internationalisation processes have been a mainstream topic in IB for decades (Cuervo-Cazurra, 2011; Hennart, 2012; Ramamurti, 2012). Although prior research mainly focuses on offshoring processes rather than on reshoring processes, is taken into consideration in our study. We frame and summarise this debate in Section 6.2.1.

Besides the aforementioned literature rooted in IB, there is another relevant research stream rooted in purchasing and supply management literature and specifically devoted to reshoring. Although this stream does not include any in-depth cross-country analysis that analytically investigates the link between home country and reshoring, it offers some useful insights for our study. Section 6.2.2 summarises this second stream of research.

6.2.1 Home country effect

Despite internationalisation literature has traditionally focused more on the *host country* effects of firms' foreign expansion (e.g., Chung and Beamish, 2005; Meyer et al., 2009), the *home country* effects have been increasingly addressed by the scholars (e.g., Cuervo-Cazurra and Genc, 2008; Holburn and Zelner, 2010). This literature has mainly drawn from three theoretical perspectives: *institutional, cultural/cognitive and industry- and extended resource-based views*.

The *institutional* approach argues that firms' strategic decisions, behaviours and performance are shaped by the formal and informal institutions (DiMaggio and Powell, 1983; Estrin et al., 2016; Hoskisson et al., 2000; Wright et al., 2005). Existing studies that explicitly focus on the home country effect have considered several components of

⁸ Chapter 6 is adapted from the paper: Wan, L., Orzes, G., Sartor, M., & Nassimbeni, G. (2019). Reshoring: Does home country matter?. *Journal of Purchasing and Supply Management*, 25(4), 100551.

institutions, bringing to an array of institutional factors related to economic, political, societal and legal aspects of the home country (Chen et al., 2016; Peng et al., 2008). Among these factors, formal institutional forces (e.g., political stability, corruption, government involvement) have been the most researched (Feinberg and Gupta, 2009; He, 2011; Hoskisson et al., 2000). Two contrasting views have emerged (Marano et al., 2016; Stephan et al., 2015). The institutional-support view argues that more developed home country institutions usually support MNCs' international expansion by providing them more tangible and intangible resources (Kirca et al., 2011), thus reducing their transaction costs (Wan and Hoskisson, 2003). The institutional-void view postulates instead that less developed home country institutions lead MNCs to develop resources and competences for operating in environments with institutional voids (mitigating institutional deficiencies), which have been proved to be useful in the international expansion, especially in emerging countries (Doh et al., 2017; Khanna and Palepu, 1997; Luo and Tung, 2007).

The *cultural and cognitive* perspectives emphasise the influence of home-country cultural values, norms, and individual beliefs on the MNCs' internationalisation decisions. Existing literature has mainly focused on the effects of the home country culture, the host country culture or the cultural distance between the two countries – often operationalized through the Hofstede's dimensions (e.g., Kogut and Singh, 1988) – on the location and entry mode choices (e.g., Barkema et al., 1996; Boateng et al., 2017; Tihanyi et al., 2005). Few other studies have instead focused on the influence of culture on other aspects of internationalisation such as human resource management practices (e.g., Hussein and Kachwamba, 2009) or knowledge transfer in international acquisition (e.g., Sarala and Vaara, 2010). The cognitive perspective focuses more on individuals' (e.g., executives and employees) mindsets and behaviours. It argues that strategic decisions are driven by individuals' perceptions and behaviours (Shenkar, 2001; Zhao et al., 2004). These perceptions and behaviours are affected by experiences, values, beliefs, and attitudes, which are in turn shaped by the home country environment in which they are embedded (Noorderhaven and Harzing, 2003; Distelhorst et al., 2015).

Finally, according to the *industry- and extended resource-based views* the firms' strategic decisions are affected by the industry characteristics and by the resources availability in home and host countries (Araújo et al., 1999; Das and Teng, 2000; Mathews, 2003). Specifically, the industry-based view (IBV) argues that the

competitiveness of the industry – which is in turn determined by a set of competitive forces (competitors, suppliers, customers, substitutive products and potential entrants) – affects firms’ strategies and performance (Porter, 1990). The extended resource-based view (ERBV) emphasises the resources and competences availability both within the company boundaries (internal) and outside them (external), which are at the basis of the competitive advantages (Lavie, 2006; Lewis et al., 2010). Scholars (e.g., Porter, 1990; Rugman and Li, 2007) suggest that the resource endowment of the home country – including natural resources, labour force, infrastructure, technology development, and industry condition – significantly affects the firms’ competitive advantages as well as their internationalisation processes.

In sum, prior studies demonstrate that home country effect manifests itself through a set of factors, which are essentially embedded in home country’s institutions, culture, industry conditions and resources (Berry et al., 2010; Ghemawat, 2001; Xie et al., 2017). These factors have been argued to influence a wide set of decisions in the internationalisation processes, including (1) whether a company internationalise or not (e.g., He and Cui, 2012; Yaprak et al., 2017); (2) where the company internationalises to (i.e., location choice) (e.g., Child and Rodrigues, 2005; MacCarthy and Atthirawong, 2003); (3) how the company internationalises (i.e., entry or governance mode) (e.g., Chen et al., 2016; Contractor et al., 2014); and (4) what is the performance effect (e.g., Cuervo-Cazurra, 2017; McGahan and Victor, 2010). However, these studies and theories are focused on offshoring rather than reshoring processes.

6.2.2 Reshoring country-related studies

Extant research on reshoring has mainly focused on the question “why do firms reshore?” and identified a vast array of reshoring motivations, such as “made-in” effect, government incentives, delivery times and reliability, labour costs’ gap reduction and energy costs (see Di Mauro et al., 2018; Fratocchi et al., 2014; Stentoft et al., 2016 for reviews). Although these studies have argued that the characteristics of the home and the host country might influence the reshoring decisions (Ellram et al., 2013; Kinkel, 2012; Heikkilä et al., 2018), the understanding of the home country/region effects on reshoring is still very limited. No empirical study has so far explicitly analysed the impact of the home country on reshoring, with one exception, i.e., Baraldi et al. (2018). This paper sheds light on the effects of the home- and host-country network on reshoring processes.

It focuses on a single aspect of the country (i.e., network characteristics) and the empirical base is composed of a single case study.

Besides the aforementioned papers, there are some reshoring studies either with a single-country or a dual-country/region focus. In the latter case (i.e., dual country/region focus), scholars do not analytically compare the two countries/regions. We summarise these studies in Table 6.1, highlighting their main features: country, method, industry, firm size, reshoring entry mode, and main reshoring motivations.

A comparative look at the various reshoring studies with a single-country focus (see Table 6.1) suggests that companies headquartered in different countries reshore their manufacturing activities due to different motivations. Furthermore, reshoring exhibits also some industry differences across countries.

A more detailed analysis of the reshoring studies with a dual country focus partially confirms the existence of some differences among countries. Ancarani et al. (2015) reveal for instance that there is a significant home region effect (Rugman and Oh, 2013) on the duration of the stay abroad (before reshoring). More in detail, they find that EU companies exhibit a shorter offshore duration compared with US companies and argued that this might be due to the different organisational archetypes adopted by US and EU companies to manage their subsidiaries. Vanchan et al. (2017) show that the reshoring motivations of US and UK companies are different: US firms reshore mainly for lead time, quality and wage issues, while UK firms reshore for flexibility in production, access to market, and the rising costs in low-cost countries. However, these differences of reshoring motivations across countries are not confirmed by Srai and Ané's (2016) study on French and UK companies.

To sum up, the literature on reshoring highlights some differences between countries in terms of main reshoring motivations and industries. However, it mainly shows “*descriptive*” pictures. Consequently, there is a lack of in-depth comparative studies on how the home country matters in reshoring processes.

6.3 Methodology

6.3.1 Data and measurement

The data used in this study were extracted from two related databases composed by secondary data: the “Uni-CLUB MoRe Back-reshoring” and the “European Monitor on

Reshoring” (<https://reshoring.eurofound.europa.eu/>). Data used in the analysis were collected from 2011 to February 2017. The data collection has been presented in Chapter 3.

Table 6.1 Reshoring studies with a single-country or dual-country/region focus

Country (or Region)	Methods	Industry involved	Firm size	Reshoring entry mode	Main reshoring motivations	Authors
Denmark	Survey	Various	All	/	Automation, Production close to R&D, Lead time	Arlbjørn and Mikkelsen (2014)
Denmark	Mix	Various	M&L	/	Quality, Flexibility, Lead time	Stentoft et al. (2016)
Finland	Survey	Various	M&L	/	Quality, Flexibility, Lead time, Logistics costs	Heikkilä et al. (2018)
Finland	Single case study	Transportation	M	In-sourcing	Costs' gap reduction, Demand growth, Changes in purchasing needs	Gylling et al. (2015)
Germany	Mix	Various	All	/	Quality, Flexibility, Fast delivery	Kinkel and Maloca (2009)
Germany	Survey	Various	All	/	Quality, Flexibility, Labor costs' gap reduction	Kinkel (2012)
Germany	Survey	Various	All	/	Quality, Flexibility, Transport costs, Logistic costs	Kinkel (2014)
Italy	Multiple case studies	Clothing	S&M	In-sourcing	Exploitation of the innovation potential, Purchasing and logistics optimization	Di Mauro et al. (2018)
Italy	Survey	Various	All	/	Made-in-Italy effect, Customer services	Bettiol et al. (2017)
Italy	Single case study	Clothing	S	In-sourcing	Firm's strategic changes, Local relationships	Baraldi et al. (2018)
New Zealand	Survey	Consumer/ industrial goods	S&M	/	Flexibility, Fast delivery, Quality, Made-in effect	Canham and Hamilton (2013)
Spain	Multiple case studies	Footwear	/	/	Delivery times, Failures in (market) entry strategy	Martínez-Mora and Merino (2014)
Sweden	Survey	Various	M&L	/	Quality, Lead time, Flexibility, Access to domestic skills/knowledge/technology	Johansson and Olhager (2018)
UK	Mix	Automotive	/	/	Disadvantageous exchange rate, Transport costs, Quality	Bailey and De Propris (2014)
UK	Single case study	Clothing	L	In-sourcing	Repositioning of the brand, Commitment of investment in domestic production	Robinson and Hsieh (2016)
US	Conceptual paper	Various	/	/	Labor costs' gap reduction, Increased transportation cost	Tate (2014)
US	Secondary data	Various	/	/	Quality, Lead time, Shipping cost, Labor costs' gap reduction	Zhai et al. (2016)
US & UK	Mix	Various	/	/	UK: Foreign cost increase, Flexibility, Access to domestic market US: Foreign cost increase, Lead time, Quality	Vanchan et al. (2017)
US & Europe	Secondary data	Various	All	/	Europe: Total costs, Made-in effect, Customer services, Delivery delays US: Total costs, Delivery delays, Quality	Ancarani et al. (2015)
UK & France	Survey	Various	All	/	Quicker replenishment, Quality, Proximity to customers	Srai and Ané (2016)

Note: S - small size company; M - medium size company; L - large company.

Starting from the 747 reshoring projects recorded in the databases, 70 reshoring projects were removed due to missing or unreliable data. A further 148 reshoring projects were removed because the number of projects belonging to a specific country was lower than 20, i.e., the threshold that we adopted for a minimal country-based characterisation. Our final dataset includes therefore 529 reshoring projects covering five countries (US, Germany, UK, France, and Italy). The 529 reshoring projects belong to 437 companies since 60 companies implemented two to five reshoring projects.

6.3.2 Descriptive statistics of the dataset

Table 6.2 provides the main descriptive data on industry, firm size, reshoring entry mode and motivations for the full dataset (N=529) and the five country sub-sets (US, Germany, UK, France, Italy).

Table 6.2 Dataset characteristics (N=529)

	Home country												Chi square test
	All (N=529)		US (N=290) (54.8%)		Italy (N=92) (17.4%)		UK (N=60) (11.3%)		Germany (N=49) (9.3%)		France (N=38) (7.2%)		
Industry													
Mechanical	88	16.6%	51	17.6%	12	13.0%	7	11.7%	17	34.7%	1	2.6%	$\chi^2= 57.476$ $P<0.001$
Clothing	87	16.4%	34	11.7%	32	34.8%	11	18.3%	2	4.1%	8	21.1%	
Electronics	82	15.5%	45	15.5%	17	18.5%	9	15.0%	6	12.2%	5	13.2%	
Automotive	60	11.3%	31	10.7%	7	7.6%	6	10.0%	9	18.4%	7	18.4%	
Other	212	40.1%	129	44.4%	24	26.0%	27	45.0%	15	30.6%	17	44.7%	
Firm size													
Large	296	56.0%	138	47.6%	61	66.3%	25	41.7%	44	89.8%	28	73.7%	$\chi^2= 44.825$ $P<0.001$
SME	233	44.0%	152	52.4%	31	33.7%	35	58.3%	5	10.2%	10	26.3%	
Entry mode													
In-sourcing	419	79.2%	223	76.9%	73	79.3%	43	71.7%	48	98.0%	32	84.2%	$\chi^2= 14.052$ $P<0.01$
Out-sourcing	110	20.8%	67	23.1%	19	20.7%	17	28.3%	1	2.0%	6	15.8%	
Motivations													
Logistic costs	112	21.2%	84	29.0%	9	9.8%	8	13.3%	5	10.2%	6	15.8%	$\chi^2= 78.976$ $P<0.001$
Made in effect	97	18.3%	60	20.7%	29	31.5%	4	6.7%	1	2.0%	3	7.9%	
Quality issues	95	18.0%	65	22.4%	7	7.6%	9	15.0%	13	26.5%	1	2.6%	$\chi^2= 81.057$ $P<0.001$
Customer proximity	86	16.3%	52	17.9%	17	18.5%	13	21.7%	0	0.0%	4	10.5%	
Labour costs' gap reduction	82	15.5%	60	20.7%	4	4.3%	12	20.0%	3	6.1%	3	7.9%	$\chi^2= 67.788$ $P<0.001$
Delay in deliveries	78	14.7%	54	18.6%	1	1.1%	16	26.7%	5	10.2%	2	5.3%	
Total costs	69	13.0%	46	15.9%	5	5.4%	14	23.3%	1	2.0%	3	7.9%	$\chi^2= 82.080$ $P<0.001$
Government incentives	53	10.0%	41	14.1%	0	0.0%	8	13.3%	0	0.0%	4	10.5%	

Note: P values are computed by Monte Carlo simulation due to sparsity (Hope, 1968).

The data show that the reshoring projects are almost equally distributed between European Union (45.2%) and US (54.8%). If we consider the country (rather than the region), US is at the first position (290 reshoring projects) followed by Italy (92 reshoring projects), UK (60 reshoring projects), Germany (49 reshoring projects), and France (38 reshoring projects). Most of the reshoring projects in the full dataset belong to four industries: mechanical (16.6%), clothing (16.4%), electronics (15.5%), and automotive (11.3%). The label "Other" includes industries with less than 6% of the projects each (e.g., household appliances, furniture, food, chemicals). As far as the firm size is considered, SMEs and large firms are almost equally distributed in the full dataset (233 vs. 296, 44.0% vs. 56.0%). Regarding the entry mode choice, the data show that in-sourcing has been adopted by most of the reshoring projects regardless of the home country. That is, 419 (79.2%) reshoring projects adopt in-sourcing, whereas 110 (20.8%) adopt out-sourcing. With regard to the reshoring motivations, we concentrated only on the eight motivations out of 37 which have been quoted by at least 50 reshoring projects (~10% of the full dataset). We found 112 (21.2%) reshoring projects motivated by logistic costs, 97 (18.3%) by “made-in” effect, 95 (18.0%) by quality issues, 86 (16.3%) by customer proximity, 82 (15.5%) by labour costs’ gap reduction, 78 (14.7%) by delay in deliveries, 69 (13.0%) by total costs, and finally 53 (10.0%) by government incentives.

Motivations data were characterised by some peculiarities which require attention before data analysis: (1) some reshoring projects do not list any specific motivation (89 projects have therefore missing data on motivations); (2) some projects quote more than one motivation.

We first analysed the nature of missing motivations in our dataset. According to statistics literature (e.g., Graham, 2009), there are three widely accepted categories of missing data mechanisms: (1) missing completely at random – MCAR (if missingness is independent from both of observable and unobservable variables); (2) missing at random – MAR (if missingness is dependent from other observable variables); and (3) missing not at random – MNAR (if missingness is dependent from unobservable variables). It is plausible to argue that our missing data are MAR, i.e., they depend on other available variables (Rubin, 1976; Schafer and Graham, 2002). Indeed, since missing data are more frequent in some countries and industries, we can exclude that they are MCAR. Moreover, we have no reasons to believe that our missing data depend on other unobserved variables (MNAR).

We therefore performed multiple imputation (MI) rather than listwise deletion, since MI is argued to reduce the potential bias when data are MAR (Van der Heijden et al., 2006). We used the MI procedure (Rubin, 1987; Schafer, 1997) to impute the missing values based on the other variables and repeated this task for 20 times, in order to reduce the uncertainty of the imputation procedure (e.g., White et al., 2011). The results of the additional analyses (see Section 6.3.3) performed on the 20 repetitions were then combined into a single estimate (called pooled result). Finally, in order to make the motivations data comparable across companies and countries (Brun, 2008), we normalised these binary variables as follows: if a company quoted just one motivation, this variable was set equal to one; if a company quoted two motivations, these two variables were set equal to 0.5; if a company quoted three motivations, these three variables were set equal to 0.333; and so on.

6.3.3 Data analysis

To achieve the aim of our paper – i.e., to analyse whether and how reshoring projects are different across countries – we performed two sets of statistical analyses.

First, we compared the reshoring projects of the five countries in terms of industry, firm size, reshoring entry mode, and reshoring motivations and tested the significance of these overall differences through the Chi square test. Since some reshoring projects have more than one motivation and they are not mutually exclusive, we treated each motivation as a separate variable and performed separate Chi square analyses (Table 6.2).

Second, to shed light on the peculiarities of each country compared to the other countries considered as a whole, we performed five binary logistic regression models. Such models estimate the probability that a reshoring project belongs to a particular country rather than to the others, based on the industry, the firm size, the reshoring entry mode, and the reshoring motivations. By doing so, they show in a more synthetic and rapid way the specificities of such a country, this way answering the research question of our study. In each binary logistic regression model, the full dataset (N=529) was analysed. The dependent variable (i.e., the home country) was a dummy variable equal to 1 if the project belongs to the considered country and to 0 if it belongs to one of the other countries. Despite in our statistical model we considered country as the dependent variable for practical reasons, we do not intend to imply a causal relation but just to test whether and how reshoring projects are different across countries. Both previous literature (see

Section 6.2.1) and conceptual reasoning would in fact suggest that the country affects the reshoring phenomenon and not the other way round. The independent variables include industry, firm size, reshoring entry mode and reshoring motivations. Except for reshoring motivations, the independent variables (i.e., industry, firm size, reshoring entry mode choice) were operationalised through dummy variables.

Given that the size of some country sub-sets (i.e., France and Germany) were relatively low compared to the number of variables considered, to complement the binary logistics regressions, we also performed a multinomial logistics regression (MNL) analysis with the US as a baseline (see Appendix D), ensuring the validity and reliability of our findings. In MNL analysis, rather than comparing the reshoring projects of each country with the reshoring projects of the other countries taken as a whole, we compared them with reshoring projects of US companies (i.e., the baseline).

6.4 Results

The results of the first set of analyses (i.e., Chi square) are reported in the last column of Table 6.2. These results show that the industry ($\chi^2= 57.476$, $P<0.001$), firm size ($\chi^2= 44.825$, $P <0.001$), reshoring entry mode ($\chi^2= 14.052$, $P <0.01$) and motivations, including logistic costs ($\chi^2= 78.976$, $P <0.001$), “made-in” effect ($\chi^2= 96.831$, $P <0.001$), quality issues ($\chi^2= 81.057$, $P <0.001$), customer proximity ($\chi^2= 68.771$, $P <0.001$), labour costs’ gap reduction ($\chi^2= 67.788$, $P <0.001$), delay in deliveries ($\chi^2= 82.080$, $P <0.001$), total costs ($\chi^2=77.287$, $P <0.001$), and government incentives ($\chi^2= 73.376$, $P <0.001$) vary across countries.

The results of the binary regressions are reported in Table 6.3. They show that the reshoring projects of the five analysed countries significantly differ in terms of industry, firm size, reshoring entry mode, and reshoring motivations. The correlation matrix and the analysis of the Variance Inflation Factors (VIF) (all lower than 2) reveal that multicollinearity was not an issue (Allison, 1977, 2012).

Our analyses show that the industry distributions of reshoring projects are different between countries, especially for Germany and Italy. While German reshoring projects are more likely in the mechanical sector ($\beta=1.081$, $P<0.05$) compared to the projects of “other” sectors, Italian reshoring projects are more likely in the sectors of clothing and electronics ($\beta=1.449$, $P<0.01$; $\beta=1.041$, $P<0.05$, respectively) compared to the projects of

“other” sectors. Comparatively, US reshoring projects are less likely in the clothing sector ($\beta=-1.014$, $P<0.01$).

We found that the firm size distinguishes German reshoring projects from the rest of the countries. Comparatively, German reshoring projects are more likely to belong to large size companies ($\beta=2.172$, $P<0.001$). By contrast, US reshoring projects are less likely to belong to large size companies ($\beta=-0.631$, $P<0.01$) compared to all the rest. For UK, Italian and French reshoring projects, the variable firm size is not significant.

Table 6.3 The results of the binary logistic regression

Variables	US vs. others (N=529; US=1; Other = 0)		ITALY vs. others (N=529; Italy=1; Other = 0)		UK vs. others (N=529; UK=1; Other = 0)		GERMANY vs. others (N=529; Germany=1; Other = 0)		FRANCE vs. others (N=529; France=1; Other = 0)			
	Coe. (b)	Robust S.E.	Coe. (b)	Robust S.E.	Coe. (b)	Robust S.E.	Coe. (b)	Robust S.E.	Coe. (b)	Robust S.E.		
Constant	0.710	0.408	-2.203***	0.526	-	1.837**	0.605	-7.427***	1.668	-	3.023*	0.887
Industry												
Clothing	-1.014**	0.352	1.449**	0.455	0.029	0.462	-0.566	0.853	0.558	0.555		
Electronics	-0.328	0.312	1.041*	0.462	-0.274	0.453	-0.107	0.566	-0.189	0.725		
Mechanical	-0.152	0.295	0.513	0.524	-0.724	0.521	1.081*	0.519	-1.829	1.052		
Automotive	-0.290	0.488	-0.264	0.653	-0.388	0.573	1.239	0.676	0.216	0.666		
Firm size												
Large	-0.631**	0.226	0.447	0.334	-0.617	0.359	2.172***	0.505	0.752	0.475		
Entry mode												
In-sourcing	-0.497	0.288	0.192	0.419	-0.185	0.401	2.780*	1.227	0.266	0.573		
Reshoring Motivations												
Logistic costs	0.893	0.550	0.170	0.802	-1.644	1.047	0.821	0.984	0.599	0.907		
Made in effect	0.568	0.458	1.013*	0.460	-2.042	1.147	-2.465	2.490	-1.649	1.138		
Labour costs' gap reduction	1.066	0.592	-2.087	1.361	1.075	0.754	-0.050	1.183	-0.438	1.328		
Quality issues	0.414	0.455	-1.337	0.700	-0.294	0.847	2.504***	0.654	-2.104	1.844		
Customer proximity	0.351	0.498	0.111	0.590	0.921	0.724			-0.115	0.840		
Delay in deliveries	0.660	0.558	-7.763*	0.827	1.950*	0.761	1.839*	0.911	-1.654	1.717		
Total costs	0.283	0.545	-0.768	0.827	1.731**	0.724	-1.795	2.048	-0.229	1.007		
Government incentives	1.132*	0.552			1.172	0.449			0.746	0.740		
Pseudo R ²	0.068		0.185		0.122		0.310		0.115			

* p < 0.05 ** p < 0.01, *** p < 0.001

Notes:

(1) Government incentives variable was excluded from the Italy and Germany models since there were no projects pointing out this motivation. Customer proximity variable was also excluded from the Germany model for the same reason.

(2) Pseudo R² has been calculated using the procedure proposed by Harel (2009) for samples with multiple imputation of missing data.

As far as reshoring entry mode is concerned, we found that German reshoring projects are more likely to adopt an equity solution (i.e., in-sourcing) ($\beta=2.780$, $P<0.05$) compared to all the rest. The entry mode variable is not significant for the other countries.

Concerning reshoring motivations, US reshoring projects are more likely to be motivated by the government incentives ($\beta=1.132$, $P<0.05$), compared to the rest of the countries. By contrast, comparatively, Italian reshoring projects are more likely to be motivated by the “made-in” effect ($\beta=1.013$, $P<0.05$), while they are less likely to be motivated by delay in deliveries ($\beta=-7.763$, $P<0.05$). UK reshoring projects are more likely to be motivated by delay in deliveries and total costs ($\beta=1.950$, $P<0.05$; $\beta=1.731$, $P<0.01$, respectively). German reshoring projects are more likely to be motivated by quality issues and delay in deliveries ($\beta=2.504$, $P<0.001$; $\beta=1.839$, $P<0.05$), compared to all the rest. Finally, the motivations variables are not found to be significant when comparing French reshoring projects with others.

The results of the MNL model are presented in Appendix D. This analysis basically confirms the binary regressions, showing that the reshoring projects significantly differ in terms of industry, firm size, reshoring entry mode, and reshoring motivations.

More in detail, the following findings are confirmed: (1) Italian reshoring projects are more likely in the sectors of clothing and electronics; (2) German reshoring projects are more likely to belong to large size companies; (3) German reshoring projects are more likely to adopt an equity entry mode; (4) Italian reshoring projects are less likely to be motivated by delay in deliveries and German reshoring projects are more likely to be motivated by quality issues. There are however also some differences – in MNL the “made-in” effect is not significant for Italy and the delay in delivery and total costs are not significant for UK – due to the fact that binary regressions compare each country with all the others as a whole, while MNL compares each country with the baseline country (in our case the US).

6.5 Discussion

Through systematic comparisons, our results clearly show that each country has peculiarities in terms of reshoring industry, firm size, entry mode and reshoring motivations.

In the literature background section, we have analysed three theoretical perspectives to understand the influence of the home country on internationalisation processes. By adopting the same theoretical lenses, in this section we seek to further understand the

possible institutional, cultural/cognitive, and industry/resource-related factors underlying the reshoring diversity across the five analysed countries.

According to the industry-based (Porter, 1990) and the extended resource-based (Lavie, 2006) views, the industrial profile of a country has an impact on companies' competitive advantages and strategies including their (de)internationalisation decisions (Grøgaard et al., 2013; Luo and Wang, 2012; Peng et al., 2008). In the last decades, intense globalisation processes have favoured the shift of many production activities to developing countries and the reconfiguration and repositioning of the operations. Therefore, the geography of manufacturing has changed worldwide. Despite this, some western countries have been able to keep solid manufacturing roots that now play a relevant role in reshoring processes (De Backer et al., 2016). In the light of these considerations it is possible to interpret our results related to the industry of the reshoring projects.

Comparatively, the Italian projects are more likely to belong to clothing industry ($\beta=1.449$, $P<0.01$). Italian clothing industry involves more than 46,000 companies and employs almost 400,000 workers. The revenues increased to 84.1 billion euros in 2016 (Camera Nazionale della Moda Italiana, 2016). Profoundly restructured when compared to the past, this industry has been able to face the challenges of globalisation by raising the product quality, by positioning in premium price segments, and by significantly improving productivity. A scenario that also enabled reshoring processes.

Through similar arguments we can interpret the result related to the mechanical industry. This industry is significant and positive ($\beta=1.081$, $P<0.05$) in the German sub-set. The mechanical industry (NACE C28 and C25) is one of the most important industries in the German economy, with more than 59,000 companies. The production value has increased from around 335 billion euros in 2007 to around 363 billion in 2016 (Eurostat, 2018).

From the viewpoint of the extended resource-based perspective, a strong manufacturing base can be considered a source of distinctive technological, relational and reputational resources. In addition, the proximity and integration between manufacturing and design activities, and more generally between product and process development, have an impact on innovation capability and time to market (Berger, 2013; Bonvillian, 2013; Pisano and Shih, 2012). In our results, the "made-in" effect – a reputational resource – is probably the most evident example. The "made-in" effect in the Italian sub-set is significant and positive ($\beta=1.013$, $P<0.05$). This country image is considered a synonym for high

production competences and adds value to the Italian products, especially in the fashion industry. Taking advantage of this intangible resource, Italian companies can rediscover and leverage the domestic manufacturing base to differentiate from their competitors worldwide (e.g., Baraldi et al., 2018; Robinson and Hsieh, 2016).

The institutional view argues that the institutional contexts in which firms are embedded shape their strategies (North, 1990; Scott, 1995). We therefore deduce that institutional forces in the home country may directly or indirectly influence various aspects of reshoring including propensity, intensity, form and performance. In our findings, government incentives provide the most direct and understandable example of this influence. Specifically, we observe that government incentives variable is significant and positive ($\beta=1.132$, $P<0.05$) in the US sub-set. Revitalising manufacturing and “bringing jobs back” have long been the strategic goals of the US government (Pearce II, 2014). Among the substantial incentives that the US administration has approved, the tax initiative “Tax Cuts and Jobs Act (TCJA)” is regarded as the most significant federal tax reform enacted in the United States in decades (White House, 2017). Having compared the industrial policies of the five countries analysed (see Table 7.1 in Chapter 7), we believe that the US policies are the most significant and effective.

As far as the cultural/cognitive perspective is concerned, culture may be the least intuitive manifestation of the country effect. It normally cannot be observed directly since it is embodied in managerial decision-making and actions (Noorderhaven and Harzing, 2003). In addition, as a multi-level construct, it consists of various levels including national cultures, organisational cultures, group cultures, and cultural values that are represented at the individual level (Leung et al., 2005). Being so pervasive, it is difficult to isolate its effects.

In our data, the result related to the entry modes is probably the one more directly associated with culture. We have seen that German reshoring projects are more likely to adopt an equity solution (i.e., in-sourcing) ($\beta=2.780$, $P<0.05$). As well known, Germany is characterised by the originality of industrial relations, where workers and trade union representatives have significant power, particularly in large companies. There are examples of German firms where the agreement between ownership and workers has allowed to save or even to bring back jobs from abroad (Federal Ministry of Education and Research, 2017). In these cases, trade union representatives agreed with ownership and government representatives to bring foreign production back to existing factories,

thereby preserving jobs and employment. In other words, the culture and practice of concertation ("mitbestimmung"), particularly frequent and relevant in Germany, has favoured internalisation choices. Beside this aspect, the (re)entry mode choice may have been influenced by other elements. Several studies have shown that cultural-related factors such as power distance, individualism, long-term orientations, and uncertainty avoidance reflect psychological needs concerning control and security (Hofstede, 1991), and therefore the managerial choices related to the entry modes (Pan and Tse, 2000; Canabal and White III, 2008; Shenkar, 2001; Harzing, 2003).

We have so far linked the reshoring characteristics to a single dimension of home country environment (i.e., institutions, culture, industry/resource). However, reshoring strategies are more likely to be the results of the interplay between them. As an example, precisely the preference of equity solutions (i.e., in-sourcing) in Germany may be associated not only to cultural factors but also to the specific industrial profile and institutional forces. Germany continues to heavily invest in innovation; it is now one of the pioneering countries in Industry 4.0 technologies. In-sourcing can better justify intangible (e.g., workers education) and tangible investments and protect know-how and technical skills, especially in high-tech and capital-intensive industries (Brown et al., 2003; Ekeledo and Sivakumar, 2004; Mutinelli and Piscitello, 1998).

Another example is provided by the US sub-set, where reshoring projects are more likely to be SMEs ("firm size" significant and negative, $\beta=-0.631$, $P<0.01$). This result may come as a surprise since the US is generally viewed as the country of the large MNCs. A possible explanation brings into play both institutional and industry-related factors. Government support seems to contribute significantly to repatriation mainly by reducing the manufacturing cost gap (total cost of ownership). However, support is predominantly directed to those companies that have kept manufacturing capabilities. From this point of view, it is possible that the so-called "smiling curve" model adopted by many large companies (i.e., focus on R&D and marketing considered highly value-added activities, out-sourcing and often offshoring of manufacturing activities) has made them less able to respond to the government call for "moving jobs back home". This explanation is supported by the additional analysis we performed. When compared to large companies, American SMEs show significantly more frequent motivations connected to the reduction of logistic costs ($P<0.01$) and delayed deliveries ($P<0.05$). These motivations are more easily associated with manufacturing rather than R&D or marketing units. In conclusion,

the institutional, cultural/cognitive and industry- and extended resource-based views were confirmed to be able not only to interpret the phenomenon of offshoring but also those of reshoring, especially if the interplay between the corresponding factors is considered.

Chapter 7 Conclusions

7.1 Purpose

The purpose of this chapter is to conclude this thesis by articulating theoretical implications, policy implications, managerial implications, future research directions and limitations.

7.2 Conclusions

Reshoring, as an emerging topic, not only brings together scholars from a variety of intellectual traditions but also promotes research on a wide array of aspects within the OM field. Existing studies have primarily analysed the principle drivers behind reshoring, demonstrating that reshoring is driven not only by external environment conditions (e.g., labour cost, economic crisis) but also internal strategic intents (e.g., supply chain renewal, quality improvement) (see Fratocchi et al., 2016 for reviews). Clearly, the dialogue has gradually shifted from *why* companies reshore towards a wider scope involving *how* companies reshore and *what* the outcomes are. Although we have seen that there has been considerable progress in understanding reshoring on a number of issues in the last five years, the research on this subject is still in its infancy stage. On the basis of previous contributions, this thesis puts the discourse further by illustrating and analysing the dynamics and evolution of reshoring in the context of global operations, providing a more nuanced understanding of the reshoring phenomenon in Europe, reshoring companies' strategic decisions, and reshoring peculiarities.

More in detail, the thesis provides a systematic literature review on reshoring literature over the past 13 years (see **Chapter 2**). By analysing 77 articles from 2007 to 2019, we discuss the findings and conclusions of prior research along six key areas: (1) antecedents, (2) strategic decisions, (3) implementation processes, (4) decision making approaches, (5) outcomes, and (6) industry 4.0 and reshoring. We offer prospective insights into future agenda that have important implications encompassing institutions and reshoring, operations reorganisation and reconfiguration, relevant resources and dynamic capabilities, value creation and value capture.

We then provide a comprehensive picture of reshoring in Europe by analysing its dynamics and evolutionary trajectories (see **Chapter 4**). Specifically, we analyse 253 reshoring projects derived from database ERM along several aspects: frequency,

motivations, geographic diversification (i.e., home country, host country), time periods (i.e., earlier reshoring, second movers, later reshoring), industries, and employment implications. In quantitative terms, reshoring appears to be essentially stable, while qualitatively significant changes emerge relative to the aforementioned features.

Afterwards, we analyse the determinants of reshoring entry modes (EM) and compare the results to those explaining offshoring EM (see **Chapter 5**). Using a sample of 677 cross-industry and cross-country reshoring projects, we find that offshoring EM significantly constrains the subsequent reshoring EM. More in detail, firms adopting offshore insourcing entry modes tend to retain these modes in reshoring. Furthermore, reshoring EM is explained by industry- and project-specific factors, while offshoring EM is influenced by a broader set of industry-, country-, and firm-specific factors.

Finally, by using a dataset including 529 cross-industry reshoring projects developed by companies headquartered in five countries (i.e., US, Germany, UK, France, and Italy), we find that these projects differ in terms of industry, entry mode, firm size and motivations (see **Chapter 6**). Thus, we highlight that reshoring turns out to be a phenomenon where each country has its peculiarities. We further shed light on the possible institutional, cultural/cognitive and industry/resource-related factors underlying these specificities.

7.3 Implications

7.3.1 Theoretical implications

This thesis contributes to the reshoring literature, and more broadly, international business literature in at least five ways.

First, we identify the current state of knowledge on reshoring (see Chapter 2), allowing to have a more complete and timely understanding of what is known and how the discourse evolves. Unlike the existing reviews where scholars focus more on the single aspects of reshoring such as drivers (i.e., Foerstl et al., 2016; Moradlou and Backhouse et al., 2016; Piatanesi and Arauzo-Carod, 2019; Wiesmann et al., 2017) or the decision making processes (i.e., Bals et al., 2016), our analytical framework provides a comprehensive coverage of existing contributions involving antecedents, processes and outcomes. Moreover, compared with the latest literature reviews published in 2018 and 2019 (i.e., Barbieri et al., 2018; Piatanesi and Arauzo-Carod, 2019), our review captures

the very recent contributions published in the last two years, articulating the new and relevant debate on reshoring (e.g., industry 4.0 and reshoring).

Second, based on the database ERM, we provide an overview of reshoring in Europe covering five years from 2014 to 2018 (see Chapter 4), which advances significantly the understating of the dynamics, the evolutionary trajectories and the impact of reshoring. It fills the huge gap in reshoring knowledge and highlights the importance of understanding the evolving geographies of global operations. Moreover, it provides vital clues to generate research questions and propositions for future research.

Third, our study, as the first attempt, explicitly analyse the determinants of reshoring EM based on large-scale data (see Chapter 5). The results confirm the multi-level nature of EM determinants (industry, firm, country and project-specific levels) already highlighted by previous research focusing on offshoring. It also extends the current knowledge on reshoring EM with a holistic view, i.e., analysing these factors jointly. Moreover, we empirically reflect the evolution process of companies' EM by investigating the effect of offshoring EM choice on the subsequent reshoring EM choice. It also contributes to the path-dependency debate by extending the discussion into the context of reshoring.

Fourth, our study is the first to provide in-depth evidence that the behaviours of reshoring projects do differ across countries (Chapter 6). As a comparative study of companies from multiple home countries, our study responses to the call for research on the role of the home country in reshoring (e.g., Bals et al., 2016; Tate, 2014; Vanchan et al., 2017). Moreover, by integrating the institutional, the cultural/cognitive, as well as the industry- and extended resource-based perspectives, the study provides a holistic view of how the home country could exert influence on MNCs' reshoring in various dimensions. It extends the discussion of home country effects into the context of reshoring and highlights that the argument according to which offshoring is influenced by multi-dimensional factors (Cui et al., 2011; Yamakawa et al., 2008; Yi et al., 2013) also holds in the context of reshoring. In addition, it offers a richer insight into the fundamental question of "why do firms reshore" by contextualising reshoring drivers. We shed light on the most important driver in a specific context using a comparative approach. Moreover, this study also extends our understating of country effects in the global value chains configuration debate by shedding light on the distinctiveness of country-specific advantages between five leading reshoring countries.

Finally, we identify research gaps that are understudied yet critical to both theorisation and practice, guiding future scholarly inquiries along the identified directions revealed in Chapter 2 and the following section (Section 7.4). We highlight some theoretical perspectives (e.g., co-evolution perspective, institutional perspective) to study the respective research questions. We also point out some frontier issues which have attracted increasing scientific interest involving value creation and value capture.

7.3.2 Policy implications

The impact of reshoring on country development has been a key concern for policymakers in many countries, especially for those where reshoring has already been set as an important instrument to improve country's employment, to revive manufacturing industries, to change position in GVCs. The companies' behaviours directly determine their impact on country development. Thus, getting an in-depth understating of reshoring trends and dynamics is a necessary condition for policymakers to make effective policies. In order to understand the policy implications, we summarise the most relevant initiatives that the five analysed countries (e.g., US, UK, Italy, Germany, France) have recently adopted to support the manufacturing industry (see Table 7.1). We have collected this data through the institutional websites and official documents of the governments involved. As shown in Table 7.1, the declared objectives of the German, French and Italian initiatives are to promote the technological innovation, the digital modernisation, and the empowerment of the workforce of the national companies ("Industry 4.0"). The declared objective of the English and American initiatives is to bring jobs and production back, i.e., an objective that is present, albeit implicitly, even in the other countries' initiatives. Almost all of these projects provide financial aids through a mix of tax benefits and direct support for new investments, in addition to other incentives. The commonality of objectives and actions between these country-based initiatives is not surprising. What is surprising, however, is the fact that the target of all these initiatives is weakly characterised. None of these initiatives exhibits an industry focus. No one considers and distinguishes between in- and out-sourcing choices, even if the manufacturing system of a country can benefit differently from the repatriation of production through equity and non-equity solutions. Only two initiatives (Italy and France) take into account the firm size, favouring SMEs. Finally, only the "Reshore UK" project targets specifically

reshoring firms. Clearly, the current reshoring policies are weakly targeted in the sense that current policy initiatives do not consider the heterogeneity of firms and industries. Thus, *first*, we suggest that policymakers should take into account the industry, firm size, and entry modes (in- vs. out-sourcing) to configure more specific actions. This is even more true for those policy initiatives – such as consulting services and workforce development – which require by their nature to be customised considering the industrial and dimensional features of the targeted companies (which in turn affects the skills, contents, and methodologies needed).

Table 7.1 Main initiatives of the five countries

Country	Title	Institution	Declared Objective	Main Actions	Target			
					Reshoring firms	Industry	Firm size	Entry modes
US	“Tax Cuts and Jobs Act” (TCJA)	United States Congress	To support employment and revive manufacturing in US	Corporate tax rate cut Substantial tax reforms	Included	/	/	/
UK	“Reshore UK”	UK Trade & Investment & Manufacturing Advisory Service	To bring production back to the UK	Support on location selection Consulting services	Target	/	/	/
Italy	“Piano Industria 4.0”	Ministry of Economic Development	To support innovative investments and empowerment of skills in Italy	Financial support Tax incentives Workforce development	Included	/	SMEs (primary)	/
Germany	“Industrie 4.0”	Federal Ministry of Education and Research & Federal Minister for Economic Affairs and Energy	To drive German digital manufacturing forward	Financial support I40 platform development	Included	/	/	/
France	“Industrie du Futur”	French government	To modernize the French production base and production tools	Financial support Tax incentives Staff training Platform development	Included	/	SMEs (primary)	/

Second, the limitation of current policies and initiatives aimed at fostering reshoring is highlighted in our study by the fact that the reshoring motivation related to government incentives is absent in some countries (e.g., Germany and Italy). By contrast, we provide evidence that government incentives play a critical role in driving reshoring in the US. Thus, policymakers need to be fully aware of the driving role of government intervention in reshoring and provide more direct support based on their country conditions. For

instance, the Italian government could reformulate current policies by better addressing industrial and motivational characteristics of potential reshoring projects. It could provide more direct support (e.g., tax reduction, financial aid) to clothing companies and, at the same time, strengthen the infrastructure (educational system, human resources development) connected to this industry. Similarly, considering the importance of the “made-in” effect, it could also better protect the country brand by improving regulations and (quality) control systems.

Third, policymakers need to recognise the potential effect of entry modes on employment and start to think about how to influence companies’ entry modes towards their interests. Companies adopting in-sourcing entry mode have a higher level of control, which favours job creation and labour force training. Therefore, we suggest that policymakers need to rethink how to design policies by taking the determinants of entry modes into consideration.

Fourth, although it is very likely that the relationship between government incentives and reshoring scale is structurally causal, policymakers still need to recognise the importance of co-development with reshoring companies and make policies which are effective and truly beneficial for both country and companies. For example, with the development of the country, policymakers may reduce the incentives or launch other policy initiatives tailored to other trade activities (e.g., foreign direct investment, export, import) at the same time. For reshoring companies where the taxes reductions at home play a critical role in lowering their total cost, the aforementioned policy changes may exert a more profound effect on their production cost. Thus, policymakers need to consider whether and the extent to which these policies erode the benefits that the reshoring companies enjoyed.

Finally, although we did not empirically test the conditions under which the government support exerts influence, our additional analysis in Chapter 5 show that US reshoring projects are more likely to be performed by SMEs. Moreover, American SMEs show significantly more frequent motivations connected to the reduction of logistic costs and delayed deliveries. These results imply that the response to the “government incentives” may differ across firms. In this regard, the government cannot assume that incentives or other policies exert similar influences on all the firms with different resources/capabilities configurations. We therefore suggest that policymakers need to be fully aware of the

importance of the boundary conditions of the government forces and formulate target-policy frameworks.

7.3.3 Managerial implications

The study provides implications also for practitioners charged with the responsibility of reshoring decisions.

First, the dynamics and evolution of reshoring have not only changed the global manufacturing landscape, but also the way in which the MNCs configure their supply chains. Therefore, companies, regardless of whether they intend to reshore or not, need to pay close attention to reshoring trend, features, and impact.

Second, our findings provide support for the argument that government support is of particular importance for reshoring. Thus, managers need to think about how to take full advantage of government support (if any). They need to familiarise with government policies at different levels or communicate with governmental agencies. They also need to realise that government support may constitute an invaluable source of competitive advantage (Antkiewicz and Whalley, 2006; Child and Rodrigues, 2005; Gaur and Kumar, 2009).

Third, our results show (Chapter 5) that offshoring EM significantly constrains the subsequent reshoring EM and provide a clear-cut illustration of the stability of captive EMs. The stability of EM may be a rational decision in response to the full evaluation of risks and returns from alternative EMs (Luo, 2001). In some cases, managers make EM decisions with inertia explained by company culture or by the characteristics of the management team (Hambrick and Mason, 1984). Therefore, managers need to be aware of the inertia effect in decision-making processes and are encouraged to make rational EM decisions by fully assessing the costs and benefits.

Fourth, we provide evidence that countries are differently *receptive* to reshoring choices, i.e., they offer differently *conducive* environments for the repatriation of manufacturing. This diversity is linked on the one hand to their industrial, cultural and institutional specificities, and on the other hand, to the sectoral, dimensional, and motivational specificities of the reshoring projects. Managers need to understand that those (comparative) advantages do not automatically make the company become globally competitive. In other words, the success of a reshoring project depends on the appropriate matching between the characteristics of the home country and the characteristics of the

project. Therefore, on the one hand, we invite managers to consider home country (institutional, cultural, and industrial) factors and to be fully aware of their importance, which could suggest different reshoring development paths. On the other hand, managers should realise that successful reshoring is determined by the interplay between external conditions and internal (firm-level) conditions (Ramamurti and Singh, 2009). They should strive to find out which capabilities allow to leverage country-level advantages and to respond to institutional pressures more effectively.

Finally, the reshoring is evolutionary in nature; thus, we also encourage managers to evaluate their shoring strategies with an evolutionary view.

7.4 Future research directions

Our empirical studies have filled the key research gaps proposed in Chapter 2. Despite this, there is still an array of research areas that could deepen our understanding of the reshoring dynamics. In this section, we future propose some research avenues with a particular focus on the issues we have dealt with in our thesis (i.e., Chapter 4, 5, 6).

First, the data collected so far in the ERM show that reshoring is an ongoing process whose features are evolving over time. Thus, future research needs to continue to monitor the reshoring features in Europe and analyse its evolutionary trajectories. Although we are confident about our results, as we highlighted, the shoring strategies in Operations Management should be understood under the light of the evolution of both business environment (external) and firm conditions (internal). In addition to the variables (e.g., firm size, industry, motivation, entry mode) included in our analysis, future research could analyse reshoring dynamics by focusing on more aspects (e.g., manufacturing plant, the degree of internationalisation, operational activities). Moreover, it also could link reshoring with other country-related factors and examine their relationships.

Second, we have witnessed that there are huge variances among reshoring companies. For example, they differ on matters of geographic dispersion, organisational form, motivations, experiences, resources endowments, and home and host country conditions. What determines reshoring EM within a certain category of reshoring companies? In order to answer this question, we suggest future research to test the causal model presented in Chapter 5 by extending to samples capturing the heterogeneity of reshoring firms and then compare the findings to the ones presented by us. For example, future

research could differentiate the samples in terms of ownership (state vs. non-state), offshoring country (developed vs. developing country), past experiences (satisfactory offshoring experience vs. unsatisfactory offshoring experience), and reshoring degree (part reshoring vs. full reshoring). In addition, exploring the entry modes decision making process using a case study approach is also suggested. It is interesting to probe the challenges that the companies face and the ways through which they overcome them. Scholars can also explore the underlying mechanisms through which the offshoring experiences exert influences on subsequent reshoring entry modes. It is also interesting to look into the advantages and disadvantages of certain entry modes and link them to reshoring performance.

Third, future research needs to further explore how the home country shapes reshoring behaviours from different perspectives. Our results in Chapter 6 provide a clear-cut illustration of the peculiarities of reshoring of five countries and point out the possible underlying country-related determinants. However, it is difficult for us to provide an accurate explanation of how a specific country-related factor matters. Thus, future research could deepen this issue by assigning a specific institutional factor as an independent variable or moderator (e.g., government intervention). It is also interesting to identify the contingency factors of the home country effects. Another intriguing question is: how much does the home country matter? In Chapter 6, we analyse the possible effect of the institutions, culture, and industries on reshoring patterns. These sources of home country effect are all dynamic. How precisely do these factors influence reshoring companies? In which aspects? Given the evolving nature of the home country and companies, it is very interesting to investigate whether the relative importance of home country, industry or firm resources and capabilities inherited from the home country shifts as companies develop.

7.5 Limitations

It is worth to note that this thesis has some limitations. We list six main limitations.

First, the data used in this thesis are secondary data. We have discussed how difficult it is to collect data on reshoring practices (see Chapter 3). Despite the fact that we have made significant efforts to maximise the reliability of our data (e.g., 10% of our cases were checked by us through telephone interview), examining reshoring with primary data is strongly encouraged.

Second, the extent to which our data represent the true scale of reshoring is unclear. This issue is also related to data accessibility. It is difficult to measure reshoring at both aggregated and firm levels. These difficulties stem especially from the fact that it is challenging to track reshoring practices at the global level. So far, no public comprehensive dataset or list of reshoring projects is available (Gray et al., 2013).

Third, the data used in this study are limited to reshoring projects in major western countries. The inclusion in the dataset of other developed or emerging countries would facilitate the generalisation of the findings.

Fourth, from a methodological point of view, the size of some country sub-sets (i.e., France and Germany) were relatively small compared to the number of variables considered. This limitation is more pronounced in Chapter 5. Although we are confident about the statistic inference conclusion, it could be much better if we could have more data about those two countries.

Fifth, our dataset does not include performance data, preventing us from understanding which reshoring projects have given the best results. This limitation applies however to most of the previous reshoring studies, with just a few exceptions (Brandon-Jones et al., 2017; Johansson and Olhager, 2018; Stentoft et al., 2018).

Finally, although our statistic results can provide the basis for statistical generalisations to a broader population, compared to the case study approach, it is weak to deepen the understanding regarding how firms reshore, in particularly the process through which the companies reconfigure their supply chains.

Looking forward, we are in a period with rapid and intense changes in the global political economy. The growing tensions between the major developed countries and developing countries, the geopolitical risks, and the business uncertainty have placed companies and in particular MNCs in a more difficult position. MNCs are continuously reconfiguring and reorganising their global value chains through the transformation between offshoring and reshoring, aim at identifying the “right-shoring” strategies. These phenomena provide massive opportunities for OM scholars to contribute to the discourse on reshoring, and more broadly, global operations. Although reshoring is an emerging topic, reshoring practices have been built explicitly on the experiences of offshoring which has been studied for decades. Therefore, studying reshoring has great potential to expand and modify existing theories and models rooted in global operations and supply chain configurations fields.

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APPENDIX A. Multilingual glossary

English

1	Back-reshoring	46	‘Move R&D back’
2	Backreshoring	47	‘Relocate R&D’
3	Backshoring	48	‘Repatriate R&D’
4	Reshoring	49	‘Return R&D’
5	Back-sourcing	50	‘Transfer R&D’
6	Backsourcing	51	‘Transfer to local supplier’
7	De-internationalisation	52	‘Transfer to local suppliers’
8	Divestment	53	‘Transfer to national supplier’
9	Home-shoring	54	‘Transfer to national suppliers’
10	Homeshoring	55	‘Return to local supplier’
11	In-shoring	56	‘Return to local suppliers’
12	Inshoring	57	‘Return to national supplier’
13	Manufacturing relocation	58	‘Return to national suppliers’
14	Near-shoring	59	‘Supply basis back home’
15	Right-shoring	60	‘Supplier back home’
16	Nearshoring	61	‘Supplier back home’
17	Rightshoring	62	‘Leave local suppliers’
18	On-shoring	63	‘Leave local supplier’
19	Onshoring	64	‘Leave offshore supplier’
20	Re-industrialisation	65	‘Leave offshore suppliers’
21	Reindustrialisation	66	‘Leave foreign supplier’
22	Reshore	67	‘Leave foreign suppliers’
23	Re-shoring	68	‘Cut off local suppliers’
24	Reshoring	69	‘Cut off local supplier’
25	Reverse globalisation	70	‘Cut off offshore supplier’
26	Reverse relocation	71	‘Cut off offshore suppliers’
27	‘Move back manufacturing’	72	‘Cut off foreign supplier’
28	‘Move manufacturing back’	73	‘Cut off foreign suppliers’
29	‘Move production back’	74	‘Transfer out-sourced services’
30	‘Move back production’	75	‘Transfer outsourced services’
31	‘Relocate production’	76	‘Reduce offshore outsourcing’
32	‘Relocate manufacturing’	77	‘Reduce global sourcing’
33	‘Repatriate production’	78	‘Repatriate jobs’
34	‘Repatriate manufacturing’	79	‘Return jobs’
35	‘Return production’	80	‘Move back jobs’
36	‘Return manufacturing’	81	‘Move jobs back’
37	‘Transfer production’	82	‘Repatriate foreign jobs’
38	‘Transfer manufacturing’	83	‘Return foreign jobs’

39	‘Move back services’	84	‘Move back foreign jobs’
40	‘Move services back’	85	‘Move foreign jobs back’
41	‘Relocate services’	86	‘Repatriate offshore jobs’
42	‘Repatriate services’	87	‘Return offshore jobs’
43	‘Return services’	88	‘Move back offshore jobs’
44	‘Transfer services’	89	‘Move offshore jobs back’
45	‘Move back R&D’		

Deutsch

- Reshoring/reshore: English term is used
- Inshoring/inshore: English term is used
- Reverse relocation: *Produktionsrückverlagerung, Rückverlagerung, Wiedereingliederung, Wiedereinlagerung, Wiedereingliederung, umgekehrte Standortverlagerung*
- Reverse globalisation: *umgekehrte Globalisierung*
- Onshoring: The term is also used, but not as an exact synonym to reshoring, etc. It is used for relocations within the same country. The German term for this is *Inlandsverlagerung*.

French

- *Reshoring, onshoring, reshoring, inshoring, manufacturing repatriation, reverse relocation: la relocalisation, la relocalisation économique, le rapatriement, rapatrier, la relocalisation inversée, Inverser la relocalisation, la délocalisation inversée, la co-localisation inversée, colocalisation inversée* (all these French terms have the same meaning, i.e. reshoring)
- There are also a few terms directly taken from English which can also be used in French, although they are not used frequently: *l’offshoring/l’onshoring/le nearshoring/l’inshoring*
- Other terms:
 - *le ‘backsourcing’* = French word for insourcing, the opposite of outsourcing
 - *la dé-internationalisation* = French word for de-internationalisation
 - *le télétravail/le ‘homeshoring’* = French terms for Home-shoring/Homeshore
 - *la mondialisation inversée/renverser la mondialisation* = French terms for reverse globalisation

Slovak

- Reshoring/reshore: *premiestnenie/premiestnit/relokacia*
- Onshoring/reshore: *presun, prestahovat, premiestnit*
- Reshoring/backshore: *navrat vyroby/firmy/spolocnosti do povodnej krajiny*
- Backsourcing/backsource: *navrat sluzieb spat do firmy/spolocnosti*
- Inshoring/inshore: English term is used
- De-internationalisation: *de-internacionalizacia*
- Home-shoring/homeshore: *praca z domu*
- Repatriate production/manufacturing: *vratit/repatriovat vyrobu/produkciiu*
- Reverse globalisation: *reverzna/spatna/obratena globalizacia*
- Reverse relocation: *reverzna/spatna/obratena relokacia/premiestnenie*

Serbo-Croatian/Bosnian

- Onshore: *na kopnu, kopneno, na obali*
- Inshore: *priobalno*
- De-internationalisation: *internacionalizacija*
- Repatriate production: *vratiti proizvodnju, vracena proizvodnja*
- Reverse globalisation: *obrnuta globalizacija*
- Reverse relocation: *obrnuto premjestanje*

Finnish

- Reshoring/reshore: *työn kotiuttaminen* (or English term is used)
- Onshoring/reshore: *ulkoistaminen* (or English term is used)
- Reshoring/backshore: *työn kotiuttaminen* (or English term is used)
- Backsourcing/backsource: *ulkoistuksen purkaminen* (or English term is used)
- Inshoring/inshore: *työn kotiuttaminen* (or English term is used)
- Onshoring: *ulkoistaminen* (or English term is used)
- De-internationalisation: English term is used
- Home-shoring/homeshore: *työn teettäminen etänä* (or English term is used)
- Repatriate production/repatriate manufacturing: *tuotannon kotiuttaminen* (or English term is used)
- Reverse globalisation: *käänteinen globalisaatio* (or English term is used)
- Reverse relocation: *paluumuutto* (or English term is used)

Spanish

- Reshoring/reshore: English term is used
- Onshoring/reshore: English term is used
- Reshoring/backshore: English term is used
- Backsourcing/backsource: English term is used
- Inshoring/inshore: *externalizar procesos a un proveedor dentro del país* (or English term is used)
- Onshoring: English term is used
- De-internationalisation: *desinternacionalización*
- Home-shoring/homeshore: English term is used
- Repatriate production/repatriate manufacturing: *repatriar la producción/repatriar la manufactura*
- Reverse globalisation: *globalización inversa*
- Reverse relocation: *reubicación inversa*

Portuguese

- Reshoring/reshore: English term is used
- Onshoring/reshore: English term is used
- Reshoring/backshore: English term is used
- Backsourcing/backsource: *terceirizar processos de um fornecedor dentro do país* (or English term is used)

- Inshoring/inshore: *terceirização dentro do país* (or English term is used)
- Onshoring: *desinternacionalização*
- De-internationalisation: English term is used
- Home-shoring/homeshore: *repatriar a produção*
- Repatriate production/repatriate manufacturing: *globalização inversa*
- Reverse globalisation: *deslocalização reversa*
- Reverse relocation: English term is used

Romanian

- Reshoring/reshore: *Activitati tip reshore* (or English term is used)
- Onshoring/reshore: *Activitati tip onshore* (or English term is used)
- Reshoring/backshore: *Activitati tip backshore* (or English term is used)
- Backsourcing/backsource: *Activitati de tip backsource* (or English term is used)
- Inshoring/inshore: *Activitati de tip inshore* (or English term is used)
- Onshoring: *Activitati de tip onshore* (or English term is used)
- De-internationalisation: *De-internationalizare*
- Home-shoring/homeshore: *Activitati de tio homeshore* (or English term is used)
- Repatriate production/repatriate manufacturing: *Productie repatriata*
- Reverse globalisation: *Globalizare inversa*
- Reverse relocation: *Relocare inversa*

Polish

- Reshoring/reshore: *repartacja dzialalnosci/produkcji*
- Onshoring/reshore: *przeniesc dzialanosc/produkcje*
- Reshoring/backshore: *repartacja dzialalnosci/produkcji*
- Backsourcing/backsource: *repartacja pracy*
- Inshoring/inshore: *przeniesienie dzialalnosci/produkcji*
- Onshoring: *przeniesc dzialanosc na mala odleglosc* (or English term is used)
- De-internationalisation: *de-internacjonalizacja/wycofanie si*
- Home-shoring/homeshore: English term is used
- Repatriate production/repatriate manufacturing: *przeniesc produkcje z powrotem do kraju*
- Reverse globalisation: *odwrocona globalizajca*
- Reverse relocation: *odwrocona relokacja*

Estonian

- Reshoring/reshore: English term is used
- Onshoring/reshore: English term is used
- Reshoring/backshore: English term is used
- Backsourcing/backsource: English term is used
- Inshoring/inshore: English term is used
- Onshoring: English term is used
- De-internationalisation: *tagasitoomine* (or English term is used)

- Home-shoring/homeshore: English term is used
- Repatriate production/repatriate manufacturing: *agasitoomine kodumaale* (or English term is used)
- Reverse globalisation: *deglobaliseerimine* (or English term is used)

APPENDIX B. NACE codes for industries within the 'Manufacturing' sector

Code	Sub-sector
C10	Manufacture of food products
C11	Manufacture of beverages
C12	Manufacture of tobacco products
C13	Manufacture of textiles
C14	Manufacture of wearing apparel
C15	Manufacture of leather and related products
C16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
C17	Manufacture of paper and paper products
C18	Printing and reproduction of recorded media
C19	Manufacture of coke and refined petroleum products
C20	Manufacture of chemicals and chemical products
C21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
C22	Manufacture of rubber and plastic products
C23	Manufacture of other non-metallic mineral products
C24	Manufacture of basic metals
C25	Manufacture of fabricated metal products, except machinery and equipment
C26	Manufacture of computer, electronic and optical products
C27	Manufacture of electrical equipment
C28	Manufacture of machinery and equipment n.e.c.
C29	Manufacture of motor vehicles, trailers and semi-trailers
C30	Manufacture of other transport equipment
C31	Manufacture of furniture
C32	Other manufacturing
C33	Repair and installation of machinery and equipment
C35	Industrial and commercial machinery and computer equipment

APPENDIX C. Reshoring motivations

1	Automation of production process	29	Know how in the home country
2	Brand repositioning	30	Labour costs' gap reduction
3	Brexit	31	Lack of ex ante location planning
4	Change in firm's business strategy (e.g. new business area, vertical integration, etc.)	32	Adoption of lean manufacturing
5	Change in total costs of sourcing	33	Local employees' poor skills
6	Changes in taxation	34	Logistics costs
7	Adoption of clean technology	35	Loyalty to the home country
8	Collaboration with suppliers	36	'Made in' effect
9	Competitive pressure	37	Need for greater organisational flexibility
10	Corporate social responsibility image	38	Offshored activities' control complexity
11	Cultural and linguistic differences in the host country	39	Poor quality of offshored production
12	Customer demand increase	40	Production sustainability
13	Customs issue	41	Proximity to customers
14	Reduce delivery time	42	Proximity to suppliers
15	Duties	43	Production quality control
16	Global economic crisis	44	R&D vicinity
17	Energy costs in the host country	45	Rationalisation of costs
18	Exchange rate risk in the host country	46	Reduction of administrative costs
19	Firm's global reorganisation	47	Retailer/customer pressure
20	Government support for relocation	48	Risk of brand counterfeiting
21	High inventory costs in the host country	49	Size of the lots
22	Implementation of strategies based on product/process innovation	50	Streamlining of supply chain
23	Improve customer service	51	Strengthen the brand image
24	Improvement in efficiency	52	Termination of earlier supply relationships
25	Increased home country manufacturing productivity	53	Unattractiveness of the offshore market
26	Increased production costs in the host country	54	Union pressure in the home country
27	Intellectual property protection	55	Untapped production capacity in the home country
28	IT security	56	Willingness to maintain employment in the home country

APPENDIX D. Multinomial Logistic Regression Model Results (Reference category: US reshoring projects)

Variables	ITALY			UK			GERMANY			FRANCE		
	Coefficient (b)	Robust S.E.	P> t	Coefficient (b)	Robust S.E.	P> t	Coefficient (b)	Robust S.E.	P> t	Coefficient (b)	Robust S.E.	P> t
Cons.	-1.936***	0.545	0.000	-1.122*	0.470	0.017	-6.941***	1.671	0.000	-2.564**	0.802	0.001
Industry												
Clothing	1.625**	0.490	0.001	0.432	0.467	0.355	-0.109	0.898	0.904	1.011	0.581	0.082
Electronic	1.030*	0.474	0.030	-0.101	0.459	0.825	0.013	0.577	0.982	0.047	0.743	0.95
Mechanical	0.515	0.522	0.324	-0.618	0.519	0.234	1.021	0.520	0.050	-1.675	1.067	0.116
Automotive	-0.124	0.685	0.856	-0.201	0.622	0.746	1.245	0.712	0.081	0.400	0.747	0.593
Firm size												
Large	0.628	0.358	0.080	-0.401	0.360	0.266	2.267***	0.507	0.000	0.902	0.460	0.050
Entry mode												
In-sourcing	0.310	0.434	0.475	0.047	0.396	0.905	2.857*	1.229	0.020	0.448	0.582	0.442
Motivations												
Logistic costs	-0.316	0.794	0.691	-2.387*	1.000	0.017	0.569	1.011	0.575	0.183	0.856	0.831
Made in effect	0.539	0.483	0.265	-2.501*	1.118	0.026	-2.679	2.609	0.307	-1.842	1.153	0.111
Labour costs' gap reduction	-2.268	1.408	0.107	0.170	0.631	0.788	-0.442	1.220	0.717	-1.004	1.354	0.459
Quality issues	-1.212	0.764	0.113	-0.928	0.781	0.235	2.074**	0.671	0.002	-2.354	1.947	0.227
Delay in deliveries	-7.902*	3.551	0.028	1.084	0.703	0.123	1.533	0.942	0.104	-2.065	1.796	0.252
Total costs	-0.688	0.841	0.414	1.015	0.580	0.081	-1.827	2.134	0.394	0.008	0.988	0.993

* p < 0.05, ** p < 0.01, *** p < 0.001

Note: Government incentives variable and customer proximity variable were excluded from model since there were no Italian reshoring projects pointing out government incentives motivation and no German reshoring projects pointing out government incentives and customer proximity motivations.