

# Reshoring and Insourcing Drivers and Future Research Directions

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# Reshoring and Insourcing: Drivers and Future Research Directions

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## **Reshoring and Insourcing: Drivers and Future Research Directions**

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## **Introduction**

Outsourcing and offshoring are important business strategies and continue to be of significant interest to both managers and scholars (Tate *et al.*, 2009; Hsiao *et al.*, 2010; Bals *et al.*, 2013). In the past, strategic decisions were often made to reduce costs and transfer risks and responsibilities to offshore subsidiaries and suppliers (Manuj and Mentzer, 2008). More recently, evidence suggests that managers have started to reverse previous outsourcing and offshoring strategies (McIvor, 2009). Studies suggest that 40 percent of managers perceive a trend toward countered reshoring and insourcing activities within five years after the initial decisions (Tate *et al.*, 2014; Kinkel, 2014). As a result, scholars are increasingly interested in the emerging reshoring and insourcing phenomena (Hameri and Hintsa, 2009; Cabral *et al.*, 2013; Ellram, 2013; Fratocchi *et al.*, 2014). However, as with emerging topics, the current literature is fragmented and many questions remain unanswered (Arlbjørn and Mikkelsen, 2014).

One issue in particular persists: delineating the specific drivers of reshoring and insourcing (Gray *et al.*, 2013; Tate, 2014). For example, discussions have raised questions over whether reshoring and insourcing decisions are driven by failure to realize cost benefits from offshoring and outsourcing strategies (Kinkel and Maloca, 2009), long-term adaptations of firm operations (Ellram *et al.*, 2013), or something else, such as changes in managerial attitudes about the hassles, “hidden” costs, and risks of offshored and outsourced operations (Gray *et al.*, 2013).

Researchers have sought to explain drivers of make or buy and location decisions theoretically (e.g. McIvor, 2009), using established theories such as transaction cost economics (TCE) to explain outsourcing failures (Handley and Benton Jr., 2013). However, these drivers have not yet been fully extended to conceptually explain reshoring and insourcing decisions of firms, essentially representing revoked offshore-outsourcing decisions (Lampel and Giachetti 2013). Missed opportunities to study particular value creation tasks, defined as a specific

product/component or service that a firm requires to effectively engage in its core business purpose and to deliver value to its direct customers (Lepak *et al.*, 2007), limits our understanding of the link between reshoring and insourcing drivers and firm decision making. For example, while a value creation task such as product prototyping might be most effectively produced in-house and onshore, another task like component assembly might most effectively be conducted offshore-outsource. Hence, firms may be driven to engage in various combinations of reshoring and insourcing decisions simultaneously.

Moreover, the applied terminology is not yet unified and lacks specificity (Gray *et al.*, 2013). This, in turn, hinders progress in understanding the drivers of reshoring and insourcing because ill-defined or assumed definitions will yield ill-defined theoretical concepts in academic research (Wacher, 2008). To that end, competing terms impede clarity and limit the discussion of all possible reshoring and insourcing decisions available and thus, the motivating drivers of managerial decision making (Fratocchi *et al.*, 2013; Gray *et al.*, 2013). A prominent example illustrates this confusion in practice: the Obama administration's "Insourcing American Jobs" forum (White House, 2012) was actually concerned with the reshoring of jobs back to the U.S. Another example concerns the firm Katjes Fassin, who reported quality, lead time and capacity problems as drivers for their recent reshoring initiative, which in fact encompassed both the reintegration of formerly outsourced production (insourcing) and the reallocation of order volumes to geographically closer suppliers (reshoring) (Klein, 2013).

The current research seeks to address this equivocality. The purpose, therefore, is twofold. First, it seeks to develop a more complete understanding of the underlying drivers of reshoring and insourcing decisions based on clear definitions of reshoring and insourcing permutations. Second, it provides specific directions for future research to investigate the reshoring and insourcing drivers–outcome relationship and the contextual variables affecting it.

To address this dual purpose, this research elaborates Transaction Cost Economics (TCE) and Organizational Buying Behavior (OBB) theories to help explain the reshoring and insourcing drivers–outcomes logic (Figure 1) (e.g. Ketokivi and Choi, 2014). Based on an in-depth evaluation of the relationship between external drivers and reshoring and insourcing decision outcomes, four main topics guiding future practical and scholarly thinking emerged as future research directions. These directions suggest further TCE- and OBB-grounded research as well as the study of additional contextual factors outside the scope of our underlying theories (Brodbeck *et al.*, 2007). This research helps managers to cope with the multiplicity of drivers and obstacles affecting their decision-making processes by providing them with a comprehensive blueprint to determine if they should initiate supply chain redesign through reshoring and insourcing changes for certain value creation tasks (Ellram *et al.*, 2013).

### **Conceptualizing reshoring and insourcing decisions**

We now turn to the conceptualization of reshoring and insourcing permutations, as shown in Figure 1. Offshoring and outsourcing are often interrelated international production and sourcing strategies implemented to realize performance improvements (Jahns *et al.*, 2006). Outsourcing refers to work that “is performed by independent parties who are not part of the firm’s employee base” (Ellram *et al.*, 2008, p. 149), while offshoring refers to the relocation of value chain activities outside of the country of the firm’s headquarters (Bals *et al.*, 2013). Hence, the differentiating factors between the two are ownership and location (Jahns *et al.*, 2006). Also, the two terms are not mutually exclusive and are often combined strategies (Bengtsson and Berggren, 2008).

Reshoring and insourcing are also fundamentally related to ownership and location and represent one-dimensional changes or combined two-dimensional changes from one cell to another (see Figure 1). Moreover, there are also hybrid reshoring and insourcing changes, e.g. where a firm

locates closer, but not all the way back, to the home country, or where it reallocates a previously outsourced task to a joint venture or a long term partner over which it has attained some hierarchical control. These reshoring and insourcing permutations are defined in detail in the following sections. The terms for the specific changes from one cell to another are illustrated in Figure 1 and summarized in Table 1.

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### ***Defining reshoring***

*Reshoring* is defined as the relocation of value creation tasks from offshore locations to geographically closer locations such as domestic or nearshore countries and based on the following premises (Bals, *et al.* 2013; Gray *et al.*, 2013; Ellram *et al.*, 2013; Tate, 2014):

- It is the reverse decision of a previous decision to offshore,
- It can refer to all or only a part of previously offshored activities,
- It is irrespective of the ownership mode in the offshore country.

Following these geographical considerations, the concept of reshoring can also be further differentiated into *Backshoring* and *Nearshoring*. *Backshoring* is the decision to partially or fully relocate value creation to the home country of the firm's headquarters (Fratocchi *et al.*, 2014; Kinkel and Maloca, 2009). The term *Backshoring* specifically refers to moving task production all the way back to the home country (Arlbjørn and Mikkelsen, 2014). *Nearshoring* denotes repatriating value creation tasks from the foreign host country to a location closer to, but not within, the borders of the home country (Fratocchi *et al.*, 2014).

Moreover, this research distinguishes *Outsourced Backshoring* between offshore and nearshore locations. In both cases, value creation tasks previously delegated to suppliers outside

the home country are relocated back to the same or alternative suppliers, but either back to the buying firm's home country (*Outsourced Backshoring*) or just to a border state location (*Outsourced Nearshoring*). An example of a firm engaged in *Outsourced Backshoring* is California-based toy brand Wham-O-Toys, which recently relocated Frisbee production from a Chinese supplier to a US supplier. *In-house Nearshoring* is moving a previously outsourced value creation task to a wholly-owned subsidiary in a nearby region or country. Finally, an example of *In-house Backshoring* is Siteco GmbH, which shut down its wholly-owned Slovenian plant and ramped-up lighting production in a new, wholly-owned production facility located next to its headquarter premises in Germany.

### ***Defining insourcing***

Gray *et al.* (2013) specifically point out that the reshoring decision is fundamentally concerned with where value creation tasks are to be performed, independent of who is performing them. Insourcing is defined as “the decision to reincorporate an outsourced activity within a company that had formerly been transferred to an external supplier” (Cabral *et al.*, 2013, p. 2). The process of reversing outsourcing requires additional internal labor to supply the firm's operational needs, but allows the firm to regain hierarchical control of the required processes and competencies (Sikula *et al.*, 2010). Insourcing decisions have two distinct attributes:

- Reduction of external contract volume (and transferring this part of the volume into in-house governance) or overall termination of the cooperation with the current outsourcing partner for a particular value creation task.
- Creation of a new, or an alteration of the existing, governance structure.

Insourcing can take the form of *Domestic Insourcing*. For instance, JP Morgan Chase chose to insource its U.S.-based information systems services, previously outsourced to IBM in the U.S. Task value creation may also reside in a nearshore or offshore location while a firm integrates the



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respective task back into its own organizational boundaries, typically into a local subsidiary. These changes are defined as *Nearshore* and *Offshore Insourcing*.

### ***Defining combined reshoring and insourcing decisions***

In the defined two-dimensional spectrum firms may also simultaneously reshore and insource value creation tasks. In doing so, firms integrate more value creation of the back- or nearshored tasks to their own domestic production facilities. An example of *Backshore Insourcing* is Slek Audio, which moved the production of high-end headphones away from a Chinese supplier to its own manufacturing plant in the U.S. Alternatively, a firm can chose to *Nearshore Insource*. For instance, Margarete Steiff GmbH, a German company, decided to relocate production of a line of toys from a Chinese supplier to wholly-owned subsidiaries in Tunisia and Portugal.

### ***Hybrid reshoring and insourcing decisions***

In addition to combined changes, there are also changes related to hybrid forms of governance and location (Figure 1). Instead of fully integrating previously delegated tasks back into their own organizational boundaries, firms may decide to choose a one-dimensional change (e.g. joint venture or long-term partnership), which would be referred to as *Collaborative Domestic Insourcing*, *Collaborative Offshore Insourcing*, *Collaborative Backshoring* and *Collaborative Nearshoring*.

Such changes entail relocating value creation of a long-term partnership (offshore or nearshore) closer to the focal firm's headquarters while maintaining hybrid governance with the same long-term partner. The two-dimensional changes are *Collaborative Nearshore Insourcing* and *Collaborative Backshore Insourcing* depending on the destined geographic location of the task. These hybrid governance forms represent a weaker form, but can still be labeled as *Insourcing* derivatives since they lead to greater hierarchical control over the task, compared to their previous state of governance (Williamson, 2008).

### **Drivers of reshoring and insourcing decisions from the transaction cost economics and organizational buying behavior perspectives**

The preceding sections defined the reshoring and insourcing permutations available to firms as ownership and locational strategies. This discussion sets up a definitional base from which to now focus on the drivers of reshoring and insourcing decisions. TCE and OBB provide established categories to structure reshoring and insourcing drivers along behavioral and transactional characteristics associated with the task (Williamson, 1975, 1985 and 1998). TCE helps explain why firms integrate certain activities internally and source others from the market (Coase, 1937). Recently, researchers have begun to extend the tenets of TCE to encompass location decisions and strategies (Buckley and Casson, 2009; Schneider *et al.*, 2013). In the pursuit of optimal locational choices and governance modes of transactions, decision makers compare transaction costs and benefits of current offshore-outsourcing operations to projected transaction costs and benefits of decision alternatives that involve reshoring and insourcing scenarios (Table 2) (Cyert and March, 1956; Chiles and McMackin, 1996).

OBB serves as a complementary theory to TCE, providing additional details for framing tangible reshoring and insourcing drivers. In line with TCE, OBB views the transaction as the unit of analysis and further specifies task characteristics (Webster Jr. and Wind, 1972). Specifically, OBB characterizes the task (buying class) based on its frequency, novelty, importance and complexity (McQuiston, 1989; Wind and Thomas, 1980). Similarly, Williamson (1979) affirmed that transaction difficulties and associated costs increase when transactions are characterized by uncertainty, asset specificity, and frequency (Williamson, 1979; Aubert *et al.*, 2004). These characteristics, along with assumptions of human behavior, change the design and performance of business contracts (Williamson, 1998). Therefore, the following sections focus on behavioral

human drivers, followed by transactional drivers for reshoring and insourcing (Table 2). Moreover, OBB and TCE both support that the number and variety of transactions taking place at any given time, as firms may pursue distinct offshoring-reshoring and outsourcing-insourcing decisions simultaneously across their portfolio of value creation tasks (Robinson *et al.*, 1967).

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### ***Behavioral and human drivers***

*Bounded rationality* is a cognitive assumption of human behavior where decision makers are inherently limited in their choices because environmental complexities strain the bounds of knowledge, making it difficult to foresee all potential contingencies of a buyer-supplier relationship and rationalize all expected outcomes (Pisano, 1990; Lewin *et al.*, 2009; Cabral *et al.*, 2013). The inability to accurately project performance outcomes may lead to higher than expected costs associated with offshoring/outsourcing decisions, including poor quality, supplier dependence, and excess coordination and monitoring of problem suppliers (Fredriksson and Jonsson, 2009; Tate *et al.*, 2009). Furthermore, loss of control over suppliers that act opportunistically can also create serious financial and reputation costs associated with product defects and recalls (Tate *et al.*, 2009; Gray *et al.*, 2013). An example of bounded rationality in the reshoring and insourcing context is General Electric's decision to invest \$800 million into its previously abandoned production site in Kentucky in order to revitalize appliance production in the US, previously offshored/outsourced overseas. This decision was made because of the dramatic decline in sales resulting from unforeseen product quality problems and the faster than expected increase in Chinese labor costs. Firms' inability to capitalize on expected benefits, the advent of unexpected costs, and industry-contextual factors drive managers to reconsider outsourcing and offshoring decisions (Fratocchi *et al.*, 2014).

Moreover, decision making biases such as the bandwagon effect also originate from bounded rationality (Barthélemy, 2003). A company imitating competitor offshoring/outsourcing decisions is justified on the grounds that benefits attainable by other firms will replicate to its own firm. Moreover, the fear of suffering from competitive disadvantages if competitors profit from offshore-outsourcing reinforces bandwagon behavior (Abrahamson and Rosenkopf, 1993).

In addition, changes in managerial valuation through management turnover can also drive reshoring and insourcing decisions due to a shift of strategic priorities towards the focus on different key performance metrics (Tate, 2014). Revisiting previous decisions based on a new performance appraisal system can lead to an altered valuation (Veltri *et al.*, 2008). For instance, changes in firms' market-product combinations may also favor Backshore-Insourcing. For example, Varta Microbattery GmbH changed their product-market strategy away from mass produced heavy industrial batteries and entered the market for micro batteries. In order to deal with the shorter product lifecycles in this segment, Varta required close integration of product development and production located on headquarter premises in Germany. The example also highlights how firm strategy and objectives can influence the context in which reshoring and insourcing decisions are made and how drivers are perceived by managers.

Finally, the lack of codification of knowledge may complicate the transfer of knowledge of firms to their subsidiaries and suppliers, and vice versa (Gulbrandsen *et al.*, 2009). Difficulties in disseminating relevant knowledge for the value creation task is likely to enhance transaction costs and favor reshoring (Winter, 1998). Knowledge dissemination problems are also negatively related to using external partners and thus, favor insourcing (Kogut and Zander, 1993). For example, Otis Elevator's production facility in Mexico ran into a production backlog, ultimately causing significant order cancelations. While the firm initially nearshored to Mexico to benefit from government incentives and comparatively low labor costs, it decided to backshore production

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to South Carolina. Managers claimed that client specific knowledge is deeply embedded among sales, production, and R&D departments in South Carolina, a claim that hints at how firm capabilities influence the viability of such decisions. The failure to adequately communicate with the Mexican plant on client-specific matters caused rework and high capital lock-up. Hence, the accumulating transaction costs justified their *Backshoring* initiative.

*Opportunism* describes the behavior of actors toward transaction partners when driven by self-interest (Williamson, 1973). Since both parties suspect that the other is opportunistic, each will engage in information-seeking activities, altering inter-firm relationships which can increase transaction costs (Aubert, *et al.*, 2004). *Opportunism* typically results in de-prioritization of the business relationship, causing dissatisfied buying firms, in conjunction with higher coordination and control costs, to seek reshoring and insourcing alternatives (Handley and Benton Jr, 2013). Buying firms may become dependent on suppliers for technology, assets, and other types of resources which shift relational power in the supplier's favor and increase the risk of supplier opportunism for the buyer (Handley and Benton Jr, 2013). For example, Hubbardton Forge, a lamp fixture manufacturer, backshored components sourced in China to the U.S. because of perceived risks associated with dependency on suppliers' possession of key resources and their ability to dictate prices for specialty materials (Reshoring Initiative, 2015).

### ***Transactional drivers***

*Environmental Uncertainty* exposes firms to potential disturbances and is defined as the perceived degree of volatility and unpredictability in the marketplace by decision makers (Milliken, 1987). Such uncertainty is considered a strong driver of contemporary reshoring and insourcing decisions (Ellram *et al.*, 2013; Gray *et al.*, 2013; Tate *et al.*, 2014), especially in conjunction with bounded rationality (Aubert *et al.*, 2004). Specifically, previously unforeseen cost increases, such as wage rates and fuel and transportation costs, disrupt business set models (Sirkin *et al.*, 2014). Moreover,

macroeconomic changes like economic growth projections, raw material shortages, and exchange rate fluctuations induce further uncertainty (McArthur and Nystrom, 1991; Lewin *et al.*, 2009; Ellram *et al.*, 2013; Tate *et al.*, 2014). For example, Lemken GmbH & Co.KG relocated its assembly of agricultural machinery from a wholly-owned Russian subsidiary to a long-term supplier in its home country of Germany. This decision was a reaction to increased political instability, volatile material and energy costs, and consistently high logistical uncertainty from arbitrary export regulation.

Institutional and regulatory changes such as subsidies and policy changes, labor market regulations, tax structures, and political stability also affect the attractiveness of certain countries or regions and have increasingly become sources of significant uncertainty (Gray *et al.* 2013; Tate, 2014, Tate *et al.*, 2009). Changes to government assurances of security such as intellectual property protections can also impact decision making in favour of reshoring and insourcing decisions (Ellram *et al.* 2013; Tate, 2014). In this vein, Caterpillar decided to backshore compact engine manufacturing from Japan to Victoria, Texas due to unpredictable and increasingly unfavorable tax policies and loosening intellectual property protection in the host country.

A further constituent of uncertainty is supply chain complexity (Ellram *et al.*, 2013). Vertical complexity (e.g. number of direct suppliers), horizontal complexity (e.g. number of tiers), as well as geographic dispersion and length of the supply chain, create additional uncertainty for the firms (Choi and Hong, 2002). Supply chain complexity increases coordination and control efforts and costs, increases transportation costs, and ties up excessive amounts of working capital in safety stock (Lewin *et al.*, 2009; Tate, 2011; Ritter and Sternfels, 2004). Lieb and Lieb (2009) found evidence of complexity's impact, reporting that one-fourth of western manufacturers took steps to reduce supply chain length.

Cultural and psychic distances are also connected to supply chain complexity (Alcacer, 2006; Handley and Benton Jr., 2013). In this context, the prioritization of environmental and social concerns by Western buying firms may be met with indifference in some locations versus others (Ellram *et al.*, 2013; Reuter *et al.*, 2010). Going back to the Margarete Steiff GmbH example, *Nearshore-Insourcing* production became more attractive to the firm when it realized the high costs associated with auditing and ensuring labour and environmental practices with its Chinese suppliers. Furthermore, the Steiff example, moreover hints at how firm internal capabilities and experiences influence reshoring and insourcing decisions when being compared to the state of location and governance.

Finally, task uncertainty also affects offshoring and outsourcing decisions (Manuj and Mentzer, 2008). In particular, innovation and technological progress in production technology allows for a switch to less labor intensive production modes, which favor reshoring and insourcing (Handley and Benton Jr., 2013). For instance, technological progress towards automatic versatile operations (associated with the emergence of industry 4.0) enables autonomous manufacturing cells to independently control and optimize manufacturing in various steps without requiring human analytics or intervention (Lasi *et al.*, 2014). For NCR, this development favored ATM production closer to sales markets. To serve the European markets, NCR relocated value creation from India to Hungary in order to produce closer to its European headquarters. Moreover, task scale and production process interconnectedness, as opposed to product modularity, impacted the coordination and control intensity of transactions (Ketokivi and Ali-Yrkkö, 2009). NCR experienced a significant decline in coordination effort and cost between R&D, logistics and production functions.

*Frequency*, another exemplar of task uncertainty, captures the number of transactions between exchange parties. When transactions fail to approach anticipated frequency and scale with

offshore outsourcing partners, high logistics costs and low fixed cost digression result in less competitive cost positions compared to more regionally centered alternatives (Safizadeh *et al.*, 2008). A recent study on 3PLs reported that 57 percent of their major customers had shifted parts of their manufacturing from Asia back to North America, Central America or Eastern Europe to deal with increased need for customization and smaller lot sizes (Lieb and Lieb, 2009; McKinsey Global Institute, 2012). Moreover, frequent design changes of products and components increase task novelty, which in turn increases pre-transaction costs and the interconnectedness of internal operations, R&D, and upstream and downstream functions (McQuiston, 1989). Finally, task frequency increases with greater product variety, which can lead to higher costs for outsourced/offshored tasks (McIvor, 2009).

*Asset specificity* describes durable investments made for specific products and processes (Williamson, 1985). Asset specific investments can be physical, where the level of investment required for the transaction is customized to the specific value creation task, especially in cases of high product or process complexity (McIvor, 2009). Customized assets in a dedicated transaction can lower transaction costs, but also reduce product variety and market adaptability when market forces demand changes (Williamson, 1985). If a supplier's product or production technology is becoming outdated or no longer suits the firm's product architecture, the focal firm may consider changing the supplier or integrating the activity in-house (Ciarli *et al.*, 2008) and seek regional sources (Handley and Benton Jr., 2013). Thus, the context of technological advances can impact the effect of asset specificity on decision making. For example, Siteco GmbH, a manufacturer of lighting technology, reshored its in-house production of high efficiency light bulbs from Maribor, Slovenia to Traunreut, Germany. This change was due to a product technology shift that demanded less labor, but required greater customization. Reduced rework and coordination efforts favored



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manufacturing and final assembly in Germany. Hence, Slovenia's comparative cost advantages eroded.

Resource availability is also a constituent of asset specificity (Tate *et al.*, 2014). Intangible resources such as skills and knowledge affect the strength of firms' commitments to offshoring and outsourcing decisions (Nachum and Zaheer, 2005; Ellram *et al.*, 2013). Known or perceived scarcity of any kind may drive firms to reconsider locational and governance choices where greater control over these resources and less partner dependence can be exercised. For instance, Wal-Mart insourced parts of its supply chain infrastructure from numerous logistics service providers to safeguard its logistical capabilities and reduce its supplier dependence, highlighting how a change in firm objectives and strategies influences its decisions.

Finally, human asset specificity can result from substantial investments in personnel dedicated to new or existing product development and production efforts (Handley and Benton Jr., 2013; Gulbrandsen *et al.*, 2009). Knowledge specificity plays a significant role in human asset specificity and is typically associated with functional inter-dependence, e.g. integration of R&D and production (Ketokivi and Ali-Yrkkö, 2009). Firms such as Ford Motors Inc., Otis Inc., and Varta Microbattery GmbH state that from co-location engineering and production, as well as production and sales after they had reshored or insourced, they realized enhanced knowledge sharing. This led to reduced capital lock-up and enhanced security of supply resulting in reduced transaction costs.

### **Directions for future research**

Based on the specification of reshoring and insourcing permutations as well as their drivers, the following sections subsequently describe and elaborate on four future research directions (FRDs)

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in greater depth (Figure 2). For each of the four FRDs, a summary of suitable and concrete research suggestions is provided (see Tables 3 to 6).

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***FRD1: Reshoring and insourcing decision outcomes and permutations***

Turning towards the performance implications of certain reshoring/insourcing decisions, future research should clearly specify the permutations studied in terms of location and ownership change. With regards to the locational dimension, this research suggests investigating international value dispersion, by further studying regional changes such as nearshoring within and around China, India and Eastern Europe, for example, which are the most frequent destinations of repatriation of manufacturing for specific value creation tasks. In fact, previous research has found that, beyond a certain level of international dispersion of interrelated value creation tasks, focal firm performance declines (Lampel and Giachetti, 2013). Hence, we can expect that findings on the level of geographic dispersion or concentration of a focal firm's supply chain yields valuable insights to practitioners when making reshoring and insourcing decisions. With regards to ownership, its role in dispersed or concentrated value creation is to be investigated further.

Future research should also apply our derived definitions of reshoring and insourcing permutations in the context of multinational firms. However, the conceptualization of the location dimension within the framework (Figure 1) requires some adaptation to become fully applicable to multinational companies. The starting point for reshoring permutations in this research was the location of the focal firm's headquarters. Future research should also take into account where products or components (value creation tasks) are needed next in the value creation process. An example of this differentiating locational anchor is the escalator handrail producer EHC, headquartered in Canada. EHC moved its production from its German subsidiary (EHC Germany

GmbH) to Slovakia, and then back to Germany (due to logistical complexity and high communication costs). From a Canadian perspective, sourcing from Slovakia or Germany both would be considered offshore production. However, given that the handrails are produced primarily for the local European market (geography where the value creation task is needed), from the perspective of the German subsidiary this change would have to be considered *In-house Backshoring*. Hence, to apply the reshoring and insourcing matrix (Figure 2) to multinational company research one must consider the geographic location (plant or business unit), which next requires the respective value creation task as the anchoring point instead of using the location of its corporate headquarters as the anchoring point. Going beyond the headquarter focus will enable the inclusion of such cases in future research and thereby broaden the documentation of the relatively sparse empirical base of reshoring and insourcing examples. This logic seems particularly useful for studying the emerging country perspective, which is also empirically underdeveloped.

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Insert Table 3 here.  
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Finally, a greater focus on the reshoring and insourcing decision outcome–performance relationship is needed to better understand different types of regional cluster concentrations (Fratocchi *et al.*, 2014). The identification of specific changes in the matrix that typically lead to superior performance over other alternatives, regardless of their respective drivers, would constitute a strong managerial contribution. Table 3 summarizes FRD1.

***FRD2: TCE and OBB specific drivers of reshoring and insourcing decisions***

The driver side of the reshoring and insourcing driver–outcome relationship described in this research should be used by scholars to expand empirical investigations of TCE- and OBB- specific drivers. We specifically call future research to focus on human and behavioral as well as

transactional factors simultaneously. A detailed list of reshoring and insourcing drivers was previously developed and discussed (Table 2) to serve as a springboard for further research. Numerous future research suggestions then emerged around this discussion (Table 4). While not all suggestions are addressed in detail here, several are discussed in greater depth to illustrate and further underpin the logic of Table 4.

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With respect to “human and behavioral factors”, much of the current research on reshoring and insourcing concentrates on narrow parameters and decisions driven primarily by cost. To broaden the scope of the debate, future research should aim at assessing the strength of drivers that are not immediately quantifiable in terms of transaction costs. For instance, The Coleman Company overestimated outsourcing benefits while underestimating the resulting supply chain complexity, monitoring and control intensity which ultimately drove its insourcing decision. However, the benefits from reducing control and monitoring intensity were hard to assess ex-ante. A deeper investigation into these types of decisions should be undertaken to reveal underlying managerial motivations such as willingness to explore alternatives and reverse previous decisions. These findings could help decipher and objectify what Gray *et al.* (2013) call “managerial valuations”, intrinsic feelings of willingness toward and motivators of reshoring and insourcing decisions.

Based on the driver category “transactional factors”, the impact of reshoring and insourcing decisions on the focal firm’s supply chain structure and on its supply chain relationships should be explored. Such study appears to be particularly influential to firms that frequently engage in multiple location and sourcing decisions simultaneously. For example, specific events such as expiring supplier contracts or termination of a product-life cycle triggering a buying firm’s

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strategic intent to reshore, insource, or a combination of both becomes more apparent than without such events. To study the effect of such events on reshoring and insourcing, the critical incident theory (Flanagan, 1954; Gremler, 2004) appears to provide a complementary theoretical lens to the TCE and OBB perspective developed in this study.

Moreover, the suitability of the numerous reshoring and insourcing permutations available to managers, given a specific configuration of drivers, should be taken into account. In this context, in-depth case studies or large sample empirical investigations are suitable in order to identify interaction effects between different drivers leading to specific permutations of reshoring and insourcing decisions. Ideally such an analysis would contrast and compare these relationships for different value creation tasks such as direct components, services or machinery. Theoretically, research could combine TCE and RBV to explain the connection between the valuation of external drivers and internal firm capabilities (McIvor, 2010; Holcomb and Hitt, 2007).

### ***FRD3: OBB-related structural factors and reshoring and insourcing decision making***

Structural factors also affect reshoring and insourcing decisions. For example, who is involved in the decision making is likely to affect the choice of permutation. Therefore, future research should investigate the moderating effect of the buying center constellation, as described in OBB literature (Robinson *et al.*, 1967). Accordingly, most firms rely on diverse cross-functional teams to qualify and implement sourcing and locational decisions from different angles. Buying centers are important team structures that bundle the manifold expertise required to qualify and implement critical reshoring and insourcing decisions. Hence, the moderating impact of buying center structure on the reshoring and insourcing driver–outcome relationship requires additional empirical substantiation. For example, if drivers are strongly perceived (e.g. high transaction costs favor reshoring/insourcing), but the buying center readiness to engage is low due to a lack of

internal capabilities to manage local suppliers or re-integrate value creation, then the firm might be hindered to implement their favored decision.

Furthermore, the countries of operation of the buying center members should consider when making driver and capability assessment (FRD2) and the related reshoring and insourcing decisions (FRD1). In the light of the increasing organizational reliance on virtual teams that are no longer physically co-located, (physical and cultural) distance of buying center members' might further affect misaligned cognition of reshoring and insourcing drivers. For instance, R&D engineers located in India might have a different opinion about political stability and future market potentials in India than their engineering counterparts from the U.S. and the logistics coordinator located in Europe. Hence, additional insights into role of international geographical diversification affecting the reshoring and insourcing driver-decision relationship is expected to complement extant research on cross functional integration (Lampel and Giachetti, 2013).

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Insert Table 5 here.  
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Moreover, different functional backgrounds and expertise of buying center members (e.g. production, logistics, R&D, or purchasing) each individual is likely to perceive the presented decision drivers differently (Dearborn and Simon, 1958). Such varying perceptions across agents can lead to conflict and lead to sub-optimal decisions lacking procedural rationality in global sourcing (Stanczyk *et al.*, 2015). Further research on the buying center's members' alignment concerning their perceptions of reshoring and insourcing decision is likely to yield managerially relevant findings. Especially the study of conflict mitigation strategies among its members is likely to yield practically relevant findings in order to avoid political decision making at low levels of procedural rationality. Table 5 summarizes the suggestions related to FRD3.

***FRD4: Contextual variables affecting reshoring and insourcing decision making***

Numerous contextual variables outside of the TCE/OBB theoretical framework also provide considerable interesting avenues to pursue in future research endeavors. Similar to the moderating role of buying center structure brought forward under FRD3, these variables emerged in our conceptualization of the reshoring and insourcing driver–outcome relationship. Specifically, we call future research to investigate the moderating role of industry-, strategy-, capabilities-, and experience-related variables on this relationship (Figure 2) as further specified in Table 6.

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Insert Table 6 here.  
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The technological intensity of an industry can be expected to affect the reshoring and insourcing driver–outcome relationship. While some industries are more receptive to leaps in manufacturing automation technology such as industry 4.0 developments (Lasi *et al.*, 2014) or smart-robotic process automation (Institute for Robotic Process Automation, 2015), firms competing in less technology-intense environments are also less affected by drivers of asset specificity. This explains why some industries are strongly affected and transformed while others may not be impacted at all. Thus, industry characteristics such as technological intensity should be accounted for when studying the causality between drivers and reshoring and insourcing outcomes.

Turning toward firm strategy and objectives as contextual variables affecting firm decision making, future research should distinguish between reshoring and insourcing decisions made as a result of a deliberate shift in firm strategy versus a firm reaction to failure. On the one hand, reshoring and insourcing decisions made by Walmart and Varta Microbatteries, for example, were motivated by a long-term strategic intent to create localized supply chain structures. Furthermore, strategic shifts often develop and emerge over time, indicating first an adaptation to changes in firms' business environment, then, later, part of an intended and path dependent course of strategic

action (Lewin and Volberda, 2011; Fratocchi *et al.*, 2014). With such a strategic intent, firms and their managers can be expected to become more receptive to external drivers and to value them differently than managers lacking such strategic direction. On the other hand, the decisions made by Katjes Fassin GmbH or Lemken GmbH can be characterized as short-term focused reactions to failed offshoring/outsourcing. Such abbreviated decision making processes negatively affects procedural rationality and the feasibility of their implementation (Eisenhardt and Bourgeois, 1988). Future research hence should investigate decision making quality in strategic long-term and risk mitigating short-term reshoring and insourcing decisions.

Moreover, firms are likely to be affected by their internal capability assessments in dealing with the resulting outcome. A decision team thus may be willing to reshore and insource, but firm readiness to implement the decision and handle the eventual outcomes of their decisions is lacking. Therefore, firm reshoring and insourcing readiness and their impact on the reshoring and insourcing driver-decision relationship have to be assessed at various levels of analysis, i.e. country (e.g. labor laws), supplier network (e.g. contractual agreements), company (e.g. production capacities), teams (e.g. functional representatives involved in the buying center) and individuals (owners and top management). Furthermore, readiness is a dynamic concept, which favors longitudinal research designs to deeply explore the topic (Doh, 2005).

Concerning firm experience as a contextual variable, the offshoring literature has argued that a positive past experience with offshoring has strong implications on future offshoring engagement (Lewin *et al.*, 2009) as well as its success (Jensen, *et al.*, 2013; Maskell *et al.*, 2007). The organizational learning perspective suggests that successful past implementation provides a positive feed-back loop. Complementary theoretical lenses to study the changing ability of firms to react to external stimuli, digest reshoring and insourcing drivers and to revoke offshoring/outsourcing decisions would be the concept of absorptive capacity (Calantone *et al.*,



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2002; Levitt and March, 1988). Furthermore, future research should investigate if certain changes in Figure 1 are actually more difficult to implement than others and if they require advanced internal experience and consume more resources. The ease of decision reversal (e.g. offshore-outsourcing) is something that has been previously investigated to some degree in the literature (e.g. Handley, 2012). However, its implications for reshoring and insourcing decisions remain unexamined.

## **Conclusion**

This research set out for two purposes: First, we sought to develop a more complete understanding of the underlying drivers of reshoring and insourcing decisions based on clear definitions of reshoring and insourcing permutations. Second, we provided specific directions for future research to further investigate the reshoring and insourcing driver-outcome relationship and additional contextual variables affecting it. Based on the analysis presented here, two main contributions are put forward.

First, this paper provides a more unified terminological base to benefit future scientific and practical contributions in the field of reshoring and insourcing phenomena as well as making findings and derived implications more comparable. We incorporate the previously neglected hybrid reshoring and insourcing changes, thereby completing the definition of these two connected phenomena (Figure 1 and Table 1) along the established dimensions of governance and location. Based on this approach, we elaborate how multiple decisions can be implemented simultaneously and in opposite directions for the same firm. Additionally, TCE and OBB allowed us to specify the behavioral and transactional drivers for reshoring and insourcing in great depth (Table 2). Herewith, we urge future research be grounded in a comprehensive set of drivers in order to advance our understanding of the reshoring and insourcing driver-outcome relationship (Figure 1).

Second, specific research suggestions are presented to guide future scholarly inquiries as summarized in Tables 3 to 6. By tying OBB and TCE logic to the phenomena of reshoring and insourcing, we are able to explain how these theories can inform future research programs. Also, the theory helped to structure the main factors affecting the reshoring and insourcing driver–outcome relationship as summarized in Figure 2. Applying TCE and OBB as theoretical lenses we were able to study reshoring and insourcing decisions at the value creation task level of analysis for novel insights. First, TCE allows deriving a very comprehensive overview of drivers beyond the usual cost debate, bringing in aspects such as bounded rationality of decision makers. Second, OBB offers a lens to study the actual decision making entities, e.g. the buying center composition. Combining the behavioral factors of TCE and OBB indeed offers much more clarity on the human aspects of the decision making, without losing sight of the transaction as the common unit of analysis. Moreover, our findings yield interaction effects between transactional and behavioral drivers as well as additional contextual factors. In addition we elaborated where TCE and OBB reach their predictive boundaries to predict the reshoring and insourcing phenomenon as displayed by the fourth FRD. Therefore, we hint at additional theories that help frame the identified predictive contextual variables to support future academic inquiry. Based on our final conceptualization, managers are provided a comprehensive blueprint to determine if they should initiate reshoring and insourcing changes for specific value creation tasks.

Overall, future research should help extend the empirical base of reshoring and insourcing examples, particularly from emerging economies as well as developed economies. Investigations into how managers and firms from emerging economies define the reshoring and insourcing vernacular are expected to yield additional insights. For example, what do these terms mean to managers of firms based in Southeast Asia, both in emerging and more mature economies such as Vietnam and Singapore, respectively.

To conclude: Both reshoring and insourcing are exciting and growing topics, especially considering that just a few years ago the idea of bringing in-house manufacturing and/or sourcing back from foreign “low-cost” locations was not being discussed in the boardrooms of most global companies as it is today. With the work presented, we aim to provide a foundation for further endeavors that can guide scholarship and practice on these topics.

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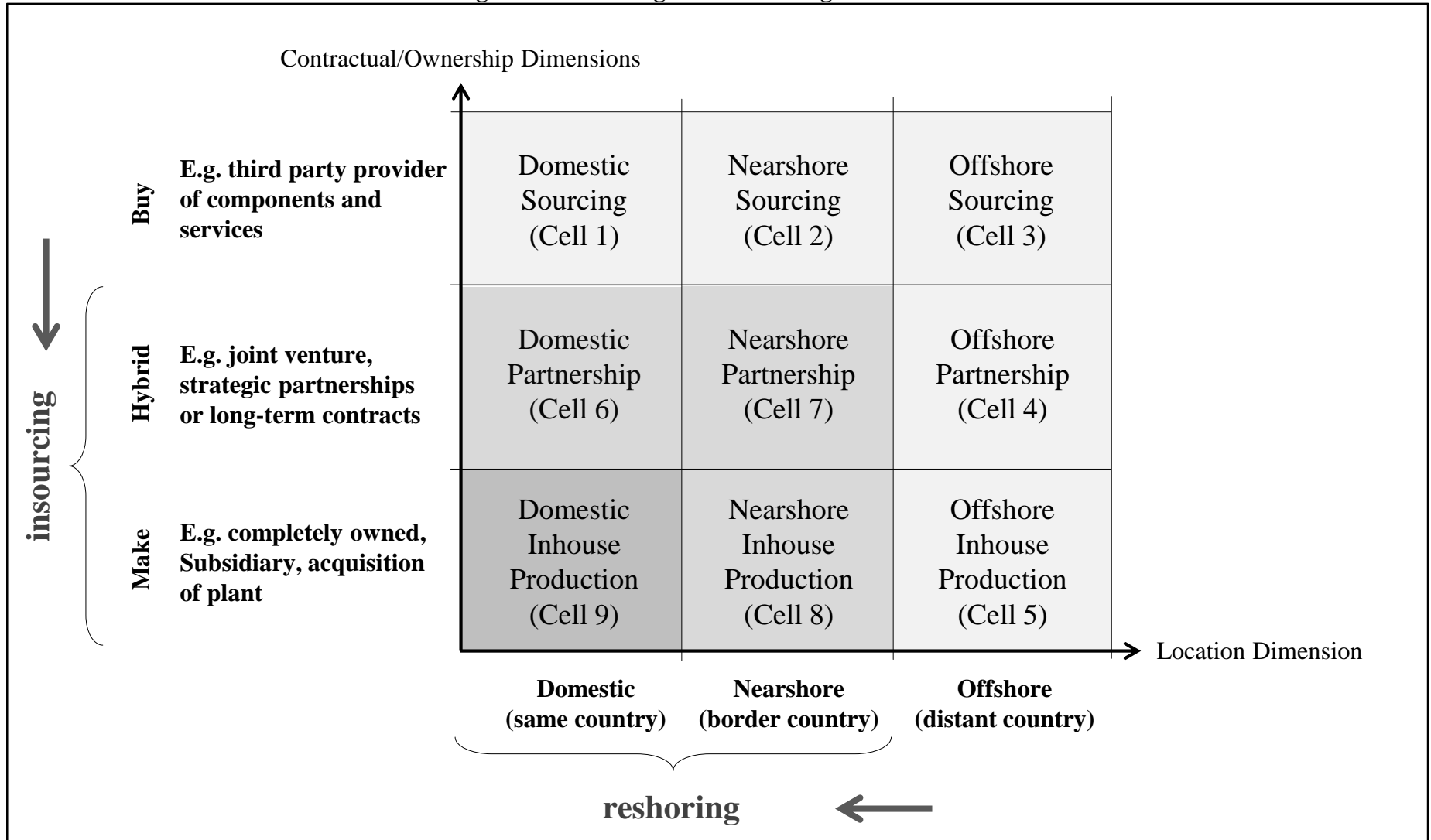


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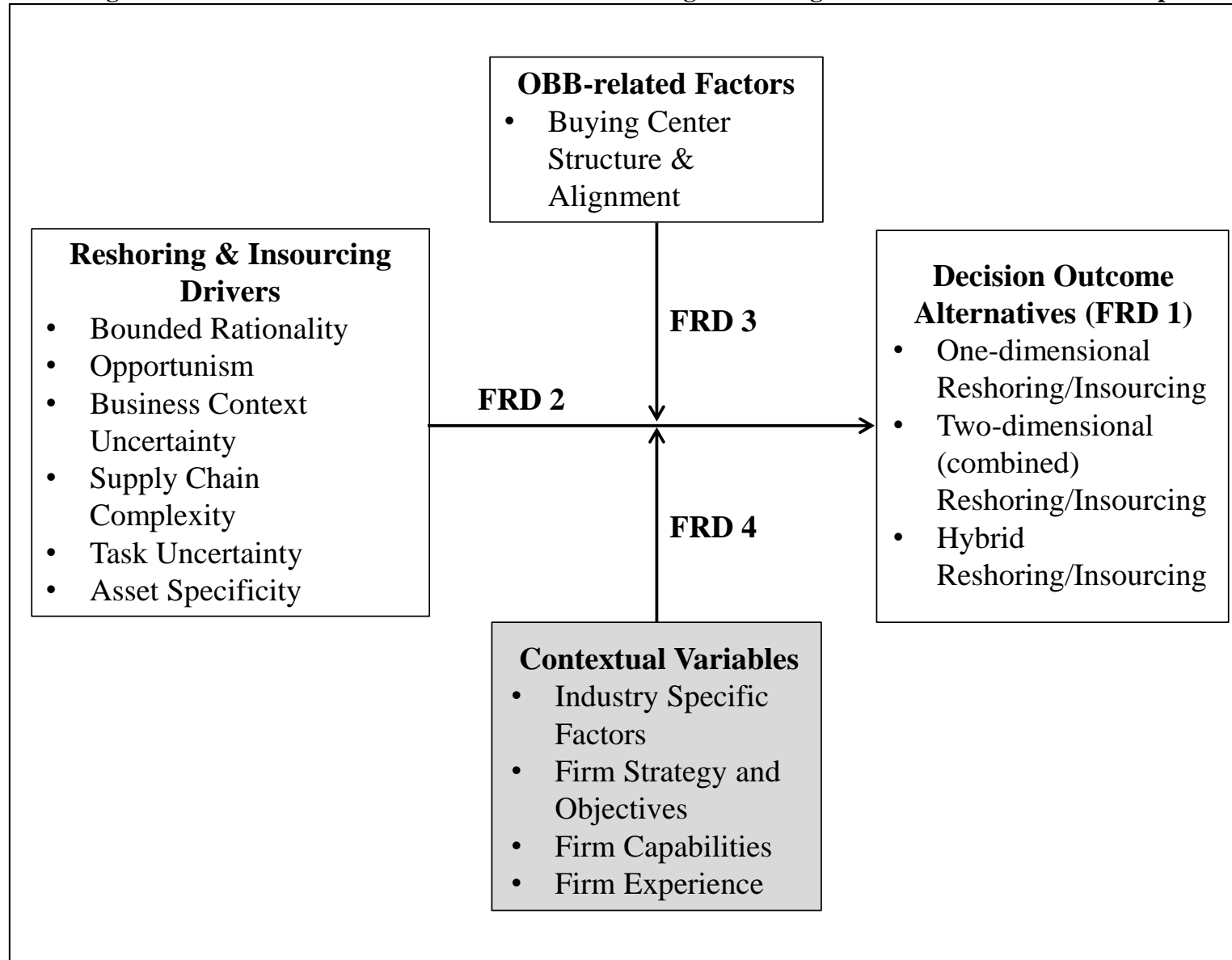
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## FIGURES AND TABLES

**Figure 1: Reshoring and Insourcing Alternatives**



**Figure 2: Future Research Directions for the Reshoring/Insourcing Drivers–Outcome Relationship**



**Table 1: Terminology for Reshoring/Insourcing Changes**

<b>Change</b>	<b>Terminology for the Changes within the Framework</b>
<b>One-Dimensional Changes</b>	
Cell 1 to Cell 9 Cell 6 to Cell 9	<i>Domestic Insourcing</i>
Cell 2 to Cell 8 Cell 7 to Cell 8	<i>Nearshore Insourcing</i>
Cell 3 to Cell 5 Cell 4 to Cell 5	<i>Offshore Insourcing</i>
Cell 2 to Cell 1 Cell 3 to Cell 1	<i>Outsourced Backshoring</i>
Cell 3 to Cell 2	<i>Outsourced Nearshoring</i>
Cell 5 to Cell 8	<i>In-house Nearshoring</i>
Cell 5 to Cell 9 Cell 8 to Cell 9	<i>In-house Backshoring</i>
<b>One-Dimensional Hybrid Changes</b>	
Cell 1 to Cell 6	<i>Collaborative Domestic Insourcing</i>
Cell 3 to Cell 4 <sup>1</sup>	<i>Collaborative Offshore Insourcing</i>
Cell 4 to Cell 6 Cell 7 to Cell 6	<i>Collaborative Backshoring</i>
Cell 4 to Cell 7	<i>Collaborative Nearshoring</i>
<b>Two-Dimensional (combined) Changes</b>	
Cell 4 to Cell 8 Cell 3 to Cell 8	<i>Nearshore Insourcing</i>
Cell 2 to Cell 9 Cell 7 to Cell 9 Cell 3 to Cell 9 Cell 4 to Cell 9	<i>Backshore Insourcing</i>
<b>Two-Dimensional (combined) Hybrid Changes</b>	
Cell 2 to Cell 7 Cell 3 to Cell 7	<i>Collaborative Nearshore Insourcing</i>
Cell 2 to Cell 6 Cell 3 to Cell 6	<i>Collaborative Backshore Insourcing</i>

**Table 2: Reshoring and Insourcing Drivers**

1. Human and Behavioural Factors			
Factors	Category	Exemplars	Author(s), (Year)
Bounded rationality	Performance projections	Cost assessment of initial decisions	Tate <i>et al.</i> (2009); Lacity and Hirschheim 1993
		Management performance aspirations	Tate <i>et al.</i> (2009); Gray <i>et al.</i> (2014)
	Failures	Use of prior experience in decision making	Pisano (1990); Lewin <i>et al.</i> (2009)
		Decision biases	Cabral <i>et al.</i> (2013)
		Changes in managerial valuation	Veltri <i>et al.</i> (2008); Tate <i>et al.</i> (2014)
		Tacitness of required knowledge	Gulbrandsen <i>et al.</i> (2009)
Opportunism	Relational issues	Inter-firm relationship management	Handley and Benton Jr. (2013); McIvor (2013)
		Supplier de-prioritization of relationship	Handley and Benton Jr. (2013); McIvor (2013)
		Power-dependence issues	Gulbrandsen <i>et al.</i> (2009); Tate <i>et al.</i> (2014)
2. Transactional Factors			
Factors	Category	Exemplars	Author(s), (Year)
Environmental Uncertainty	Business context uncertainty	Exogenous costs	Millikin (1987)
		Macroeconomic changes	Lewin (2009); Gulbrandsen <i>et al.</i> (2009); Ellram <i>et al.</i> (2013)
		Institutional changes and differences	Ellram (2013); Gray <i>et al.</i> (2013); McIvor (2013); Tate (2014)
	Supply chain complexity	Vertical and horizontal complexity	Ellram <i>et al.</i> (2013)
		Supply chain length and dispersion	Handley and Benton Jr. (2013); McIvor (2013)
		Supply and customer market proximity	Ritter and Sternfels (2004)
		Cultural and psychic geographic distance	Alcacer (2006); Ellram <i>et al.</i> (2013); Tate <i>et al.</i> (2014)
		Environmental regulation and concerns	Ellram <i>et al.</i> (2013)
	Task uncertainty	Task scale (volume)	Safizadeh <i>et al.</i> 2008; Fratocchi <i>et al.</i> 2014
		Task and product complexity	Handley and Benton Jr. (2013)
		Task frequency	Williamson (1985); Safizadeh <i>et al.</i> (2008)
		Task novelty	McQuiston (1989); Handley and Benton Jr. (2003)
		Product variety	Williamson (1985); McIvor (2009)
		Process modularity	McIvor (2009); Ketokivi and Ali-Yrkko (2009)
Asset Specificity	Physical asset specificity	Focal firm investments into plant or supplier	Williamson (1985); Handley and Benton Jr. (2013)
		Supplier or plant investment into focal firm	Gulbrandsen (2009)
		Obsolescence of technology	Ciarli <i>et al.</i> (2008)
		Resource availability and scarcity	Ellram <i>et al.</i> (2013); Tate <i>et al.</i> (2014)
	Human asset specificity	Dedicated personnel to supplier	Gulbrandsen <i>et al.</i> (2009); Handley and Benton Jr. (2013)
		Skills & knowledge specificity	Gulbrandsen <i>et al.</i> (2009); Ketokivi and Ali-Yrkko (2009)

**Table 3: Summary of Future Research Direction 1: Decision Outcomes and Permutations**

<b>Decision Outcome Alternative</b>	<b>Specific Research Suggestions</b>
<ul style="list-style-type: none"> <li>• <b>One-dimensional Reshoring/ Insourcing</b></li> </ul>	<ul style="list-style-type: none"> <li>• Study the effect of one dimensional permutations on firm performance</li> <li>• Conceptualize the location dimension by using the plant or business unit as the locational anchor in the reshoring and insourcing framework</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Two-dimensional (combined) Reshoring/ Insourcing</b></li> </ul>	<ul style="list-style-type: none"> <li>• Study the effect of two dimensional permutations on firm performance</li> <li>• Conceptualize the location dimension by using the plant or business unit as the locational anchor in the reshoring and insourcing framework</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Hybrid Reshoring/ Insourcing</b></li> </ul>	<ul style="list-style-type: none"> <li>• Study the effect of one-dimensional and two-dimensional hybrid permutations on firm performance</li> <li>• Conceptualize the location dimension by using the plant or business unit as the locational anchor in the reshoring and insourcing framework</li> </ul>

**Table 4: Summary of Future Research Direction 2: Drivers of Reshoring and Insourcing**

<b>Drivers of Reshoring and Insourcing</b>	<b>Specific Research Suggestions</b>
<b>A. Human &amp; Behavioral Factors</b>	
<b>A.I Bounded Rationality</b>	
<ul style="list-style-type: none"> <li><b>Performance projections</b></li> </ul>	<ul style="list-style-type: none"> <li>implications of decisions resulting from failure vs. strategic intent</li> <li>bandwagon effects and other decision biases affecting the valuation of drivers and performance benefits</li> <li>performance implications of reducing locational footprint</li> </ul>
<ul style="list-style-type: none"> <li><b>Failures</b></li> </ul>	<ul style="list-style-type: none"> <li>how short-term decisions vs. long-term strategic shifts effect decision outcomes over time</li> <li>the effect of reshoring and insourcing failure on the evaluation of other value creation tasks</li> </ul>
<b>A. II Opportunism</b>	
<ul style="list-style-type: none"> <li><b>Relational issues</b></li> </ul>	<ul style="list-style-type: none"> <li>supplier contract renewals allowing new strategic focus</li> <li>social capital available in home and host country</li> <li>relationship specific investments in host country/suppliers</li> </ul>
<b>B. Transactional Factors</b>	
<b>B.I. Environmental Uncertainty</b>	
<ul style="list-style-type: none"> <li><b>Business context uncertainty</b></li> </ul>	<ul style="list-style-type: none"> <li>currency exchange</li> <li>infrastructure, e.g. transportation</li> <li>intellectual property rights landscape</li> <li>sustainability and CSR/sustainability regulations</li> </ul>
<ul style="list-style-type: none"> <li><b>Supply chain complexity</b></li> </ul>	<ul style="list-style-type: none"> <li>quantification of supply chain complexity and monitoring intensity</li> <li>control and monitoring costs of distant vs. close suppliers and in-house locations technology altering the relevance of spatial distance and labor costs (e.g. more efficient production through automation)</li> </ul>
<ul style="list-style-type: none"> <li><b>Task uncertainty</b></li> </ul>	<ul style="list-style-type: none"> <li>product innovation speed</li> <li>effect of commercial success of the product</li> <li>timing in the product-lifecycle on the evaluation of drivers and decision outcomes</li> <li>the effect of single part compared to modular manufacturing on decision outcomes</li> <li>purchasing categories that favor or hinder reshoring and insourcing</li> </ul>
<b>B.II. Asset Specificity</b>	
<ul style="list-style-type: none"> <li><b>Physical asset specificity</b></li> </ul>	<ul style="list-style-type: none"> <li>production technology availability in locations (production automation)</li> <li>disruptive technological advances (e.g. 3D printing) on supplier competitive and geographic comparative advantages</li> </ul>
<ul style="list-style-type: none"> <li><b>Human asset specificity</b></li> </ul>	<ul style="list-style-type: none"> <li>changing requirements regarding educated and skilled labor</li> <li>talent pool availability in locations (engineering graduates)</li> </ul>

**Table 5: Summary of Future Research Direction 3: OBB-related Factors**

<b>OBB-related Factors</b>	<b>Specific Research Suggestions</b>
<ul style="list-style-type: none"> <li>• <b>Buying Center Structure &amp; Alignment</b></li> </ul>	<ul style="list-style-type: none"> <li>• the willingness to reshore and insource across the buying center.</li> <li>• the perception of readiness across the buying center</li> <li>• buying center decision making biases related to group composition</li> <li>• function-specific preferences involved in the buying center</li> <li>• the effect of dispersed virtual buying center teams</li> </ul>

**Table 6: Summary of Future Research Direction 4: Contextual Variables**

<b>Contextual Variables</b>	<b>Specific Research Suggestions</b>
<ul style="list-style-type: none"> <li>• <b>Industry Specific Factors</b></li> </ul>	<ul style="list-style-type: none"> <li>• the effect of structural industry variables (country, supply chain structure) on the reshoring and insourcing driver–outcome relationship</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Firm Strategy and Objectives</b></li> </ul>	<ul style="list-style-type: none"> <li>• the effect of corporate priorities on the valuation of drivers and decision outcomes</li> <li>• the effect of functional strategies on global sourcing motives and the valuation of drivers and decision outcomes</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Firm Capabilities</b></li> </ul>	<ul style="list-style-type: none"> <li>• the effect of reshoring and insourcing experience on firm capabilities and their intentions to reshore and insource</li> <li>• the underlying processes behind reshoring and insourcing decisions</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Firm Experience</b></li> </ul>	<ul style="list-style-type: none"> <li>• types of managerial experiences and values in relation to their effect on reshoring and/or insourcing decisions</li> <li>• organizational readiness and experience to deal with different levels of governance and locational relationships and changes</li> </ul>