

From China to the west: why manufacturing locates in developed economies

This article analyses the competitive priorities underlying manufacturing location initiatives in developed economies. Specifically, building on secondary data, we compare and contrast manufacturing backshoring from China by companies headquartered in developed economies (308 cases) and Chinese foreign direct investment to developed economies (155 cases). Results suggest that both types of initiatives share some common priorities, such as exploiting the ‘country of origin’ effect and innovation opportunities in developed countries. At the same time, results highlight differences that may be attributed to the home country of the firm. In particular, cost priorities appear to be more important for Chinese companies than for backshoring ones. Findings offer insight into why manufacturing in developed economies may expand as a result of both repatriations and of foreign direct investments from emerging economies such as China, and point to potential areas of policy intervention.

Keywords: backshoring; OFDI; manufacturing in high-cost environments; competitive priorities; location decision; China

Word count: 9,368

1. Introduction

For the last three decades, the offshoring of manufacturing to low-cost locations (Fredriksson and Jonsson 2009; da Silveira 2014) has been a distinctive strategy for developed economies (DE) manufacturers. Aided by increasing modularisation, DE firms have disaggregated standardised manufacturing activities from the rest of the value chain and relocated them to low-cost economies, while often keeping both the upstream R&D and downstream marketing activities at home (Mudambi 2008).

Since the global crisis of 2008, the issue of re-attracting manufacturing to DE has been added to the political agenda (Rose and Reeves 2017) of many national governments, with the aim to support employment and growth. The present COVID-19 crisis is further unveiling fears of supply chain vulnerability (Cohen and Lee 2020; Ivanov and Dolgui 2020) and is fuelling additional political pressures towards expanding the DE manufacturing base.

Vis-à-vis political interest, there has been mixed consensus in academia over the importance of revitalising manufacturing in DE. A ‘manufacturing renaissance’ (Hayes and Pisano 1996; Pisano and Shih 2009, 2012) has been advocated based on the contention that the joint system of research and development, engineering and production capabilities provides the foundation for the growth of innovation within an economy (Spring et al. 2017). The return of manufacturing to DE has also been justified by the ‘hidden costs of offshoring’, which include lower product quality, loss of domestic labour skills and weakened intellectual property protection (Larsen, Manning, and Pedersen 2013). Finally, the cost-advantages of some low-cost countries have decreased over years, due to increasing labour and transportation costs (Simchi-Levi et al. 2012). Conversely, other scholars contend that manufacturing in DE may not be economically viable in the long term (de Treville, Ketokivi, and Singhal 2017). One argument is that the systematic strategy of offshoring has in some cases destroyed the supply base and skills required to carry out production in DE (Di Mauro

et al. 2018; Pal et al. 2018). In addition, manufacturing exhibiting low inter-dependences among production, R&D and marketing may continue to benefit from locating in low-cost economies (Ketokivi et al. 2017).

Past research has approached the problem of ‘which manufacturing’ befits DE from a broad perspective, focusing either on countries’ location-specific advantages (Dunning 1980) or on the characteristics of industry value chains (Mudambi 2008). Recent research has proposed combining these normative approaches with a grounded appraisal of real managerial decisions to locate in DE (Ketokivi et al. 2017), in order to gain insight into which factors determine the attractiveness of high-cost environments and drive micro-level location decisions. In this direction, a crucial research theme lies in the identification of the competitive priorities underscoring firms’ location initiatives in DE. In fact, competitive priorities represent the manufacturer’s strategic emphasis on developing or maintaining some specific sources of competitive advantage (Leong, Snyder, and Ward 1990; Ward et al. 1998; Ward and Duray 2000) and underscore manufacturing strategies (Frohlich and Dixon, 2001; Kulkarni, Verma, and Mukundan 2019; Rosenzweig and Easton 2010). In turn, priorities guide the location of manufacturing facilities, in order to exploit the comparative advantages of different countries (Buckley and Casson 1976; da Silveira 2014; Dunning 1980; Ferdows 1997; Mudambi 2008).

The last decade has witnessed two relevant flows of location initiatives towards DE: on the one hand, the return of offshore production (backshoring) (Fratocchi et al. 2016; Johansson et al. 2018; Kinkel and Maloca 2009), on the other, outward foreign direct investment (OFDI) by firms headquartered in emerging economies (EE) (Estrin, Meyer, and Pelletier, 2018). A significant portion of both backshoring (Ancarani et al. 2015; Ancarani and Di Mauro, 2018) and FDI have originated from China (Thürer et al. 2020; Wang and Gao 2019; Wang and Li 2017). In particular, the volume of Chinese OFDI is such to have turned

China from the ‘world factory’ to the ‘world investor’ (Wang and Li 2017). The analysis of backshoring and OFDI from China to DE is of particular interest for the analysis of DE attractiveness for several reasons. First, these initiatives have to adapt to cost conditions that may challenge their profitability. Next, they have to (re)create their network of collaborations in countries where some skills may have vanished due to offshoring (Johanson and Vahlne 2009). Therefore, these decisions are likely to be grounded in strategic reasoning (Di Mauro et al. 2018; Peng 2012) rather than on emotional reactions (Dutton 1993).

Despite the body of research on backshoring and on Chinese OFDI has recently gained momentum (Haasis and Liefner 2019; Paul and Benito 2018; Stentoft et al. 2016), and the strategic content of both initiatives has been acknowledged (Child and Rodrigues 2005; Di Mauro et al. 2018; Johansson et al. 2018; Luo and Tung 2018), relatively little is known about the competitive priorities underlying these location initiatives towards DE. To fill this gap, this study addresses the following main research question: *What are the competitive priorities of firms that were previously operating in China and have moved to DE?*

Because competitive priorities of firms locating in a geographical region are expected to align with the region location advantages (Ferdows 1997; Mudambi 2008), backshoring and Chinese OFDI to DE should exhibit equivalent priorities. However, previous research has shown that strategic priorities may also depend on the headquarter or ‘home’ country of the firm (Fleury et al. 2015; Makino, Isobe, and Chan 2004) and that strategic differences exist in the location decisions of DE firms vs. Chinese firms. In particular, while DE firms deploy their network of manufacturing to exploit their ownership advantages (Dunning, 1980), Chinese firms use foreign subsidiaries to acquire critical resources to compete globally and to become less vulnerable to institutional and market disadvantages at home (Luo and Tung 2007, 2018). Therefore, a second research question for this study is: *Are the competitive*

priorities of firms previously operating in China and locating in DE influenced by the firm home country?

To answer the two research questions, this study compares two samples of manufacturing location initiatives in DE, made up of firms headquartered in China and DE firms backshoring from China respectively. With the goal to identify similarities and differences, competitive priorities are separately identified for Chinese and backshoring initiatives and a configuration approach is applied in order to seek patterns of priorities and organise them into taxonomies (Frohlich and Dixon 2001; Kathuria et al. 2010; Miller and Roth 1994; Zhao et al. 2006). The analysis of configurations allows delving into how the different competitive priorities work together to build firms' competitive advantage in DE.

Answering the two research questions allows making the following novel contributions to research, practice and policy:

- (1) From a research perspective, the study adds to the body of knowledge on competitive priorities and their patterns, therefore illuminating on the competitive advantages pursued by firms locating in DE. Although an established stream of studies in Operations Management (OM) has shown the value of organising competitive priorities into taxonomies, this study breaks novel ground by evaluating the appropriateness of existing taxonomies for firms deploying manufacturing plants from EE toward DE. Finally, by exploring the influence of the headquarter country on competitive priorities (Fleury et al. 2015; Luo and Tung 2018), it enhances the understanding of the importance of contextual factors for location decisions.
- (2) From a managerial viewpoint, by clarifying the relative advantages of manufacturing companies locating in DE, results can help other companies planning similar moves to align their location decisions with their competitive

strategies. Although backshoring and OFDI initiatives are undertaken by two different groups of firms, whose executives are influenced by their own cultural and institutional conditions, these firms may be competing in the same global markets and may therefore benefit from the knowledge of each other's competitive priorities. Finally, the identification of these priorities may offer advice to firms from EE other than China that are latecomer investors in DE.

(3) Finally, since re-attracting manufacturing is on the policy agenda of many governments, this analysis can throw light on the reasons for appeal of DE as manufacturing location (Lampón and González-Benito 2019). In particular, the comparison of Chinese OFDI and backshoring firms in DE can pinpoint whether support policies for attracting manufacturing should be of the 'one-size-fits-all' type or whether they should be tailored differently between domestic and foreign firms.

The paper is organised as follows: Section 2 reviews the background of the study, Section 3 introduces the empirical strategy, Section 4 describes the data set and results, Section 5 discusses findings, while Section 6 provides implications for theory, practice and policy. Section 7 concludes with limitations and future research directions.

2. Literature background

2.1 Competitive priorities and location decisions

The literature on the location of manufacturing activities is extensive and has approached location decisions from different disciplinary perspectives (Buckley and Casson 1976; Dunning 1980; Ferdows 1997; Rugman and Verbeke 2001). The eclectic paradigm of international production (Dunning 1980, 1998), also known as OLI model, posits that the

firm's Ownership of a set of capabilities generating competitive advantage and the firm's interest to Internalise activities must be reconciled with the host-country Location advantages. In the OM micro perspective, location decisions are viewed as components of the manufacturing strategy formulation (Wheelwright and Hayes 1985; Rosenzweig and Easton 2010), and are driven by competitive priorities (Ferdows and De Meyer 1990; Boyer and Lewis 2002). In particular, research has recognised the importance of aligning host-country location advantages with competitive priorities at firm or plant level in order for performance effects to accrue (da Silveira 2014; Feldmann and Olhager 2013; Ferdows 1997; Johansson et al. 2018; Pawar et al. 2019).

Competitive priorities are typically linked to a strategic emphasis on developing different competitive capabilities: cost, quality, delivery, flexibility and innovation (Kulkarni, Verma, and Mukundan 2019; Leong, Snyder, and Ward 1990; Ward et al. 1998; Ward and Duray 2000). Although seminal contributions suggested the existence of a trade-off (Skinner 1969; Wheelwright and Hayes 1985), later research has made allowance for the simultaneous pursue of multiple priorities, therefore supporting the existence of 'patterns' of competitive priorities (Boyer and Lewis 2002; Rosenzweig and Easton 2010; Jitpaiboon, Gu, and Truong 2016).

Evidence that competitive priorities and their patterns differ according to the geographical area where the plant is located, and in particular between developing, emerging and advanced economies, is offered by several empirical studies. Zhao, Yeung, and Zhou (2002) investigate the importance assigned to different competitive priorities by Chinese manufacturing companies in mainland China. Findings reveal that firms' future plans focused on innovation, after-sales service, quality and flexibility. Similar results are obtained by Kathuria et al. (2010) for India, whereas studies concerning developing economies suggest a joint emphasis on cost and market adaptation (Sim and Pandian 2003; Phusavat and Kanchana

2007). In a similar vein, Schoenherr et al. (2012) find that plants exhibit different patterns of competitive capabilities, depending on whether they are located in a developing, emerging or developed economy, due to the heterogeneous endowments of resources across regions. Zhao et al. (2006) develop a taxonomy for firms operating in mainland China and find that they exhibit a broad range of priorities rather than focus on specific ones. Additionally, the taxonomy differs from those previously proposed for DE by Miller and Roth (1994) and by Frohlich and Dixon (2001) for a large set of regions, therefore supporting the influence of the host-country context and of the competitive environment.

While OM has focused on differences of competitive priorities according to the host-country context, international business research has suggested that priorities are also influenced by the firm headquarter or home-country context. In fact, home institutions, industry specialisation and distinctive resources influence the competitive stance of companies (Cuervo-Cazurra and Genc 2008; Luo and Tung 2018; Wan et al. 2019b), even in a global economy of footloose companies that change location to reap country-specific advantages (Ohmae 1990). While a foreign plant is alike a 'local' firm, in that it abides by local rules and laws, utilises local resources and competes with domestic firms, yet it remains an integrated part of its parent firm (Makino, Isobe, and Chan 2004). Luo and Tung (2007, 2018) propose that location initiatives to DE respond to different strategic goals according to whether the parent firm is headquartered in EE or DE. In particular, EE firms typically choose DE locations that may compensate for their competitive disadvantages at home, in order to gain access to strategic capabilities such as technological knowledge and branding. In addition, location in DE may offset weak institutional environments in EE, because the DE institutional setting favours innovation ecosystems and property rights protection (Giuliani et al. 2014; Witt and Lewin 2007; Yamakawa, Peng, and Deeds 2008).

Figure 1 summarises the dual host/home influence on the decision to locate in DE. Location initiatives by EE firms and by DE firms will exhibit similarities and differences in terms of competitive factors they prioritise. On the one hand, by targeting DE, these initiatives share common location advantages, thus leading to contend that they will also share the same priorities. On the other, institutional dissimilarity between EE and DE and accumulated firm-specific advantages and disadvantages will be reflected in differences in the competitive priorities underlying the two types of initiatives.

[Figure 1 about here]

In the remains of this study, the competitive priorities of Chinese subsidiaries in DE are compared with those of firms that have backshored from China. This comparison offers opportunities to understand how priorities are affected by host and home-country factors, therefore throwing light on the reasons of attractiveness of location in DE for different sets of companies. The next section summarises the literature on backshoring and OFDI manufacturing initiatives originating from China towards DE focusing on the state of knowledge concerning competitive priorities.

2.2 Competitive priorities of firms locating in DE: backshoring vs. Chinese OFDI

Backshoring to DE has been attributed to a strategic focus of the firms on innovation (Di Mauro et al. 2018; Stentoft and Rajkumar 2020), brand recognition (Ancarani et al. 2015), product quality and responsiveness (Ellram, Tate, and Petersen 2013; Moradlou, Backhouse, and Ranganathan 2017). Ketokivi et al. (2017) explain the location of manufacturing in DE with the need to foster upstream and downstream linkages in the value chain through the co-location of R&D, manufacturing and marketing and service in DE. In the presence of the

COVID-19 pandemic, firms have been re-evaluating the location and governance of their global value chains with the intention of increasing supply chain resilience through backshoring and internalisation (Gereffi 2020).

Competitive priorities underlying backshoring initiatives have been empirically identified for Scandinavian firms, providing evidence that they are driven by the quest for quality, flexibility and delivery (Johansson et al. 2018; Johansson and Olhager 2018; Pal, Harper, and Vellesalu 2018). Ancarani, Di Mauro, and Mascali (2019) interpret backshoring motivations as indicators of competitive priorities on the grounds that locational advantages sought by a company must be aligned with its sources of competitiveness, and identify the following priorities for firms backshoring to Europe: cost, quality, brand recognition and responsiveness.

Current evidence concerning competitive priorities of Chinese OFDI to DE is scarce. Zeng et al. (2008) provide a notable exception by identifying ‘technology’, ‘cost control’ and ‘brand consciousness’ as the competitive priorities of internationalised Chinese manufacturing firms, although the authors make no distinction with respect to entry mode. The study findings match those of other contributions arguing that Chinese companies exhibit competitive disadvantages in brands, technologies and own innovation (Luo and Tung 2018) and that OFDI is used to close this gap. With respect to DE firms, Chinese firms need differentiation and brand advantages to compete in high value-adding markets (Zeng and Williamson 2003). In this direction, Chinese OFDI to DE is driven by the search for intangible strategic resources, such as superior skills, marketing expertise, advanced proprietary technologies and brands (Deng 2012; Buckley et al. 2018; Sutherland, Anderson, and Hertenstein 2018), in order to quickly overcome their latecomer disadvantage, strengthen global competitiveness and upgrade value chains (Luo, Xue, and Han 2010; Kedia, Gaffney, and Clampit 2012; Li, Li, and Wang 2016).

More recently, scholarly discussion has recognised Chinese firms' efforts in developing own innovative capabilities through the establishment of R&D centres in DE (He et al. 2019). Chinese firms also exhibit ownership advantages that typically differ from DE firms, such as low-cost operations and quality-price ratio (Ramamurti 2012), which can be safeguarded when producing in DE by securing the supply of scarce or cheaper natural resources such as energy (Buckley et al. 2010).

This overview suggests a dearth of studies identifying Chinese firms' competitive priorities when locating in DE, while the competitive priorities of backshoring firms have focused on specific geographical regions. In addition, there is currently no knowledge about 'patterns' of priorities for both types of initiatives. In order to address these gaps, this study applies a configurational approach to build separate taxonomies for Chinese and backshoring firms (Miller and Roth 1994; Bozarth and McDermott 1998; Frohlich and Dixon 2001) and compares them to identify similarities and differences.

3. Research methodology

Data on Chinese OFDI and backshoring to DE were collected from secondary sources (historical archives of international business newspapers and magazines, national-level newspapers and white papers by major consulting companies). Because backshoring and Chinese OFDI to DE are ongoing phenomena, secondary sources can provide timely and pertinent information for research (Calantone and Vickery 2010; Yeung, Humphreys, and Wiengarten 2016). In particular, press and internet sources have been considered useful when no other source is available (Mazzola and Perrone, 2013; Rabinovich and Cheon, 2011).

Sources in English, all the other languages within the European Union, and Chinese were used for the study. Two of the authors are native Chinese speakers and the working language of the research team was English. For backshoring, selected keywords (backshoring,

reshoring, nearshoring, insourcing, on-shoring, in-shoring, reverse globalisation, relocation, repatriation in combination with manufacturing) were used for the search. Internet search engines with the above keywords were additionally used. Regarding Chinese OFDI to DE, the CNKI (China National Knowledge Infrastructure) database, covering more than 600 full-text Chinese newspapers (CNKI 2019), Google and Baidu were probed. The following keywords were used for the search (offshoring, moving production to, start production in, manufacturing relocation, production relocation, move manufacturing to, start manufacturing in, establish a factory in, moving a factory to), together with location related keywords (overseas/abroad, developed/advanced economies/countries, European Union, Europe, North America, names of DE). The United Nations most recent country classification was used to identify DE.

The unit of analysis was the single initiative/project to move/locate manufacturing activities from China to DE. In order to separate location from governance, only location initiatives concerning owned facilities were included (i.e. backshoring in insourcing mode and Chinese OFDI in wholly owned subsidiary), while repatriations of suppliers and Chinese OFDI involving joint ventures with local firms were excluded (Gray et al. 2013; Wan et al. 2019a). Further, in order to guarantee homogeneity of the two samples, only cases of Chinese greenfield OFDI were included, since both greenfield OFDI and backshoring initiatives reflect the headquarter firms' competitive priorities instead of existing advantages of domestic firms in the target location, as it is often the case in mergers and acquisitions. A pre-test on twenty sources was carried out to ensure that the research team was aligned on inclusion and exclusion criteria. The search led to identify 308 backshoring initiatives from China and 155 Chinese OFDI to DE.

For each source, content-analysis was applied to identify motivations underlying backshoring and Chinese OFDI initiatives (Krippendorff 2004). The coding comprised forty-

two motivations drawn from an extensive literature review on backshoring (Di Mauro et al. 2018). To ensure comparability, the same coding process was applied to backshoring and Chinese OFDI initiatives, and the definitions of common motivations were carefully compared and aligned between the two samples. As the process of extracting motivational factors from large blocks of text and categorising them is interpretative, the research team reviewed each case and categorised observed motivations independently. The authors then held meticulous discussions and reached a consensus on each motivation extracted. A keyword table in both Chinese and English was created to ensure transparency and traceability. The entire data mining process was conducted manually.

4. Results

4.1 Descriptive results

Table 1 reports the main characteristics of the two samples, while the main motivations are listed in Table 2, together with a brief explanation of the labels used. Only motivations exhibited by at least 3% of the firms were included in the table and in the remains of the analysis.

[Table 1 near here]

[Table 2 near here]

4.2 Competitive priorities

Exploratory factor analysis (EFA) was performed to identify competitive priorities for each sample. Kaiser criterion was applied to extract factors and varimax rotation was used to ease

the interpretation, leading to seven factors with eigenvalues greater than one. Cross-loadings were also checked to ensure that items did not load on multiple factors. All items exhibited loadings above 0.6 and clearly mapped onto one factor. Uniqueness in the final solution was also calculated.

For backshoring initiatives (Table 3), factors account for 65.67% of variance (Hinkin 1998). Three factors (1, 6, and 7) are consistent with a quality priority. Specifically, Factor 1 (labelled Brand recognition) captures the aspects of quality that make products recognisable in the eyes of customers (Made in, Pressures from Customers), Factor 6 (labelled Quality) encompasses Quality and Offshore Control Complexity, and Factor 7 (labelled Know-how) emphasises the availability of workers' skills in DE. Factor 2 (labelled Costs) captures the importance attached to labour and logistics costs when deciding to relocate in DE. Factor 3 bundles the items Production Flexibility and Customer Proximity, therefore reflecting a focus on consumer responsiveness. Factor 4 (labelled Innovation) includes both product and process innovation. Finally, Factor 5 (labelled Delivery) captures the need to locate in DE to reduce long lead times from China, as well as problems tied to the high proportion of defective products.

For Chinese firms, four factors driving Chinese OFDI in DE explain 67.44% of variance (Table 4). Factor 1 (labelled Brand Recognition) emphasises the importance for Chinese companies of producing and sourcing in DE to signal the quality of their products. Factor 2 (labelled Costs) captures cost-related opportunities of producing in DE, tied to government incentives and low cost of energy. Factor 3 (labelled Responsiveness) captures the need to produce close to customers. Finally, Factor 4 (labelled Innovation) represents the search for opportunities for product innovation in DE. Two frequent motivations (changes in tariffs/taxation and market expansion) were excluded from EFA because of their low correlation with other motivations.

[Table 3 near here]

[Table 4 near here]

4.3 Taxonomies of priorities

Two-step cluster analysis was used to create a taxonomy of companies' competitive priorities (Miller and Roth 1994; Frohlich and Dixon 2001; Zhao et al. 2006). Each cluster was made up of companies sharing the same pattern of competitive priorities. Goodness of fit measures (AIC, BIC, ratio of size of largest to smallest cluster) suggest that a four-cluster solution best fits both backshoring and Chinese firms. Table 5 reports cluster centroids and F tests for the clustering variables, showing that all of them are significantly related to cluster membership.

For backshoring firms, we labelled clusters borrowing the classification introduced by Miller and Roth (1994) (Caretakers, Marketeers, Innovators) for competitive capabilities. The largest cluster (C2b = 108), labelled 'Market seekers', exhibits positive scores for Responsiveness and Delivery and negative centroids for the remaining factors. 'Caretakers' (C4b = 64) put emphasis on costs and delivery performance, while 'Innovators' (C3b = 90) focus on innovative processes and products that enable performance quality. Finally, the new label 'Legitimacy seekers' (C1b = 46) was introduced to denote backshoring initiatives valuing domestic know-how and country-of-origin branding.

The Chinese taxonomy identifies two clusters similar to backshoring, namely 'Legitimacy seekers' (C1c = 23) and 'Market seekers' (C4c = 36). Legitimacy seekers use sourcing and manufacturing in DE to gain customer recognition (Yamakawa, Peng, and Deeds 2008), while Market seekers aim to better serve DE consumers. Another cluster (C3c = 22) was labelled 'Innovative Caretakers', because of the simultaneous emphasis on product

innovation and cost related factors. Finally, borrowing from Zhao et al. (2006), the largest cluster (C2c = 74) was defined ‘Low Emphasisers’ because it exhibits low scores for all priorities.

[Table 5 near here]

Canonical discriminant analysis was applied to identify dimensions defining the clusters. In both samples, three functions had eigenvalues larger than one (Table 6). Canonical correlations show a very high association between each function and cluster membership. In particular, the first function explains 50% of variance for backshoring and 46.7% for Chinese OFDI. Ninety-seven percent of backshoring initiatives and 98.7% of Chinese initiatives were correctly classified, indicating high predictive ability and lack of misclassification.

[Table 6 near here]

Table 7 shows canonical discriminant coefficients. A cut-off value of ± 0.4 was used to identify factors that contribute the most to each canonical discriminant function. For backshoring, Function 1 identifies the clusters for which local know-how in DE and ‘made in’ are important elements of the backshoring strategy, at the expense of costs. Therefore, Function 1 represents premium price productions. Function 2 separates clusters for which innovation, delivery and quality are important, at the expense of costs. This function captures backshoring motivated by the geographical re-concentration of value chain activities, especially because of R&D-production coupling and production-market coupling (Ketokivi et al. 2017). Therefore, Function 2 indicates value chain integration strategies. Finally, Function 3 identifies backshoring of innovative and high-quality productions in industries where cost-

based competition is strong. Sectors such as automotive exhibit this combination of priorities, whereby a highly competitive environment is not only innovation-based but also pushes margins continually down, therefore requiring attention to costs.

Function 1 for Chinese firms identifies productions locating in DE to convince customers of their quality equivalence with DE products. These Chinese firms also compete on costs and innovation, at the expense of responsiveness, suggesting they cater for global markets. Conversely, firms in Function 2 compete on costs and innovation but do not pursue brand recognition, leading to conjecture that they use DE locations as a springboard to acquire technological knowledge and to position in higher market segments (Li et al. 2016). Finally, Function 3 identifies firms moving to DE pursuing responsiveness strategies. As in Zhao et al. (2006), these companies offer customised products or after-sale services to DE customers. Figure 2 illustrates the relation between cluster membership and the two main functions.

[Table 7 near here]

[Figure 2 near here]

5. Discussion

This study has identified specific patterns of competitive priorities of firms previously operating in China and which have moved to DE. Results highlight similarities and some notable differences between the competitive priorities of Chinese firms and those of backshoring firms.

The main commonalities reflect a focus on brand recognition, innovation, responsiveness and cost. Brand recognition, also referred to as ‘made in’ effect, has previously been recognised as

an important driver of backshoring (Ancarani et al. 2015; Fratocchi et al. 2016) but its relevance for Chinese firms has not been emphasised yet (Yamakawa, Peng, and Deeds 2008). The Chinese initiatives in this study suggest that ‘made in’ concerns products serving both domestic and DE markets. On the one hand, recent scandals within the Chinese food and beverage industry have led several Chinese firms to move production to DE having a reputation for safe and high-quality production, as the following quote from one of the sources used in the study illustrates:

Since 2008, Chinese consumers have lacked confidence in domestic milk powder brands, while at the same time they blindly trust milk powder produced abroad. (Dairy firm, China Business Journal, 2017)

On the other, DE consumers often perceive made-in-China products as having poorer quality. By establishing in DE, Chinese firms are associated with ‘credible’ locations, therefore gaining legitimacy as global players and credibility towards consumers, home-country governments and investors (Child and Rodrigues 2005; Yamakawa, Peng, and Deeds 2008):

With milk source and technology from New Zealand, not only can we expand our market in China, but we can also enter the international market and lay a foundation for our strategy in Southeast Asia and the Middle East. (Dairy firm, Shanghai Securities News, 2016).

Next, the innovation competitive priority reflects the relevance of technology and of knowledge acquisition and protection as key location advantages of some DE (Zhao et al. 2006; Kathuria et al., 2010; Luo and Tung 2018; Ancarani et al. 2019). In this direction, DE offer innovation ecosystems in which private and public organisations are brought together under institutional settings meant to promote interaction and learning (Baraldi et al. 2018; Spring et al. 2017).

The responsiveness priority is associated to the need to locate production in proximity of customers in order to better serve DE consumers. Specifically, backshoring has been linked to product lines catering for DE customers requiring customisation, postponement and after-sale services (Moradlou, Backhouse, and Ranganathan 2017). Further, customer proximity becomes increasingly important as fast product replenishment call for shorter supply chains (Srai and Ané 2016).

One very important reason why we chose Missouri is that our customer General Motor has a plant there. There are obvious benefits for locating in customer's proximity, including being able to provide fast delivery and convenient technical support. (Automotive firm, Southern Metropolis Daily, 2015)

While the focus on brand, innovation and market proximity reflect DE location advantages, the cost priority is linked to country-specific ownership advantages that both backshoring firms and Chinese firms built when producing in China. In the last decade, this advantage has eroded due to rising labour and transportation costs in China, creating opportunities for safeguarding cost priorities when locating in DE (Macchion et al. 2015), also thanks to falling costs of energy. Moreover, DE governments' subsidies represent an important support for Chinese firms' location decisions (Buckley et al. 2018).

The land is basically free, energy costs are much lower than in China, electricity price is half, and natural gas is one fifth that of China. In general, our profit in the US will be over 10% higher. (Automotive glass firm, Securities Times, 2016)

In spite of commonalities in the individual competitive factors, relevant differences emerge concerning the patterns of priorities. Specifically, backshoring firms pursue innovation in conjunction with quality and delivery. This finding aligns with evidence that relocations in DE concern processes characterised by production-development coupling and product-market

coupling, i.e. requiring cross-functional efforts and value chain geographical re-concentration (Ketokivi et al. 2017).

There are a few things that make a company unique. In my industry, it's innovation and the ability to come up with something new. Rapid prototyping is now done in-house. Our bicycle hubs are now manufactured and assembled in the United States. (iRT Wheels owner's blog, 2014).

Conversely, Chinese firms pursue innovation and cost together. Earlier studies pinpointed that Chinese firms need to develop multiple capabilities in order to be competitive on a global scale (Zhao et al. 2006). In this respect, while the innovation priority reflects capability upgrading that will lead to long-term competitiveness gains, it must be combined with short-term gains by capitalising on mass production advantages and cost position (Fleury et al. 2015). In addition, by building technological competences, Chinese firms are able to transfer valuable knowledge back to their domestic market (Luo and Tung 2007, 2018; Li et al. 2016).

With the help of America's advanced technology, professional management team, and abundant talent pools, we could master the world's cutting-edge technique for metal processing. (Metal firm, Caijing News, 2011).

The greater importance assigned to cost by Chinese firms with respect to backshoring firms is also highlighted by discriminant analysis. For backshoring firms, Function 1 identifies premium price products that leverage on brand recognition. Conversely, for Chinese firms Function 1 combines branding with cost, suggesting that these companies do not own brand equity that allows selling at higher prices.

Finally, although distinct patterns of competitive priorities characterise the majority of firms analysed, there is a sizable cluster of Chinese firms (Low Emphasisers, Zhao et al.

2006) that do not exhibit a clear competitive vision. These firms opened new plants in DE because of political contingencies, such as the need to get around increased tariffs and custom duties that inhibit their ability to export made-in-China products into DE markets (Bown 2010).

[To avoid trade barriers] our production capacity in China needs to be transferred somewhere else, so we started a factory in Chicago in 2010, and that is our solution to antidumping and anti-subsidy duties imposed by US. (Solar photovoltaic firm, China Energy News, 2014).

To sum up, results confirm the conceptual framework by highlighting that, although DE's distinctive location advantages drive similar competitive priorities for Chinese and backshoring firms, relevant home-country effects are witnessed by the fact that Chinese companies continue to place greater importance on cost competitiveness. In fact, the cost capabilities that Chinese companies have developed over time represent key sources of competitive advantage also when producing in DE and serving DE markets.

6. Implications

6.1 Research implications

From a research perspective, the study has added to the OM body of knowledge on competitive priorities and their patterns by illuminating on the competitive advantages sought by firms locating in DE. This knowledge is crucial because it can mark the difference between location in DE due to protectionism or to 'sound business' (de Treville, Ketokivi, and Singhal 2017). Furthermore, by pointing to the existence of multiple priorities influencing manufacturing location in DE, findings add to the extant literature on trade-off vs. complementarity of priorities and apply this perspective to shed new light on the logic

underlying location in DE. Next, by undertaking a comparative analysis via the lens of competitive priorities (Ward et al. 1998), this study contributes to bridging the dialogue between two separate research streams that have addressed manufacturing location in DE, i.e. backshoring and Chinese OFDI. In this direction, a simple conceptual framework building on OM and IB has been proposed that combines home-country influences on firms' competitive priorities with the host-country role (Ferdows 1997; Fleury et al. 2015; Luo and Tung 2018; Wan et al. 2019b).

6.2 Practical implications

The study provides insights for executives seeking suitable locations for manufacturing activities. Executives should be critically aware that location decisions must be driven by competitive priorities. Given that important motivations for manufacturing in DE encompass the acquisition of non-tradable assets (country-of-origin branding) or of scarcely mobile assets incorporating tacit knowledge (know-how and technological innovation), executives should evaluate whether these are sources of competitive advantage in the markets in which they compete. Specifically, when backshoring firms often relocate domestically more value-adding productions, innovation and brand image should be complemented by quality and ability to deliver (Baraldi et al. 2018; Di Mauro et al. 2018). Conversely, Chinese companies appear to seek the combination of innovation and branding with cost.

A related implication is that manufacturers planning to locate/relocate in DE should be mindful of the potential trade-offs between competitive priorities. For backshoring companies, the most relevant trade-off is between quality and innovation on the one hand and cost on the other. For Chinese firms in DE the trade-off is between cost and innovation on the one hand and responsiveness on the other, given that location in DE is used by Chinese firms not only to serve DE customers but also global customers.

Findings concerning Chinese companies can also provide useful advice to firms from EE other than China that are latecomer investors in DE. First, because the cost advantage of EE firms has a distinctive home-country component, these firms must factor in the higher production costs in DE and the costs tied to reaching EE customers from DE plants. In this light, EE will remain attractive offshore destinations for manufacturing either when cost remains an important source of competitive advantage or when responsiveness in serving EE markets is important.

Finally, although backshoring and Chinese OFDI initiatives are undertaken by two different groups of firms, whose executives are influenced by their own cultural and institutional conditions, these firms may be competing in the same global markets and may therefore benefit from the knowledge of each other's competitive priorities.

6.3 Policy implications

For at least a decade, policy makers in DE and in particular in the US and in Europe have considered the revitalisation of domestic manufacturing a policy priority. In this direction, some countries have devised policies for attracting manufacturing irrespective of the home country of the company, through a mix of reduced taxation and subsidies for opening plants (Ellram, Tate, and Petersen 2013). More recently, DE have been attempting to bring manufacturing back home with policies supporting the implementation of Industry 4.0 technologies (Ancarani, Di Mauro, and Mascali 2019; Stentoft and Rajkumar 2020).

By throwing light on the competitive priorities of firms involved in backshoring and in OFDI from China, our analysis contributes to the understanding of the reasons of attractiveness of DE as a manufacturing location. The analysis of priorities also pinpoints whether countries should implement different policies to attract Chinese FDI vis a vis backshoring.

Results hint that Chinese firms consider governmental subsidies a source of cost advantage that, coupled with low raw material and facility costs, generate a reduction in total landed costs that partially offset the higher costs of labour with respect to EE. Conversely, backshoring firms appear to perceive government support as less relevant, possibly on account of the fact that cost is not a crucial competitive priority for backshoring companies (Fratocchi et al. 2016).

Next, considering the importance of innovation for both Chinese and DE firms, policy initiatives that reinforce innovation ecosystems are functional to attracting manufacturing backshoring as well as FDI from EE such as China. This contention is supported by previous research on backshoring that found location within an industrial district advantageous for product innovation (Baraldi et al. 2018; Di Mauro et al. 2018). In particular, an open innovation system that supports value creation across diverse organisations such as community colleges, research centres or spatial aggregations of knowledge intensive manufacturing create attractive conditions for innovation-seeking investors (Spring et al. 2017).

Finally, given that both Chinese and DE firms are motivated by the need to achieve higher brand recognition, efforts should be directed towards recognising and enhancing country-specific brand image. For instance, our results show that country images associated with high quality natural resources and innovative designs are much appreciated by Chinese consumers and investors. By exploiting the ‘made in’ effect using country-specific trademarks and quality certifications, DE can improve the attractiveness of their domestic manufacturing base (Wan et al. 2019b).

7. Conclusions and limitations

This paper has explored the competitive priorities of Chinese manufacturers investing in DE

and has compared them with the priorities of DE firms backshoring from China with the aim to uncover reasons for the attractiveness of manufacturing in DE. In particular, the search for brand recognition tied to country-of-origin effects and the need to connect to advanced innovation ecosystems characterise both backshoring and Chinese initiatives. Conversely, results suggest that quality is a more important priority for backshoring with respect to Chinese firms, which conversely rely more on cost advantages.

Findings can help companies locating in DE enhance their competitiveness in the global marketplace. At the same time, they can inform DE industrial policies aiming at revitalising manufacturing.

Some limitations of the study should be acknowledged. Although careful textual search was applied in order to extract information, the use of secondary sources entails heterogeneity in case description. Therefore, future research should complement this study's findings with first-hand data on firms' competitive priorities. Next, given that China's government support to foreign expansion represents a significant institutional factor, future research should explicitly incorporate a comparison between Chinese private firms and state-owned enterprises. Further, to enhance comparability of Chinese and backshoring initiatives, this study has focused on Chinese greenfield investments. However, future research on competitive priorities that includes Chinese cross-border mergers and acquisitions to DE is desirable. Finally, the cross-sectional design of the data does not allow establishing whether priorities have shifted over time. Longitudinal studies using survey or case study methods are called to clarify this issue.

Acknowledgements

A previous version of this research has been included in the doctoral dissertation "Intermediation and manufacturing location decisions: achieving advantages from distant countries" (Virtanen 2020).

References

- Ancarani, A., and C. Di Mauro. 2018. "Reshoring and Industry 4.0: how often do they go together?" *IEEE Engineering Management Review*, 46(2): 87-96.
- Ancarani, A., C. Di Mauro, and F. Mascali. 2019. "Backshoring strategy and the adoption of Industry 4.0: Evidence from Europe." *Journal of World Business* 54 (4): 360-371.
- Ancarani, A., C. Di Mauro, L. Fratocchi, G. Orzes, and M. Sartor. 2015. "Prior to reshoring: A duration analysis of foreign manufacturing ventures." *International Journal of Production Economics* 169: 141-155.
- Baraldi, E., F. Ciabuschi, O. Lindahl, and L. Fratocchi. 2018. "A network perspective on the reshoring process: the relevance of the home and the host-country contexts." *Industrial Marketing Management* 70: 156–166.
- Bown, C. P. 2010. "China's WTO entry: antidumping, safeguards, and dispute settlement." In *China's Growing Role in World Trade*, edited by Feenstra, R. and S.J. Wei, 281-337. Chicago: University of Chicago Press.
- Boyer, K., and M. Lewis. 2002. "Competitive priorities: investigating the need for trade-offs in operations strategy." *Production and Operations Management* 11(1): 9-20.
- Bozarth, C., and C. McDermott. 1998. "Configurations in manufacturing strategy: a review and directions for future research." *Journal of Operations Management* 16(4): 427-439.
- Buckley, P. J., and M. Casson. 1976. *The Future of the Multinational Enterprise*. London: Macmillan.
- Buckley, P. J., L. Clegg, A. Cross, X. Liu, H. Voss, and P. Zheng. 2010. "The determinants of Chinese outward foreign direct investment. In Foreign Direct Investment." In *China and the World Economy*, 81-118. London: Palgrave Macmillan.

- Buckley, P. J., L. Clegg, H. Voss, A. Cross, X. Liu, and P. Zheng. 2018. "A retrospective and agenda for future research on Chinese outward foreign direct investment." *Journal of International Business Studies* 49(1): 4-23.
- Calantone, R., and S. Vickery. 2010. "Introduction to the Special Topic Forum: Using Archival and Secondary Data Sources in Supply Chain Management Research." *Journal of Supply Chain Management* 46 (4): 3-11.
- Child, J., and S. Rodrigues. 2005. "The Internationalization of Chinese Firms: A Case for Theoretical Extension?" *Management and Organization Review* 1(3): 381-410.
- CNKI.2019. Newspaper. Accessed 20 September 2019.
<http://new.oversea.cnki.net/kns/brief/result.aspx?dbPrefix=CCND>
- Cohen, M. A., and H. L. Lee. 2020. "Designing the Right Global Supply Chain Network." *Manufacturing & Service Operations Management* 22 (1):15-24.
- Cuervo-Cazurra, A., and M. Genc. 2008. "Transforming disadvantages into advantages: Developing-country MNEs in the least developed countries." *Journal of International Business Studies* 39(6): 957-979.
- da Silveira, G. J. 2014. "An empirical analysis of manufacturing competitive factors and offshoring." *International Journal of Production Economics* 150: 163-173.
- de Treville, S., M. Ketokivi, and V. Singhal. 2017. "Competitive manufacturing in a high-cost environment: Introduction to the special issue." *Journal of Operations Management* 49-51(1): 1-5.
- Deng, P. 2012. "The internationalization of Chinese firms: A critical review and future research." *International Journal of Management Reviews* 14 (4): 408-427.
- Di Mauro, C., L. Fratocchi, G. Orzes, and M. Sartor. 2018. "Offshoring and backshoring: a multiple case study analysis." *Journal Purchasing and Supply Management* 24 (2): 108-134.

- Dunning, J. H. 1980. "Towards an eclectic theory of international production: some empirical tests." *Journal of International Business Studies* 11 (1): 9-31.
- Dunning, J. H. 1998. "Location and the multinational enterprise: A neglected factor?" *Journal of International Business Studies* 29: 45–66.
- Dutton, J. E. 1993. "Interpretations on automatic: A different view of strategic issue diagnosis". *Journal of Management studies* 30(3): 339-357.
- Ellram, L., W. Tate, and K. Petersen. 2013. "Offshoring and reshoring: an update on the manufacturing location decision." *Journal of Supply Chain Management* 49 (2): 14-22.
- Estrin, S., K. E. Meyer, and A. Pelletier. 2018. "Emerging Economy MNEs: How does home country munificence matter?" *Journal of World Business*, 53(4): 514-528.
- Feldmann, A., and J. Olhager. 2013. "Plant roles: site competence bundles and their relationships with site location factors and performance." *International Journal of Operations and Production Management* 33 (6): 722-744.
- Ferdows, K. 1997. "Making the most of foreign factories." *Harvard Business Review* Mar.–Apr.: 73–88.
- Ferdows, K., and A. De Meyer. 1990. "Lasting improvements in manufacturing performance: in search of a new theory." *Journal of Operations Management* 9 (2): 168-184.
- Fleury, A., Y. Shi, S. F. Junior, J. H. D. Cordeiro, and M. T. L. Fleury. 2015. "Developing an analytical framework for study of emerging country multinationals' operations management." *International Journal of Production Research* 53 (18): 5418-5436.
- Fratocchi, L., A. Ancarani, P. Barbieri, C. Di Mauro, G. Nassimbeni, M. Sartor, M. Vignoli, and A. Zanoni. 2016. "Motivations of manufacturing reshoring: An interpretative framework." *International Journal of Physical Distribution and Logistics Management* 46 (2): 98–127.

- Fredriksson, A., and P. Jonsson. 2009. "Assessing consequences of low-cost sourcing in China." *International Journal of Physical Distribution and Logistics Management* 39 (3): 227-249.
- Frohlich, M. T., and J. Dixon. 2001. "A taxonomy of manufacturing strategies revisited." *Journal of Operations Management* 19 (5): 541-558.
- Gereffi, G. 2020. "What does the COVID-19 pandemic teach us about global value chains? The case of medical supplies." *Journal of International Business Policy*: 1-15.
- Giuliani, E., S. Gorgoni, C. Günther, and R. Rabellotti. 2014. "Emerging versus advanced country MNEs investing in Europe: A typology of subsidiary global–local connections." *International Business Review* 23 (4): 680-691.
- Gray, J. V., K. Skowronski, G. Esenduran, and J. Rungtusanatham. 2013. "The reshoring phenomenon: what supply chain academics ought to know and should do." *Journal of Supply Chain Management* 49 (2): 27-33.
- Haasis, T.I. and I. Liefner. 2019. "Reviewing the research on the internationalization of Chinese firms: Thematic expansion, new impulses and potential future development." *International Journal of Emerging Markets* 14 (1): 24-50.
- Hayes, R. H., and G. P. Pisano. 1996. "Manufacturing strategy: at the intersection of two paradigm shifts." *Production and Operations Management* 5 (1): 25-41.
- He, S., Z. Khan, Y. K. Lew, and G. Fallon. 2019. "Technological innovation as a source of Chinese multinationals' firm-specific advantages and internationalization." *International Journal of Emerging Markets* 14 (1): 115-133.
- Hinkin, T. R. 1998. "A Brief Tutorial on the Development of Measures for Use in Survey Questionnaires." *Organizational Research Methods* 1 (1): 104–121.
- Ivanov, D., and A. Dolgui. 2020. "Viability of Intertwined Supply Networks: Extending the Supply Chain Resilience Angles Towards Survivability. A Position Paper Motivated by

- COVID-19 Outbreak.” *International Journal of Production Research* 58 (10): 2904–2915.
- Jitpaiboon, T., Q., Gu, and D. Truong. 2016. “Evolution of competitive priorities towards performance improvement: a meta-analysis.” *International Journal of Production Research* 54 (24): 7400-7420.
- Johanson, J., and J. Vahlne. 2009 “The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership.” *Journal of International Business Studies* 40(9): 1411-1431.
- Johansson, M., and J. Olhager. 2018. “Manufacturing relocation through offshoring and backshoring: the case of Sweden.” *Journal of Manufacturing Technology Management* 29 (4): 637-657.
- Johansson, M., J. Olhager, J. Heikkilä, and J. Stentoft. 2018. “Offshoring versus backshoring: Empirically derived bundles of relocation drivers. and their relationship with benefits.” *Journal of Purchasing and Supply Management* 25 (3): 1-9.
- Kathuria, R., S. Porth, N. Kathuria, and T. Kohli. 2010. “Competitive Priorities and Strategic Consensus in Emerging Economies: Evidence from India.” *International Journal of Operations and Production Management* 30 (8): 879-896.
- Kedia, B., N. Gaffney, and J. Clampit. 2012. “EMNEs and knowledge-seeking FDI.” *Management International Review* 52 (2): 155-173.
- Ketokivi, M., V. Turkulainen, T. Seppälä, P. Rouvinen, and J. Ali-Yrkkö. 2017. “Why locate manufacturing in a high-cost country? A case study of 35 production location decisions.” *Journal of Operations Management* 49: 20-30.
- Kinkel, S., and S. Maloca. 2009. “Drivers and antecedents of manufacturing offshoring and backshoring—A German perspective.” *Journal of Purchasing and Supply Management* 15 (3): 154-165.

- Krippendorff, K. 2004. "Reliability in content analysis." *Human Communication Research* 30 (3): 411-433.
- Kulkarni, S., P. Verma, and R. Mukundan. 2019. "Assessing manufacturing strategy definitions utilising text-mining." *International Journal of Production Research* 57 (14): 4519-4546.
- Lampón, J. F., and J. González-Benito. 2019. "Backshoring and improved key manufacturing resources in firms' home location." *International Journal of Production Research*, DOI: 10.1080/00207543.2019.1676479
- Larsen, M. M., Manning, S., and Pedersen, T. (2013). Uncovering the hidden costs of offshoring: The interplay of complexity, organizational design, and experience. *Strategic Management Journal*, 34(5), 533-552.
- Leong, G. K., D. Snyder, and P. Ward. 1990. "Research in the process and content of manufacturing strategy." *Omega* 18 (2): 109-122.
- Li, J., P. Li, and B. Wang. 2016. "Do cross-border acquisitions create value? Evidence from overseas acquisitions by Chinese firms." *International Business Review* 25 (2): 471-483.
- Li, J., R. Strange, L. Ning, and D. Sutherland. 2016. "Outward foreign direct investment and domestic innovation performance: Evidence from China." *International Business Review* 25 (5): 1010-1019.
- Liu, H., and K. Li. 2002. "Strategic implications of emerging Chinese multinationals: The Haier case study." *European Management Journal* 20 (6): 699-706.
- Luo, Y., and R. Tung. 2007. "International expansion of emerging market enterprises: A springboard perspective". *Journal of International Business Studies* 38: 481-498.
- Luo, Y., and Tung, R. L. 2018. "A general theory of springboard MNEs." *Journal of International Business Studies* 49 (2): 129-152.
- Luo, Y., Q. Xue, and B. Han. 2010. "How emerging market governments promote outward FDI: Experience from China." *Journal of World Business* 45 (1): 68-79.

- Macchion, L., A. Moretto, F. Caniato, M. Caridi, P. Danese, and A. Vinelli. 2015. "Production and supply network strategies within the fashion industry." *International Journal of Production Economics* 163: 173-188.
- Makino, S., T. Isobe, and C. M. Chan. 2004. "Does country matter?" *Strategic Management Journal* 25 (10): 1027-1043.
- Mazzola, E., and G. Perrone. 2013. "A strategic needs perspective on operations outsourcing and other inter-firm relationships." *International Journal of Production Economics* 144 (1): 256-267.
- Miller, J. G., and A. Roth. 1994. "A taxonomy of manufacturing strategies." *Management Science* 40 (3): 285-304.
- Moradlou, H., C. Backhouse, and R. Ranganathan. 2017. "Responsiveness, the primary reason behind re-shoring manufacturing activities to the UK: An Indian industry perspective." *International Journal of Physical Distribution and Logistics Management* 47 (2/3): 222-236.
- Mudambi, R. 2008. "Location, control and innovation in knowledge-intensive industries." *Journal of Economic Geography* 8 (5): 699-725.
- Ohmae, K. 1990. *The borderless world. Power and strategy in the interlinked economy*. London: Collins.
- Pal, R., S. Harper, and A. Vellesalu. 2018. "Competitive manufacturing for reshoring textile and clothing supply chains to high-cost environment: A Delphi study." *The International Journal of Logistics Management* 29 (4): 1147-1170.
- Paul, J., and G. Benito. 2018. "A review of research on outward foreign direct investment from emerging countries, including China: what do we know, how do we know and where should we be heading?" *Asia Pacific Business Review* 24 (1): 90-115.

- Pawar, K. S., F. A. Huq, A. Khraishi, and J. Shah. 2019. "Contextualisation of the complexity in the selection of developing country outsourcees by developed country outsourcers." *International Journal of Production Research* 57 (13): 4310-4332.
- Peng, M. W. 2012. "The global strategy of emerging multinationals from China." *Global Strategy Journal* 2(2): 97-107.
- Phusavat, K., and R. Kanchana. 2007. "Competitive priorities of manufacturing firms in Thailand." *Industrial Management and Data Systems* 107 (7): 979-996.
- Pisano, G. P., and W. C. Shih. 2009. "Restoring American Competitiveness." *Harvard Business Review* 87 (7, 8): 114-125.
- Pisano, G. P., and W. C. Shih. 2012. "Does America really need manufacturing?" *Harvard Business Review* 90 (3): 94-102.
- Rabinovich, E., and S. Cheon. 2011. "Expanding Horizons and Deepening Understanding via the Use of Secondary Data Sources." *Journal of Business Logistics* 32 (4): 303-316.
- Ramamurti, R. 2012. "What is really different about emerging market multinationals?" *Global Strategy Journal* 2: 41-47.
- Rose, J., and Reeves, M. (2017). Rethinking your supply chain in an era of protectionism. *Harvard Business Review*, published on March 22.
- Rosenzweig, E. D., and G. S. Easton 2010. "Tradeoffs in manufacturing? A meta-analysis and critique of the literature." *Production and Operations Management* 19(2): 127-141.
- Rugman, A. M., and A. Verbeke. 2001. "Subsidiary-specific advantages in multinational enterprises." *Strategic Management Journal* 22 (3): 237-250.
- Schoenherr, T., D. Power, R. Narasimhan, and D. Samson. 2012. "Competitive capabilities among manufacturing plants in developing, emerging, and industrialized countries: a comparative analysis." *Decision Sciences* 43 (1): 37-72.

- Sim, A. B., and J. R. Pandian. 2003. "Emerging Asian MNEs and their internationalization strategies—Case study evidence on Taiwanese and Singaporean firms." *Asia Pacific Journal of Management* 20 (1): 27-50.
- Simchi-Levi, D., J. P. Peruvankal, N. Mulani, B. Read, and J. Ferreira. 2012. "Is It Time to Rethink Your Manufacturing Strategy?" *MIT Sloan Management Review* 53 (2): 20-22.
- Skinner, W. 1969. "Manufacturing-missing link in corporate strategy." *Harvard Business Review* 47 (3): 136-145.
- Spring, M., A. Hughes, K. Mason, and P. McCaffrey. 2017. "Creating the competitive edge: A new relationship between operations management and industrial policy." *Journal of Operations Management* 49: 6-19.
- Srai, J. S., and C. Ané. 2016. "Institutional and strategic operations perspectives on manufacturing reshoring." *International Journal of Production Research* 54(23): 7193-7211.
- Stentoft, J., and C. Rajkumar. 2020. "The relevance of Industry 4.0 and its relationship with moving manufacturing out, back and staying at home." *International Journal of Production Research* 58 (10): 2953-2973.
- Stentoft, J., J. Olhager, J. Heikkilä, and L. Thoms. 2016. "Manufacturing backshoring: a systematic literature review." *Operations Management Research* 9 (3-4): 53-61.
- Sutherland, D., J. Anderson, and P. Hertenstein. 2018. "Is the strategic asset seeking investment proclivity of Chinese MNEs different to that of developed market MNEs? A comparative analysis of location choice and orientation." *Management International Review* 58 (6): 911-933.
- Thürer, M., I. Tomašević, M. Stevenson, C. Blome, S. Melnyk, H. K. Chan, and G. Q. Huang. 2020. "A systematic review of China's belt and road initiative: implications for global

- supply chain management.” *International Journal of Production Research* 58 (8): 2436-2453.
- Virtanen, Y. 2020. (In press) “Intermediation and manufacturing location decisions: achieving advantages from distant countries.” PhD diss., Aalto University School of Business. <https://aaltodoc.aalto.fi/>
- Wan, L., G. Orzes, M. Sartor, and G. Nassimbeni. 2019b. “Reshoring: Does home country matter?” *Journal of Purchasing and Supply Management* 25: 1-12.
- Wan, L., G. Orzes, M. Sartor, C. Di Mauro, and G. Nassimbeni. 2019a. “Entry modes in reshoring strategies: An empirical analysis.” *Journal of Purchasing and Supply Management* 25 (3): 1-10.
- Wang, B., and K. Gao. 2019. “Forty Years Development of China's Outward Foreign Direct Investment: Retrospect and the Challenges Ahead.” *China and World Economy* 27 (3): 1-24.
- Wang, B., and X. Li. 2017. “From world factory to world investor: the new way of China integrating into the world.” *China Economic Journal* 10 (2): 175-193.
- Ward, P. T., and R. Duray. 2000. “Manufacturing strategy in context: environment, competitive strategy and manufacturing strategy.” *Journal of Operations Management* 18 (2): 123-138.
- Ward, P. T., J. McCreery, L. Ritzman, and D. Sharma. 1998. “Competitive priorities in operations management.” *Decision Sciences* 29 (4): 1035-1046.
- Wheelwright, S. C., and R. H. Hayes. 1985. “Competing through manufacturing.” *Harvard Business Review* 63 (1): 99-109.
- Witt, M. A., and A. Y. Lewin. 2007. “Outward foreign direct investment as escape response to home country institutional constraints.” *Journal of International Business Studies* 38 (4): 579-594.

- Yamakawa, Y., M. W. Peng, and D. L. Deeds. 2008. "What drives new ventures to internationalize from emerging to developed economies?" *Entrepreneurship Theory and Practice* 32 (1): 59-82.
- Yeung, A., C. Lo, P. Humphreys, and F. Wiengarten. 2016. "Special Issue: Operations Management and Production Research Using Secondary Data." *International Journal of Production Economics* 171: 309-310.
- Zeng, M., and P. J. Williamson. 2003. "The hidden dragons." *Harvard Business Review* 81(10): 92-99.
- Zeng, S. X., X. M. Xie, C. M. Tam, and T. W. Wan. 2008. "Competitive priorities of manufacturing firms for internationalization: an empirical research." *Measuring Business Excellence* 12 (3): 44-55.
- Zhao, X., C. Sum, Y. Qi, H. Zhang, and T. Lee. 2006. "A taxonomy of manufacturing strategies in China." *Journal of Operations Management* 24 (5): 621-636.
- Zhao, X., J. Yeung, and Q. Zhou. 2002. "Competitive priorities of enterprises in mainland China." *Total Quality Management* 13 (3): 285-300.

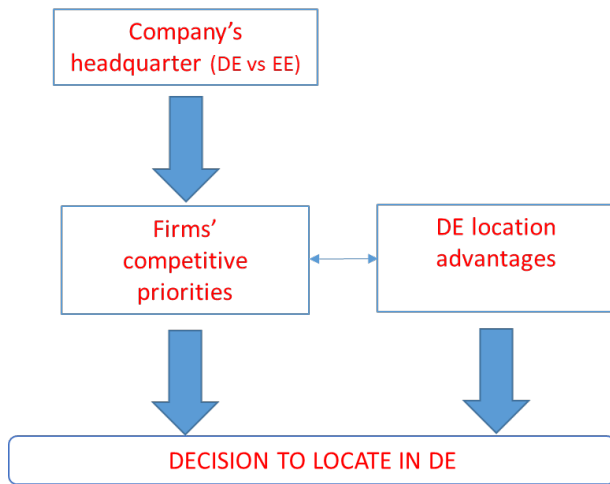


Figure 1 – Conceptual framework

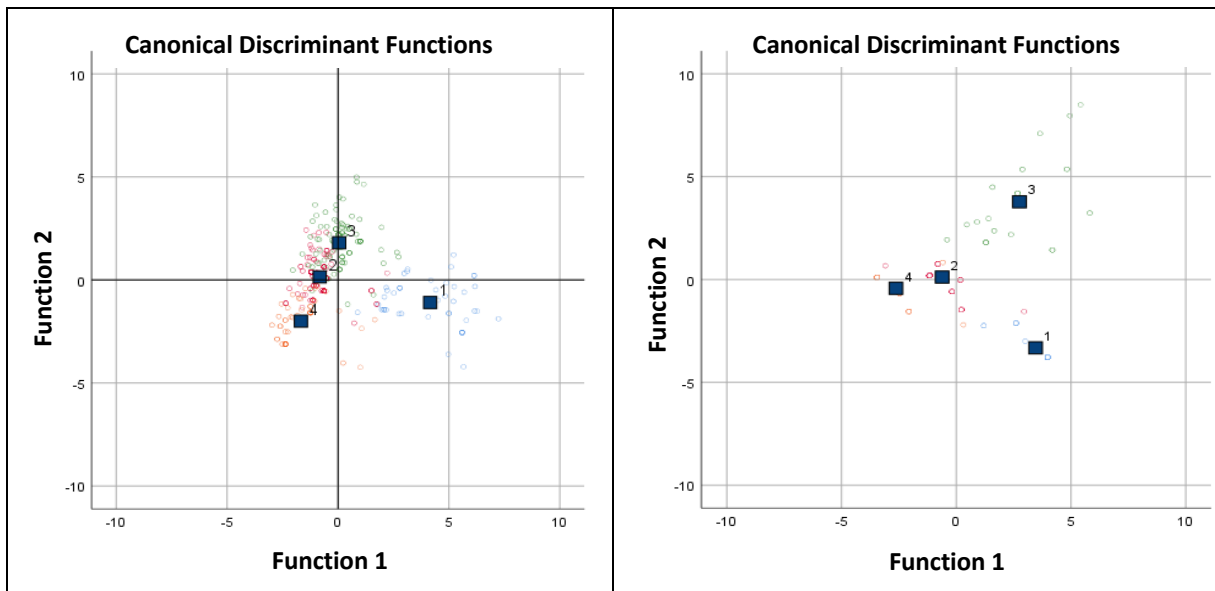


Figure 2. Cluster centroids for taxonomy of backshoring (left) and Chinese OFDI (right)

Table 1. Sample characteristics

	Backshoring by DE firms from China (308 cases)	OFDI in DE by Chinese firms (155 cases)
Firm ownership	Private (100%)	Private (86%) State Owned Enterprises (14%)
Firm size	Large (44%)	Large (97%)
Location	US (58%) EU (37%) Other developed economies (5%)	US (51%) EU (35%) Other developed economies (9%)
Industry	Machinery (20%) Electronics (18%) Textile and clothing (13%) Automotive (8%)	Electrical equipment (22%) Food and beverage (19%) Automotive (15%) Machinery (8%)

Table 2. Sample description in terms of motivations

Motivations for backshoring		
Process innovation	Adoption of process innovation	34%
Lead time	Need to reduce delivery time to final markets	31%
Logistic costs	Increase in transport and inventory costs from offshore location	27%
Customer proximity	Advantages of relocating production closer to market	24%
Labor costs	Increase in labor costs in offshore location	23%
Defective products	Need to reduce rate of defective products	22%
Total landed costs	Increase in the total landed costs from producing/sourcing in offshore location	21%
Product innovation	Adoption of product innovation	19%
Government support	Government support to relocate domestically	19%
Made in	Customers' preference for goods produced in the home country	18%
Production flexibility	Need to increase volume and mix flexibility	17%
Offshore control complexity	Complexity of controlling and coordinating offshore subsidiaries and/or suppliers	11%
Quality	Need/opportunity to improve product quality	8%
Customer support/pressure	B2B customer support or pressure to relocate in DE	7%
Know-how	Problems in protecting know-how	6%
Motivations for Chinese OFDI		
Market expansion	Opportunity to expand in DE markets	55%
Customer proximity	Advantages of relocating production closer to market	27%
Change in customs tariffs	Customs tariffs imposed by DE	27%
Made in	Customers' preference for goods produced in DE	20%
Sourcing of raw material	Customer pressure for sourcing of raw material in DE	17%
Energy costs	Lower cost of energy in DE	8%

Total landed costs	Increase in the total landed costs with respect to producing/sourcing in China	7%
Logistic costs	Increase in transport and inventory costs from offshore location	6%
Innovation	Adoption of product and process innovation	3%
Government support	Host country government support to locate in DE	4%

Table 3. Exploratory Factor Analysis - Competitive priorities of backshoring firms

Factor		Factor loadings	Uniqueness
<i>Brand recognition</i>	Customer support/pressure	0.8453	0.2644
	Made in	0.8274	0.2900
<i>Costs</i>	Labour costs	0.7433	0.3115
	Logistics costs	0.6963	0.4013
<i>Responsiveness</i>	Production flexibility	0.7469	0.3857
	Customer proximity	0.6937	0.4106
<i>Innovation</i>	Product innovation	0.8072	0.2659
	Process innovation	0.7750	0.3029
<i>Delivery</i>	Lead time	0.6815	0.3913
	Defective products	0.6736	0.3790
<i>Quality</i>	Quality	0.7652	0.3552
	Offshore control complexity	0.5936	0.4765
<i>Know-how</i>	Know-how	0.8753	0.2180
<i>Kaiser-Meyer-Olkin measure of sampling adequacy = 0.537</i>			

Table 4. Exploratory Factor Analysis - Competitive priorities of Chinese firms

Factor		Factor loadings	Uniqueness
<i>Brand recognition</i>	Sourcing of raw materials	0.8853	0.2032
	Made in	0.7669	0.3527
<i>Costs</i>	Energy costs	0.8269	0.3019
	Government support	0.7243	0.4312
	Total landed costs	0.6403	0.4776
<i>Responsiveness</i>	Customer proximity	0.8037	0.2419
<i>Innovation</i>	Product innovation	0.8826	0.2132
<i>Kaiser-Meyer-Olkin measure of sampling adequacy = 0.500</i>			

Table 5. Cluster centroids for backshoring firms and Chinese OFDI to DE

Backshoring							
Cluster (No.)	Brand recognition	Costs	Responsiveness	Innovation	Delivery	Quality	Know-how
C1b (46) Legitimacy seekers	1.8	-0.3	-0.1	0.1	-0.2	0.0	0.9
C2b (108) Market seekers	-0.4	-0.6	0.3	-0.6	0.1	-0.4	-0.2
C3b (90) Innovative Performers	-0.3	-0.2	-0.2	0.9	0.4	0.7	-0.1
C4b (64) Caretakers	-0.3	1.4	-0.2	-0.3	0.5	-0.2	-0.2
F	141.634***	126.056***	5.094***	60.467***	13.208***	24.847***	18.857***

Chinese OFDI				
Cluster (No.)	Brand recognition	Costs	Responsiveness	Innovation
C1c (23) Legitimacy seekers	2.12	-0.18	-0.11	-0.22
C2c (74) Low emphasizeers	-0.41	-0.36	-0.62	-0.05
C3c (22) Innovative caretakers	-0.10	1.91	-0.06	1.02
C4c (36) Market seekers	-0.44	-0.30	1.38	-0.38
F	189.109***	70.109***	50.295***	12.784***

*** p < 0.001

Table 6. Discriminant analysis for backshoring firms and Chinese OFDI to DE

Backshoring companies				
Function	Eigenvalue	% di variance	Cumulative %	Canonical correlation
1	3.442	50.2	50.2	.880
2	1.996	29.1	79.3	.816
3	1.423	20.7	100.0	.766
Chinese OFDI				
Function	Eigenvalue	% di variance	Cumulative %	Canonical correlation
1	4.755	46.7	46.7	0.909
2	3.813	37.4	84.1	0.890
3	1.618	15.9	100.0	0.786

Table 7. Standardised canonical discriminant coefficients for backshoring firms and Chinese OFDI to DE

Backshoring			
Factor	Function 1	Function 2	Function 3
Brand recognition	1.108	-.360	.014
Costs	-.431	-.687	.673
Responsiveness	-.094	.051	-.424
Innovation	.358	.638	.707
Delivery	.033	.673	-.060
Quality	.214	.559	.577
Know-how	.827	-.243	.017
Chinese OFDI			
Factor	Function 1	Function 2	Function 3
Brand recognition	0.794	-0.621	0.174
Costs	0.725	0.898	0.351
Responsiveness	-0.555	-0.116	0.887
Innovation	0.591	0.796	0.002