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Motivations of manufacturing reshoring: an interpretative framework

Motivations of
manufacturing
reshoring

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Abstract

Purpose – The paper presents a framework for the analysis of reshoring. The framework is then applied to analyze motivations for reshoring, as they emerge from extant literature and from new evidence collected.

Design/methodology/approach – We start by formulating a literature-grounded definition of reshoring and reviewing some key theoretical approaches for international manufacturing location. In light of these theories, we then propose an interpretative framework for the analysis of reshoring motivations. Finally, we provide new evidence on this phenomenon, by presenting the findings of an extensive data collection of reshoring cases built on secondary data.

Findings – We show that a vast array of single drivers of reshoring can be extracted from extant literature; however, our interpretative framework eventually highlights 4 main typologies of reshoring motivations, thus allowing for a more sound comprehension of why the phenomenon happens. Our empirical investigation proves also useful in comparing the relative importance of these motivations, as it reveals that value driven and country specific motivations prevail over efficiency driven and firm specific ones, respectively.

Research limitations/implications – Our study is based on the analyses of secondary data extracted from newspapers and magazine sources. Some motivations (and especially those that configure a “correction of a previous erroneous decision”) could have been underestimated. In addition, certain industries (e.g. clothing and footwear), certain countries (US and China), and certain firms (large companies and MNCs) could have more visibility to the media. Another possible limitation is due to the fact that our classification work inherently implied some discretion and individual judgment. We however spent considerable efforts in cross-validating the assessments through extensive discussion within the research team.



Originality/value – This is the first paper that summarizes the motivations of the rising reshoring phenomenon and interprets them based on an original theory-derived classification framework.

Keywords Motivations, Internationalisation, Back-reshoring, Back-shoring, Off-shoring, Re-shoring
Paper type Research paper

Introduction

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In recent years, the topic of manufacturing reshoring (Fratocchi *et al.*, 2014) – a company decision to bring production or sourcing back to their home country – has gained momentum in the popular and specialized press (Booth, 2013) and in reports by consulting firms (Laudicina *et al.*, 2014; Sirkin *et al.*, 2012; The Boston Consulting Group, 2013).

In times of global crisis, policy-makers in several Western countries have seen reshoring as a partial solution to rising unemployment rates (Tate *et al.*, 2012), and as a means to support re-industrialization (Pisano and Shih, 2009; Pisano and Shih, 2012), leading some governments (e.g. the US) to encourage and subsidize repatriations (Guenther, 2012; Livesey, 2012).

Little systematic analysis has been conducted on the phenomenon to date, so that for instance its sheer size is still unknown. The phenomenon is not a mass trend (Laudicina *et al.*, 2014) but its relevance is steadily increasing (Sirkin *et al.*, 2012).

A small body of academic research on reshoring has been produced since 2007. The contributions aim at defining and positioning the phenomenon (Ellram, 2013; Fratocchi *et al.*, 2014; Gray *et al.*, 2013; Holz, 2009), at establishing its geographical boundaries (e.g. the host countries involved) (Dachs and Kinkel, 2013), and at pinning down the underlying motivations of companies (e.g. Ellram *et al.*, 2013; Kinkel, 2014).

In particular, extant literature has identified a vast array of motivations for reshoring, though their relative importance, systematization, and their interpretation vis-a-vis prominent theories of internationalization are still missing. Also, different views of reshoring have been proposed – interpreting the phenomenon either as an adjustment to changed location advantages, or as a correction of a (previous) erroneous location choice (Gray *et al.*, 2013; Kinkel and Maloca, 2009).

In order to contribute to close these research gaps and provide a more insightful analysis of reshoring, the aim of this paper is to conceptually and empirically investigate the reasons why reshoring happens. We start by reviewing various theoretical frameworks on internationalization and location strategies suitable to explain reshoring, and derive a theory-based classification of the motivations proposed in the reshoring literature. Next, we complement our conceptual analysis with new evidence from a large-scale investigation of reshoring cases we have conducted over the past four years.

In addition to filling a literature gap, the analysis and systematic classification of motivations for reshoring is of relevance for managers. A better understanding of the drivers that lead companies to repatriate their offshore operations can help managers to address the “location decision dilemma” more effectively.

Our study identifies the motivations for reshoring from scientific and practitioners literature and classifies them into a conceptual framework based on two dimensions, i. e., the goal (“customer perceived value” vs “cost efficiency”) and the level of analysis (“internal environment” vs “external environment”). It then highlights that, despite a good overlap between the motivations identified by the literature and those emerging from empirical data exist, the emphasis attributed to certain motivations is different. For instance, the “made-in effect” – the fourth most important motivation of reshoring

decisions in our sample – has been highlighted by only three out of 33 contributions. Conversely, the loss of innovation potential and the intellectual property issues seems to be less relevant in our empirical dataset than in the literature.

The rest of the paper is organized as follows. Section 2 clarifies the concept of reshoring and its use in the paper. Section 3 reviews the extant literature on reshoring motivations, identifies relevant theories of international production and location decisions useful to interpret manufacturing reshoring motivations, and presents our classification framework. Section 4 presents the new data on reshoring collected from several secondary sources, and classifies the motivations of reshoring based on our framework. Section 5 discusses the main findings of the study. Finally, Section 6 highlights the managerial implications of the study and Section 7 presents the limitations and directions for future research.

Reshoring: towards an unambiguous definition

“Reshoring” or *“back-shoring”* have been defined in broad terms as “moving manufacturing back to the country of [the firm’s] parent company” (Ellram, 2013). Generally, as for any new and multifaceted concept, the relocation back home has generated a variety of terms and definitions, with lack of clarity about “what” production relocation to the home country is, and “which forms” it can take. It is relevant that these definitions be brought to unity in order to remove potential lexical ambiguities.

The first academic definition of *“back-shoring”* was proposed by Holz: “the geographic relocation of a functional, value creating operation from a location abroad back to the domestic country of the company” (2009, p. 156). Kinkel and Maloca use the term to mean the “re-concentration of parts of production from own foreign locations as well as from foreign suppliers to the domestic production site of the company” (2009, p. 155). While acknowledging Holz’s point that firms can repatriate only part of their foreign production, the latter definition extends the concept to include also the repatriation of production activities of foreign suppliers, although the authors only consider the case where such activities are insourced into the firm’s domestic operations. In the same vein, Gray *et al.* (2013) recognize that different manifestations of reshoring exist based on the ownership dimension, but they propose an extended typology to consider the different governance structures (insourcing vs outsourcing) also for the back-reshored activities. Accordingly, their typology consists of four cases – namely: *in-house reshoring*, *outsourced reshoring*, *reshoring for outsourcing*, and *reshoring for insourcing*.

Irrespective of the terminological choice, common to the above definitions is the acknowledgment of the phenomenon as: (i) a location decision that (ii) involves production activities, and (iii) modifies an earlier implemented off-shoring decision by re-establishing certain productions in the domestic country.

In order to consolidate a univocal and unambiguous terminology, Fratocchi *et al.* (2014) account for these features and also acknowledge the voluntariness of the decision (i.e. the fact that it is deliberately assumed by the firm’s top management and not imposed by host countries, as in the case of nationalization) proposing the term *back-reshoring*, defined as “a voluntary corporate strategy regarding the home-country’s partial or total re-location of (in-sourced or out-sourced) production to serve the local, regional or global demands”. In this paper, we adopt the definition proposed by Fratocchi *et al.* (2014) but employ the term reshoring which is most frequently used in the literature.

Why do firms reshore? Linking motivations to theories

A wide body of literature has investigated the drivers of international location choices for manufacturing, focusing in particular on the motivations for offshoring (see Atthirawong and MacCarthy, 2000; Bhutta, 2004; Quintens *et al.*, 2006; Jia *et al.*, 2014 for reviews). Among these motivations, cost reduction has been ranked by many studies (e.g. Canham and Hamilton, 2013) as the most important for offshoring. Offshore locations often offer advantages in terms of lower costs of labor and other productive inputs (Jensen and Pedersen, 2011). Other motivations include the access to products, technologies, or knowledge not available at home (Lewin *et al.*, 2009), the improvement of product quality (Ettlie and Sethuraman, 2002), the development of foreign sales activities (Bozarth *et al.*, 1998; Shi and Gregory, 1998) also through countertrade agreements (Nassimbeni *et al.*, 2014), and the improvement of delivery performance (Frear *et al.*, 1992).

In the last decade, both practitioners and scholars have identified motivations for reshoring. Unlike the offshoring literature, many reshoring studies lack a clear theory-grounded interpretation of the motivations and are often descriptive in nature.

In the remainder of this section, we address the aforementioned gap. First, we identify motivations for reshoring proposed by practitioners and scholars. Second, we review the main theories that have been considered in reshoring studies to address the issue of (re)location of production activities. Based on that, we advance a classification framework and we apply it to the empirical motivations we collected in our extensive examination of extant reshoring studies.

Motivations of reshoring in literature

We conducted a literature review considering academic articles, reports edited by consulting firms (e.g. Boston Consulting Group, McKinsey & Co.) or published in international press (e.g. The Economist, TIME) until December 2014. In order to identify the relevant literature we used internet search engines considering keywords like “reshoring” “back-shoring”, “on-shoring”, “back-reshoring” and so on. We searched such keywords even in academic databases like Elsevier’s Scopus and Google Scholar and international practitioner journals. We also scanned the proceedings of the most relevant international conferences in international business (e.g. AIB and EIBA) and operations management fields (e.g. EUROMA and IPSERA). Finally, we checked the reference lists of the retrieved papers (i.e. a snowball approach) to identify any further relevant contribution.

Attention was paid to documents proposing at least one motivation for reshoring. We finally ended up with 33 contributions, 21 authored by scholars and 12 by practitioners. It is worthy to note that 14 out of 21 scientific papers appeared in the last two years considered (2013 and 2014), clearly suggesting the momentousness of the topic in the academic debate.

We employed an inductive category building approach (Seuring and Gold, 2012) and identified from the reviewed studies 31 prominent motivations (see Table I). In order to avoid misinterpretation of the text, each item found in the sources was associated to one of the 31 prominent motivations by two independent researchers of the group and cross-validated. In the few cases of discrepancies, a third researcher was involved until a common conclusion was reached.

Inspection of Table I reveals that fewer than three motivations were proposed in 15 of the 33 contributions. At the same time, eleven motivations were found in only one contribution, confirming the fragmentation of the literature and the need for a

Type of source (Scholar vs Practitioner)	P	P	S	S	P	P	S	S	P	P	S	S	P	P	S	S	P	P	S
Motivation	Agrawal <i>et al.</i> , 2003	Ritter and Stempfels, <i>et al.</i> , 2004	Kinkel <i>et al.</i> , 2007	Kinkel <i>et al.</i> , 2008	Couto <i>et al.</i> , 2008	Goel <i>et al.</i> , 2008	Leibl <i>et al.</i> , 2009	Ferreira and Prokopets, 2009	Kinkel and Maloca, 2009	Shiry <i>et al.</i> , 2009	Amighini <i>et al.</i> , 2010	Ferreira and Heilala, 2011	Leibl <i>et al.</i> , 2011	Powell, 2011	Kinkel, 2012	Simchi- Levi <i>et al.</i> , 2012	Simchi- Sirkkin <i>et al.</i> , 2012	Tate <i>et al.</i> , 2012	
Labour costs'		x																	
gap reduction																			
Poor local	x																		
products																			
quality																			
Loss of																			
innovation																			
potential																			
Lack of skilled																			
workers in the																			
host country																			
Logistics costs																			
Reduced																			
operational																			
flexibility																			
Supply chain																			
coordination																			
costs																			
Container-size																			
minimum																			
orders																			
Loss of know-																			
how in the host																			
country																			
Made-in effect																			
Energy costs																			
High inventory																			
levels																			

(continued)

Motivations of
reshoring

Table I.
Motivations for
reshoring strategies:
a literature review

Poor local products quality	x					x				x		
Loss of innovation potential	x						x					
Lack of skilled workers in the host country						x						x
Logistics costs						x						x
Reduced operational flexibility	x					x						
Supply chain coordination costs						x						
Container-size minimum orders												
Loss of know-how in the host country										x		
Made-in effect	x										x	
Energy costs											x	
High inventory levels												x
Automation of production process										x		
Home labour market flexibility												
Increased country manufacturing											x	

(continued)

productivity (e.g. in US)	
Lack of knowledge about the foreign destination	x
Lack of systematic location planning	x
Redefinition of the global supply chain	x x
Total cost of sourcing	x
Untapped production capacity at home	x
Emotional elements	x
Exchange rate risk	
Freight costs	
Global supply chain risks	x
High unemployment rates at the home country	
National subsidies for relocation	

(continued)

Motivations of manufacturing reshoring

Table I.

Table I.

Need to increase customer satisfaction					x
Penalties for late orders					
Production and delivery time impact					
Purchase order rigidity					
Reduced responsiveness to customer demand		x			
			x		

comprehensive classification framework. Among the most frequently cited motivations for reshoring were the reduction of labor costs between host and home countries and the poor quality of production abroad.

Reshoring: main theoretical perspectives

International trade theory, strategic management theories and international business theories have all been adopted to explain firms' production location decisions and have also been adopted to explain reshoring.

International trade theory focuses on the relevance of differences in production costs and/or factor endowments between countries, which explain international specialization of production and cross-border transactions. Hence, reshoring should reflect changes in the availability and costs of factors between countries that modify their comparative advantages, and restore the attractiveness of production in the home country (Martínez-Mora and Merino, 2014).

The efficiency of the governance structure and the search for competitive advantage are issues firms have to deal with when making location decisions (McIvor, 2013). Hence, Transaction Cost Theory (TCT) and Resource Based View (RBV) can both be advocated to explain reshoring. TCT (Williamson, 2008) points to the high coordination and incentive costs that firms may face in the offshore location with respect to the home country. More precisely, some scholars have pointed out that geographical and cultural distance can raise the risk of opportunistic behaviour by either offshore suppliers (Kinkel and Maloca, 2009; McIvor, 2013) or proprietary offshore production sites (Kinkel and Maloca, 2009; Martínez-Mora and Merino, 2014). These may result in unsustainable costs to negotiate, monitor and enforce cross-border transactions, and in turn lead to the reshoring of production activities. RBV (Teece *et al.*, 1997) ties reshoring to concerns for firms' strategic resources and capabilities when firms operate in foreign contexts. Therefore, reshoring decisions can reflect the firm's inability (i) to develop critical tangible and intangible assets abroad; (ii) to transfer them to the host country; or (iii) to access and exploit the host country's resources in order to create competitive advantage (Canham and Hamilton, 2013).

Internalization theory (Buckley and Casson, 1976) and Dunning's "eclectic paradigm" (Dunning, 1980; Dunning, 1998) – while originally developed with the aim to explain the international expansion of the firm – have also been applied to the firm's international reconfiguration, which includes reshoring. Internalization theory sees direct control (i.e. internalization) over scarce, firm specific, knowledge-based resources and capabilities as the most efficient way for a firm to internationalize its activities. Essentially, Internalization theory applies TCT and RBV to explain the efficiency aspects of multinational firms (Rugman, 2010). Based on this framework, reconfigurations of the firm's supply chain are dictated by changes in the fundamental parameters of the global economy (Casson, 2013). Moreover, Buckley and Casson (2011) observe that the ownership and the location of facilities influence each other[1]. In similar vein, Martínez-Mora and Merino argue that location decisions are affected also by the governance choices, e.g. by the cost of managing ownership in a distant location (Martínez-Mora and Merino, 2014). In sum, from an Internalization theory perspective, reshoring can originate from changes either in location characteristics, and/or in the factors affecting the governance efficiency of the supply chain.

Although similarities exist between Internalization theory and Dunning's eclectic paradigm, the latter (Dunning, 1980; Dunning, 1993; Dunning, 1998) keeps a distinction between the two dimensions of firm specific advantages (namely, ownership-advantage



and internalization-advantage) that are instead an integrated feature of Internalization theory. It also makes explicit reference to the role of country-specific factors (i.e. location-advantages). Hence, according to Dunning's paradigm, reshoring can originate from changes in location-specific advantages, i.e., changes in the characteristics of the host and/or home locations (Ellram *et al.*, 2013), or from the deterioration over time of ownership and internalization advantages on which the initial off-shoring decision was based (Dachs and Kinkel, 2013). Internalization advantages essentially build on TCT, while ownership advantages are consistent with RBV, which emphasizes the importance of possessing valuable resources and capabilities (Sun *et al.*, 2012).

Common to the above explanations of reshoring is the assumption that firms correctly collect and scrutinize information that is relevant for the location decision, implying that reshoring reflects their rational reaction to changing conditions (Gray *et al.*, 2013). Embracing a different view, some scholars (Gray *et al.*, 2013; Kinkel and Maloca, 2009) argue that reshoring could rather represent the (normally short-term) correction of a prior, biased, offshoring decision the firm made due to lack of knowledge about the foreign destination, inability to accurately quantify some important location-specific factors, and suboptimal decision-making processes. On the other hand, Gray *et al.* (2013) claim that especially factors related to changes in the degrees of different types of risks, or to network externalities are not easily quantifiable for bounded rational managers (Simon, 1979). Also, they highlight that the decision-making process for the production-location choice is affected by inappropriate selection criteria (e.g. little consideration of total cost analysis) or by the so called "bandwagon effect" (Abrahamson and Rosenkopf, 1993). In a similar vein, Kinkel and Maloca (2009) emphasize that firms – especially SMEs – can suffer from lack of know-how, capacity and competent personnel for cross-border management when planning and implementing internationalization initiatives. They tend to base their location decisions on simple, static criteria that do not adequately account for the impact of the dynamics and the uncertainties of offshoring, and entail the risk of misjudgments. The experience these firms gain in operating abroad provide them with a better understanding (Johanson and Vahlne, 1977; Johanson and Vahlne, 1990) and assessment of the critical factors affecting the location decision, and push them to reverse the prior location choice. In sum, proponents of this other view of reshoring suggest that – for a whole set of reasons – firms may initially misjudge the true cost, risk and complexity of offshoring. Once they start operating abroad, they accumulate an "experiential knowledge" through learning-by-doing, which drives a change in their managerial assessment about the actual convenience of the previous location decision.

An interpretative framework of reshoring motivations

In this section, we present a theory-based classification of motivations for reshoring. Elaborating on the above theoretical frameworks, we argue that reshoring motivations can be characterized according to the following aspects, namely (a) the goal and (b) the level of analysis (Figure 1).

(a) *The goal*: "customer perceived value" vs "cost efficiency". For the aim of this paper, "customer perceived value" refers to "the customer's perceived preference for an evaluation of those product attribute, attribute performances, and consequences arising from the use that facilitate (or block) achieving the customer's goals and purposes in use situation" (Woodruff, 1997, p. 142)". "Cost efficiency" pertains to the minimization of overall costs by making a product or performing an activity in a better way.

Customer perceived value motivations for reshoring explain the phenomenon in terms of the firm's need to achieve (or protect) the critical attributes that drive and/or

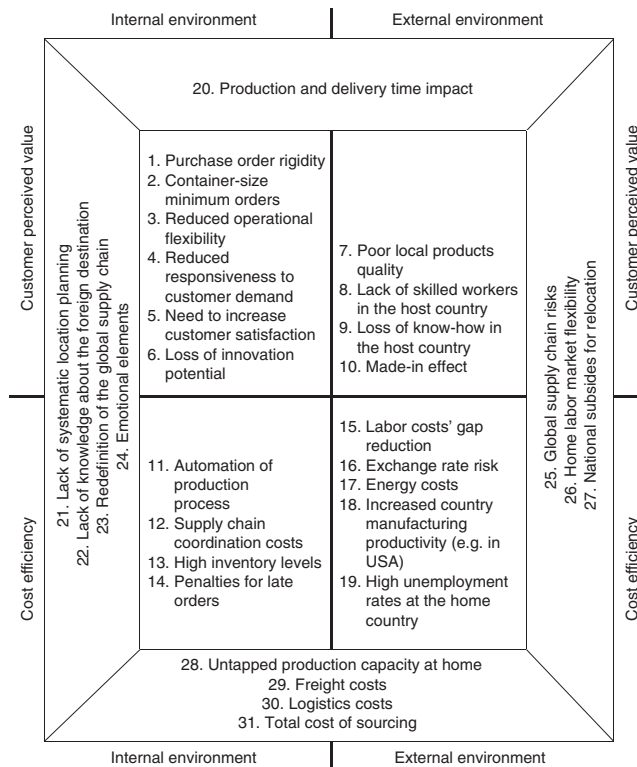


Figure 1. Motivation for reshoring strategies: an interpretative framework



influence the customers' preference. These motivations are strictly related to the customer's perceived quality (Eggert and Ulaga, 2002) and product/process innovation (Rivière, 2015; Lindič and Silva, 2011). From a RBV perspective, reshoring can foster the firm's ability to create value and maintain competitive advantage through quality and/or innovation, or to provide distinctive services to its customers. Zubac *et al.* (2010) describe how managers develop dynamic capabilities to create the "customer perceived value". Hence, reshoring becomes a sensible strategy when offshoring hinders the firm's ability to develop and/or maintain distinctive capabilities (e.g. intellectual property protection; quality; innovation; etc.), access external knowledge and/or other critical resources, understand customers' needs and fulfill them appropriately.

Cost efficiency motivations explain reshoring as the pursuit of lower production and logistics costs, and/or more efficient co-ordination and control mechanisms. Cost efficiency considerations are at the root of International trade theory, TCT and internalization theory, according to which reshoring is attributable respectively to the reduced gaps in input costs between locations, the high costs of coordinating and monitoring distant operations and relationships (e.g. supply chain coordination costs; penalties for late deliveries), and imperfections in the markets for knowledge. Cost efficiency motivations for reshoring reflect the contention that locating production activities in the home country can be ultimately cheaper than retaining them offshore, due to changes in production costs, hidden costs of offshore production, and the costs of managing global logistics and relations with distant locations, including supply chain risks.

(b) *The level of analysis*: “internal environment” vs “external environment”. Internal environment motivations are essentially *firm-specific* factors, while external environment ones mostly refer to the changing characteristics of the home and/or host countries (i.e. *country-specific* factors).

Internal environment motivations for reshoring account for the impact that global operations/configurations exert on intra- and inter-organization efficiency, and distinctive resources and capabilities. Both TCT and RBV highlight the relevance of firm-specific factors in influencing the decision to reshore.

External environment motivations for reshoring reflect the changes in the relative attractiveness of the home and host locations – essentially, changes in costs and/or endowment of production factors, in institutional factors, in country’s strategic assets, etc. The importance of country-specific factors is highlighted by TCT (e.g. country risk), International trade theory (e.g. input endowment and costs; characteristics of the labor market; barriers to trade and tariffs; etc.) and internalization theory (e.g. competitive factors and the global context affecting ownership and location decisions) (Casson, 2013; Mudambi and Venzin, 2010).

It is worth noting that Dunning’s eclectic paradigm (1980; 1998) is consistent with both efficiency and customer perceived value goals, and it includes both the internal environment and the external environment levels of analysis (Buckley and Hashai, 2009). However, this holistic view has led Dunning’s framework to be considered “too eclectic” and overdetermined (Rugman, 2010), leading some scholars to prefer theories with a narrower and more parsimonious focus. Our framework accounts for these perspectives as well.

Customer perceived value (hereafter, value driven), internal environment motivations (Quadrant I) reflect the impact of a complex, geographically extended supply chain on firm’s service dimensions and innovation potential. Offshoring, if not implemented with a market-seeking intent (Grossman *et al.*, 2006), can result in longer transportation lead times and planning horizons, and in turn in higher rigidity and lower operational flexibility. Moreover, in globally extended supply chains, the physical distance/separation between design and manufacturing functions can lower the innovation potential, while lack of co-location between marketing and production/engineering can cause inadequate or untimely responses to customers, especially when a pull approach is adopted and the supply chain is long and articulated.

Cost efficiency (hereafter, efficiency driven) and internal environment motivations (Quadrant II) inform that increased supply chain complexity also affects the coordination costs, as well as the costs of inventories and late deliveries. In some cases, the higher efficiency of the home country production comes from a reduction in the labor component of the production costs because of investments in automation.

Value driven, external environment motivations (Quadrant III) reflect the characteristics of those offshore countries that negatively influence the possibility for firms to achieve the desired quality standards (e.g. because of low quality of local production), and to generate value in those contexts (e.g. lack of skilled labor and technological capabilities). It includes institutional issues too, such as the weakness of the legal system in protecting intellectual property, which may give rise to risk of loss of know-how.

Finally, efficiency driven, external environment motivations (Quadrant IV) essentially reflect changes in the cost differentials of the production factors between the home and the host countries (e.g. labor cost; energy cost), including currency exchange rate risk. Motivations of this quadrant also reflect average efficiency improvements (e.g. productivity) at the country level in the home location.

The set of motivations emerging from the literature have been positioned inside the matrix: a cursory look reveals that they distribute evenly in the four quadrants. This suggests that reshoring is a heterogeneous phenomenon, in the sense that it represents a common response to diverse challenges firms may face (see Table I). Further, the fact that the various motivations belong to all the quadrants, imply the (potential) relevance of all the theoretical approaches considered and the usefulness of a holistic approach.

While most motivations unambiguously fit into one of the four quadrants, in a few cases, motivations are consistent with more than one quadrant, giving rise to four hybrid sections (See Figure 1). For instance, some motivations may reflect both internal environment and external environment elements. Logistics costs, for example, in a broad sense include not only the (higher) transportation costs of a globally-extended supply chains (e.g. fuel), but also country specific factors such as custom duties. Similarly, reshoring can lead to higher efficiency through optimal capacity utilization (Pearce II, 2014). While this would be essentially a firm specific factor, the underutilization of production capacity at home due to the global crisis – which can hit firms differently, but has been a general country-level trend – has contributed to drive reshoring decisions (Kinkel and Zanker, 2013). Other motivations may instead reflect both value driven and efficiency driven factors. At the internal environment level, weaknesses in the internationalization strategy and planning (e.g. lack of knowledge about the foreign destination; lack of systematic location planning) can concern misjudgments on either costs and/or value creation opportunities. At the external environment level, motivations such as global supply chain risk (due to political instability, congestion of transportation system, etc.) might impact both value (e.g. customer service) and efficiency (e.g. higher costs for expedited shipping or penalties).

New empirical evidence on motivations of reshoring

Methodology and data collection

To complement and strengthen our theory-derived classification framework for reshoring motivations, we built a database of cross-country and cross-industry reshoring decisions/projects using secondary data extracted from newspapers and magazines. Large scales survey data encompassing a wide range of countries and industries have, in fact, been substantially missing so far. More specifically, Germany is the only country for which longitudinal data are available (Kinkel, 2012; Kinkel, 2014; Kinkel *et al.*, 2007; Kinkel and Maloca, 2009). Data regarding eight other European countries (namely, Austria, Croatia, Denmark, Finland, Netherlands, Slovenia, Spain and Switzerland) were collected only once within the European Manufacturing Survey (EMS), from 2010 to mid-2012 (Kinkel and Zanker, 2013). Finally, the only dataset available for the US is that of Reshoring Initiative (www.reshorennow.org).

Secondary data have been used both in International Business and in Operations Management research (Roth *et al.*, 2008; Yang *et al.*, 2006). Among sources of secondary data, a specific role is played by written records such as newspapers and magazines, which have been considered particularly useful when no other sources are available (Cowton, 1998; Franzosi, 1987; Mazzola and Perrone, 2013). This might be the case of reshoring since the unit of analysis is often at the product or component level (rather than at the firm level) and therefore public secondary data are difficult – if not impossible – to obtain (Gray *et al.*, 2013). With specific reference to international business studies, Judd *et al.* (1991) consider written records such as newspapers suitable sources for longitudinal and multi-country studies. Yang *et al.* (2006) found

that 20 empirical articles published in six leading international business journals from 1992 to 2003 adopted samples based in newspapers articles.

We developed a data set on reshoring from 2011 to the beginning of 2014, gathering information from several sources. We first considered the historical archives of relevant international business newspapers (e.g. Wall Street Journal, Financial Times, Sole 24 Ore) and other national-level newspapers, and business magazines (e.g. The Economist, TIME, Bloomberg BusinessWeek). We searched for articles adopting selected keywords (reshoring, back-shoring, backshoring, nearshoring, back-reshoring, insourcing, on-shoring, in-shoring, reverse globalization, relocation, repatriation in combination with manufacturing). We then searched in white papers by major consulting companies (e.g. Boston Consulting Group, McKinsey, Accenture and Grand Thornton). Finally, we used internet search engines with the above-mentioned keywords to further check that no relevant news concerning reshoring was missing. With respect to US companies we also used data collected by the Reshoring Initiative (www.reshorenw.org), which, to our knowledge, is the only public database currently available.

The unit of analysis was the single decision/project to move back offshore activities. If a company has reshored production from two different host countries, in our database it accounts for two pieces of evidence. We followed standard content-analysis procedures (Krippendorff, 2004) and classified the articles, editorials, and letters as either a primary article (reshoring or equivalent keywords appeared in the headline or first paragraph and at least once in the remaining text) or a secondary article (reshoring or equivalent keywords appeared at least once). Companies' motivations for reshoring were inferred either from quotation of direct interviews with the companies' managers reported in the article, or from the journalist's report of the case.

A pre-testing was carried out with twenty sources, which were evaluated by each member of the research group and then discussed all together in order to get a common agreement of the coding process. The coding was then applied to the entire sample, and, in order to avoid misinterpretation of the text, each observation was reviewed by two independent researchers of the group and cross-validated (Kolbe and Burnett, 1991). In case of different positions, a third researcher was involved, and the source was reviewed again (Jacobson *et al.*, 2012). In addition, when the case was present in more than one source, the information was compared and, in case of discrepancy (less than 5 decisions), the case was eliminated from the database.

The database consists of 377 cases belonging to 322 companies, as 36 companies (9.5% of the total) implemented more than one reshoring operations (from 2 to 5). These cases cover all the four possible manifestations or types of reshoring identified by Gray *et al.* (2013) (see section 2).

Sample characteristics

Breakdown by home country (Table II) reveals that US and EU companies are almost equally represented in our sample (respectively 47% and 51%). The three home countries with the highest number of cases are US, Italy, and Germany, which are among the developed countries with the strongest specialization in manufacturing. As for the host country whence reshoring strategies took place, 71% of total operations concern China and other Asian countries, whereas Eastern Europe accounts for around one-tenth, representing approximately 23% of offshore experiences of EU companies.

The inclusion of both EU- and US-headquartered companies represents a significant strength of our research since the few aforementioned empirical reshoring datasets available so far focused either on European or on North American companies.

Host country's region	Home country region							
	Western Europe (No.)		North America (No.)		Asia (other than China) (No.)		Total (No.)	
	SMEs	Large	SMEs	Large	SMEs	Large	SMEs	Large
China	86		132		5		223	
	45.3%	54.7%	62.9%	37.1%	–	100.0%	54.7%	45.3%
Asia (other than China)	22		25		1		48	
	27.3%	72.7%	52.0%	48.0%	–	100.0%	39.6%	60.4%
Eastern Europe	44		1		–		45	
	36.4%	63.6%	100.0%		–	–	35.6%	64.0%
Western Europe	26		5		–		31	
	3.0%	96.0%	20.0%	80.0%	–	–	6.0%	93.0%
Central & South America	7		11		–		18	
	28.0%	71.0%	18.0%	81.0%	–	–	22.0%	77.0%
North Africa & Middle East	6		1		–		7	
	–	100.0%	–	100.0%	–	–	–	100.0%
North America	3		1		–		4	
	–	100.0%	–	100.0%	–	–	–	100.0%
Oceania	–		1		–		1	
	–	–	100.0%	–	–	–	100.0%	–
Total	194		177		6		377	
	33.0	67.0	56.5	43.5	–	100.0	43.5	56.5

Table II.

Breakdown by Home/Host country and size

Source: Uni-CLUB MoRe Back-reshoring Research Group

Note: We considered SMEs companies with less than 250 employees, following a Recommendation of the European Union Commission (2003/361/EC)

With reference to the firms' size, firms reshoring to Europe are mostly large firms disregarding the host country, confirming what was already found by Kinkel and Zanker (2013), while firms reshoring to North America are mostly SMEs (especially for reshoring from Asia).

Our database includes reshoring cases that occurred in a wide range of manufacturing industries (Figure 2). The sectors characterized by a higher number of cases, such as clothing and footwear, electronics, mechanical, and furniture and home furnishing, are among the most relevant ones for Western economies and those which have been more interested by offshoring over the last decades (UNCTAD, 2013). Our data show a higher proportion of large firms reshoring in electronics and automotive, while it is the opposite for furniture & home furnishing, matching with the findings of Dachs and Zanker (2015). For the remaining sectors, reshoring cases are almost equally distributed by size.

New empirical evidence on motivations of reshoring: classification and findings

The aforementioned content analysis procedure allowed us to identify 26 distinct reshoring motivations driving the sampled firms' behavior. Two of them (i.e. "global crisis" and "poor economic and financial performance") were excluded due to their vagueness and the consequent poor information content. Figure 3 classifies the motivations according to our interpretative framework and reports their frequency. In general, the number and variety of motivations confirm the wide and diversified set of motivations for reshoring highlighted in the literature review (see Section 3).

Comparing our empirical data with the reshoring literature, we notice a good overlap in 19 out of 24 motivations. While the cases of perfect (or very high) overlap can

be easily identified by the reader, we would like to highlight here the following significant correspondences: proximity to customers - reduced responsiveness; offshored activities' control and coordination complexity - supply chain coordination costs; inadequate IP protection & risk of brand counterfeiting - loss of know how in the host country; firm's global reorganization - redefinition of the global supply chain. In addition, we acknowledge that some motivations available in the literature can be brought back to those available in our database, i.e., inventory levels, penalties for late deliveries, and energy costs which can be attributed to our wider motivation "total cost of sourcing"; freight costs which are a component of logistics costs. Overall, these "matching" motivations cover a wide portion of the total observations in our dataset.

We notice, however, some differences in the emphasis attributed by the literature to certain motivations (in terms of number of authors that identify them and of statistical significance where available) and their relevance in our data. For instance, the "made-in effect" – highlighted by only three contributions in the literature – is the fourth most important motivation of reshoring decisions in our sample. This effect has emerged as particularly relevant in those industries (e.g. fashion) in which perceived quality is more and more influenced by the real production location, especially for high-end segments. On the contrary, innovation is the third most important reshoring motivations in the literature (loss of innovation potential) but it is cited by few firms in our database (implementation of strategies based on product/process innovation – 14 cases). This might be explained by two lines of reasoning. On the one side, if companies delocalize only mature productions this may not limit their innovation potential. On the other side, resources and capabilities of emerging countries (like China and India) have significantly grown in the last decades and these countries are nowadays able to offer fertile contexts for innovation.

Similarly, the loss of know-how in the host country seems to be less relevant in our dataset (intellectual property – 8 cases; brand protection issues – 4 cases) than in the literature (e.g. Dachs and Kinkel, 2013). This result might be explained by three interrelated lines of reasoning: (1) companies have improved their knowledge protection capabilities (e.g. Sofka *et al.*, 2014); (2) legislation concerning intellectual

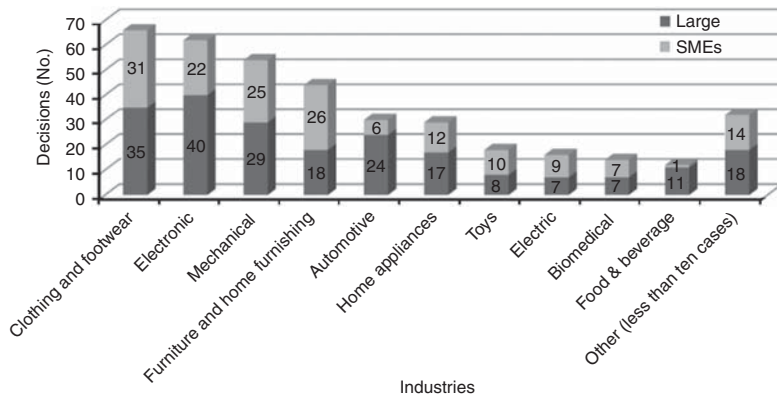
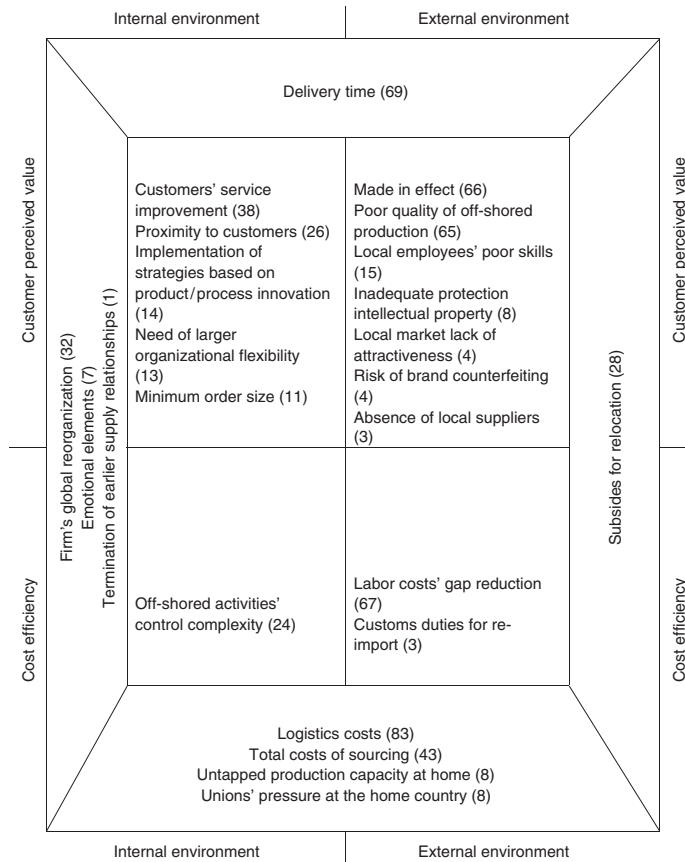


Figure 2.
Breakdown by
industry and size

Note: We considered SMEs companies with less than 250 employees, following a Recommendation of the European Union Commission (2003/361/EC)

Source: Uni-CLUB MoRe Back-reshoring Research Group



Note: The number of cases which reported each motivation is highlighted within brackets

Figure 3. Motivations for reshoring strategies: Uni CLUB MoRe Back-reshoring evidence

property and brand issues has been significantly improved in several countries (e.g. China; Li and Yu, 2014; Montobbio and Sterzi, 2013); (3) the globalization and the diffusion of the Internet have made the intellectual property and brands protection issues less dependent on the geographical location and the physical distance (Nassimbeni *et al.*, 2012). Also noteworthy is the low importance assigned by companies in our dataset to the other cost efficiency, country specific variables highlighted by the literature in addition to labor costs, in particular energy costs.

In addition to the cases of good/perfect overlap, there are two additional sets of motivations for which we can establish some links/logical correspondences between the literature and our database: (1) the unions' pressure at home can be brought back to the high unemployment rate; (2) the weaknesses in the decision-making process (lack of knowledge about foreign destination and lack of systematic planning) may cause such problems as the lack of attractiveness of local market and the absence of local suppliers.

Five reshoring motivations highlighted by the literature did not emerge in our empirical dataset, i.e., automation of production process, exchange rate risk, global supply chain risks, increased country manufacturing productivity, home labor market

flexibility. Conversely, our analysis has allowed us to identify two reasons that were not highlighted by the literature: custom duties for re-import and termination of earlier supplier relationships. The former motivation, although still not so numerically relevant (3 cases), is of some interest since it reveals the possible impact of “defensive” strategies by governments and institutions to protect local production. For illustration, we mention the recent attempts to launch protectionist policies (traditionally typical of Brazil and ASEAN countries) conducted by some Western countries like US (“Buy American” Trade Policies of Obama administration) and the European Union (e.g. the recent increase in tariff for extra-EU imports of certain products such as corn and cereals).

Motivations deriving from the extant literature and those belonging to our database cover all the four quadrants and the hybrid areas of the interpretative framework. However, comparing the latter with those cited by scholars and practitioners (see Figure 1), we notice a greater variety among the value driven than the efficiency driven areas. This result is further confirmed by the count of the number of evidences pertaining to the two areas of the matrix (i.e. 336 vs 236 evidences). Finally, external environment motivations largely prevail over the internal environment ones (263 vs 166 evidences). These findings will be discussed in the following section.

Discussion

Our study was aimed at advancing theoretically and empirically the scientific knowledge about the motivations for manufacturing reshoring. Drawing from the key theoretical perspectives adopted by the reshoring literature (i.e. International trade theory, Dunning’s “eclectic paradigm”, Internalization theory, Transaction cost theory, and Resource based view), we developed an interpretative framework and we applied it to classify the motivations highlighted by the reshoring literature. Since reshoring is a novel research topic (significant studies appear only from 2007 onwards) and empirical evidence is still limited, we extended previous analyses by applying the classification framework to the motivations identified in a set of secondary data collected by our research team.

In this section, we discuss the main results emerging from our study.

First, our theory-driven framework proves effective in classifying the various empirical motivations. The various motivations belong in fact to all the four quadrants and to some hybrid areas, implying the relevance of all the theoretical approaches considered. Based on our analysis, the standard location-related approaches can explain several empirical motivations of reshoring. Only few relocation drivers identified by the reshoring literature (e.g. lack of systematic location planning; lack of knowledge about the foreign destination) or found in our sampled firms (lack of attractiveness of local market; local of local suppliers) might raise the case of reshoring as correction of prior misjudgment (Gray *et al.*, 2013, Kinkel and Maloca, 2009). This result, strengthened by the relatively long average duration of off-shoring (especially for operations concerning Eastern Europe in our dataset), seems consistent with the findings of M^odez-Mora and Merino (2014), who argued that it is possible to explain reshoring based on extant location-related theories.

Nevertheless, it should be noted that, for a few motivations (e.g. total cost of sourcing; firm’s global reorganization), it is difficult to clearly discern whether reshoring originates from changes unpredictable to the average firm, or from erroneous initial evaluations when the offshoring decision was taken. Accordingly, we tend to believe that reshoring is primarily attributable to changing context conditions, but


cases of production repatriation due to changes in the managerial evaluation of true total costs (or, more in general, overall competitiveness) of offshoring relative to domestic production can also occur.

While our analysis supports in general the idea that extant theories appropriately classify the motivations of reshoring, a particular motivation identified by a previous study (Canham and Hamilton, 2013) and also found in our sample of companies (i.e. emotional factors) can hardly fit into any of these theories. This patriotic issue, linked to the entrepreneurs and their local roots, far from the managerial logic of multinationals (on which the theories adopted in our study are essentially based), suggests the need to take some entrepreneurial theories into consideration (see Simpeh, 2011), which could lead to the identification of entrepreneur-specific kind of motivations. Noteworthy in this direction is the attempt made by Andersson (2000) to develop a theory of the internationalization of the firm from an entrepreneurial perspective. This approach might be taken into account by future reshoring research.

Second, a relevant point for empirical analysis is the fact that our data set confirms the robustness of the motivations for reshoring already highlighted in the extant literature. The previous section has shown that there is a good overlap in 19 out of 24 reshoring motivations. Our results strengthen previous findings by extending them to a larger set of home countries, host countries, and industries.

Third, our analysis suggests a disconnection between motivations for offshoring and reshoring. While recent literature indicates that offshoring is mostly driven by cost considerations (Bailey and De Propris, 2014; Canham and Hamilton, 2013), reshoring, on its side, is significantly affected also by value-related elements, and this is apparent from both the extant empirical studies and (more significantly) from our data (see Section 4.3). A plausible interpretation for this is that lower costs of offshored locations ended up also attracting companies focused on value creation (more than cost efficiency) strategies, despite the challenges that such a choice could posit to the achievement of their competitive priorities. Reduction in cost differentials among locations, customers' requests for higher variety and customization of products, increasing difficulties in managing long-distance operations and relationships, severe risks of supply chain interruption nullify the benefits of lower input costs on competitiveness and lead companies to reverse their location decisions.

The importance of both efficiency driven and value driven motivations for explaining reshoring strengthens the case for more fully fledged ex ante evaluations of offshoring initiatives that keep into account not only the expected cost savings but also the "hidden costs" of offshoring (Larsen *et al.*, 2013).

Fourth, our analysis shows that reshoring depends on both internal environment (basically, firm specific) and external environment (basically, country specific) factors. The firm's assets and capabilities influence the effectiveness of its offshore experience, and differences in endowments can lead to different production-location decisions, even for companies belonging to the same industry. In addition, firm specific factors can vary based on product's characteristics. Corroboration for this is found in Ma sz-Mora and Merino (2014), when they observe that in the Spanish footwear industry high-range companies reshored due to the difficulties in keeping product variety high, and the excessive costs of monitoring their high-quality production in offshore countries. Instead, mid-range ones did it to optimize the usage of their production capacity.

Nevertheless, it must be acknowledged that external environment factors (e.g. changes in the relative attractiveness and host country's unfitness for the company), appear to be more relevant than internal environment ones in our dataset

(263 vs 166 cases). This finding is consistent with the conclusions of Ellram *et al.* (2013), stating that the factors which affect a region's manufacturing attractiveness change over time, and push firms to continuously reconsider their production-location choices.

Managerial implications

Relevant implications for practice can be drawn from our study. First, the extensive list of reshoring motivations built through the review of the extant literature and the analysis of secondary data provides managers a detailed overview of the factors that should be considered for taking grounded reshoring decisions. In addition, the frequency of each motivation among the cases in our database (see Figure 3) can provide managers with a preliminary assessment of their relative importance.

Besides identifying the reshoring motivations, the classification framework proposed in this study entails that managers should carefully evaluate reshoring (as well as offshoring) initiatives in terms of their underlying strategies, and trying to identify *ex ante* potential "hidden costs" (Larsen *et al.*, 2013). Motivations for reshoring such as the "lack of skilled workers in the host country" and the "made-in" effect imply the failure to transfer or develop capabilities relating to human resources (either inside the company or at its business partners in the offshore location). Furthermore, the shift to an offshore location, especially if production is carried out by external partners might end up eroding the firms' capabilities, if not correctly evaluated. In this respect, managers should be wary of adopting bandwagon attitudes towards offshoring and should adopt a strategic disposition rather than an opportunistic one with respect to offshoring.

Since the appropriateness of a location decision is driven by both internal environment and external environment factors, managers must carefully account for both of them, and re-evaluate the "overall fit" of their decision in case a change happens either at the internal or at the external level.

The fact that internal environment motivations for reshoring still appear relevant for the decision to reshore implies that the strategic evaluation of offshoring initiatives should be grounded in a consideration of the dynamics of competences and capabilities, and on the identification of the organizational changes needed when the firm operates in a geographically more dispersed environment.

Conclusions, limitations and future research directions

Offshoring of production activities to low cost locations has raised significant managerial challenges for companies and severe economic and social concerns in Western countries due to the loss of jobs and the depletion of manufacturing skills. Existing evidence indicates the reverse trend has recently started rising. Research on reshoring is still in its infancy and the comprehension of its motivations and patterns deserves further study.

To our knowledge, our work is the first one that attempts to collect, classify, and organize in a theory-based framework the motivations of reshoring as they emerge from extant literature. By linking motivations to theories and by identifying common traits among different motivations, the framework addresses the interpretation of reshoring causes. It also allows recognizing distinct "typologies" of reshoring – based on the ultimate goal of production relocation (i.e. customer perceived value vs cost efficiency) and the level of analysis (i.e. internal environment vs external environment). Additionally, our work enriches the extant knowledge on reshoring motivations

through a large-scale investigation of reshoring cases we have been conducting over the past four years. This is one of the largest empirical investigations of the phenomenon available to date. Our data confirm that extant literature has been able to detect most of the drivers of reshoring. With our analysis, we were able to quantify the relevance of the various motivations, based on their frequency in the sample.

Our results should however be viewed in light of some limitations. Our study is based on the analysis of secondary data extracted from newspapers and magazine sources. Some motivations (and especially those that configure a “correction of a previous erroneous decision”) could have been underestimated. In addition, certain industries (e.g. clothing and footwear), certain countries (US and China), and certain firms (large companies and MNCs) could have more visibility to the media. However, it should be kept in mind that collecting data on reshoring has been argued to be rather difficult by previous studies. Hennart *et al.* (2002) note that the revision of location decisions is generally perceived as a negative experience, making executives reluctant to discuss the topic with researchers (Hamilton and Chow, 1993). Public data on reshoring are difficult to obtain because the unit of analysis is often at the product or component level (Gray *et al.*, 2013).

Another possible limitation is due to the fact that our classification work inherently implied some discretion and individual judgment. We however spent considerable efforts in cross-validating the assessments through extensive discussion within the research team. Future research could refine our framework through in-depth case studies as well as empirically validate it through survey data. The two dimensions (i.e. the goal and the level of analysis) may for instance be broken down and more specific sub-dimensions may be uncovered. Furthermore, the framework can be further characterized according to the key dimensions of international business research (e.g. home/host country, industry, and firm size). Some findings of our study, such as the lower importance assigned to intellectual property protection and innovation issues with respect to previous literature, also deserves attention.

Another prominent research direction concerns the development and test of propositions linking the different typologies of reshoring motivations that we identified (i.e. the quadrants of our framework) to company characteristics, including the governance modes (insourcing vs outsourcing), the firm size, the industry, the home and host countries, and the product/production process characteristics. While these contingent effects have been significantly studied with respect to offshoring (see for instances Schmeisser’s (2013) review), they have been neglected by reshoring literature so far, and lay outside the scope of our paper. Future studies may also focus on the motivations, factors and conditions that drive a higher propensity of certain firms to relocate production back to the home country in comparison to others that instead continue to source/manufacture offshore. Finally, the effects of reshoring decisions on firm performances are a further interesting avenue for future research that would require a longitudinal approach.

Note

1. “It is often convenient to analyze the ownership of facilities conditional on their location [...] It is however a mistake to take the location of facilities as entirely exogenous, as the cost of coordination may vary between different spatial configurations of facilities. As a result, the ownership of facilities can also influence their location” (Buckley and Casson, 2011, pp. 499-500).



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