BREAKING UP THE GLOBAL VALUE CHAIN: OPPORTUNITIES AND CONSEQUENCES
ADVANCES IN INTERNATIONAL MANAGEMENT

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Prior to publishing this volume, the editors hosted a 2-day workshop (October 28–29, 2016) in Milan for papers invited to submit to the volume. The conference was co-sponsored by ICRIOS, Bocconi University and Emerald Group Publishing. The workshop gave authors an opportunity to present their papers, get extended and constructive feedback as well as learn about the other invited papers that was all related given the overall theme. Based on the received inputs the papers was going through one more round of revision and this process greatly enhanced the quality of the papers and the volume.

The editors would like to extend their deep gratitude to Nicola Scalzo for her very professional work in organizing the workshop as well as pulling this volume together.
EDITORS’ BIOGRAPHIES


Timothy M. Devinney is a professor of International Business and University Leadership Chair at the University of Leeds as well as Pro-Dean of Research and Innovation. He has published 12 books and more than 90 articles in leading journals. In 2008 he was the first recipient in management of an Alexander von Humboldt Research Award and was Rockefeller Foundation Bellagio Fellow. He is a Fellow of the Academy of International Business, an International Fellow under the auspices of the AIM Initiative in the United Kingdom, a Fellow of ANZAM (Australia New Zealand Academy of Management), and a Fellow of the Academy of Social Sciences. He served as Chair of the International Management Division of the Academy of Management. He was co-editor of Academy of Management Perspectives and the head of the International Business and Management Network of SSRN. He is on the editorial board of more than a dozen of the leading international journals.

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EDITORS’ INTRODUCTION

This is the eighth volume of *Advances in International Management* under the editorial team consisting of Timothy M. Devinney, Torben Pedersen and Laszlo Tihanyi plus Arnaldo Camuffo who has been added as a special co-editor of this particular volume. This will also be the last volume under this editorial team. Previous volumes have focused on a range of diverse topics in international management, from location and organizational aspects over institutional factors, emerging markets, entrepreneurship and meta-analysis in IB-research. This volume is focusing on how firms are reconfiguring their global value chains and separating their activities across spatial and organizational boundaries.

INTRODUCTION

Over the past 2 decades there has been a growing internationalization and fragmentation of the value chain of firms. While firms were previously conducting many activities within their boundaries and even in close proximity, the value chain has been fine-sliced and broken up as activities that were previously collocated have been relocated across organizational or geographical boundaries. The breaking up of the value chain implies that value chain activities are being separated in space and across organizational boundaries. It might be Research and Development (R&D) that is geographically separated from manufacturing if manufacturing is offshored or it might be that some activities are outsourced and then organizationally separated from the activities that are kept inside the firm. Historically, collocation and agglomeration have been very strong integration mechanisms between different activities, where coordination and exchange of knowledge are facilitated both inside the firms and among firms in clusters. However, the mechanisms of collocation and agglomeration are vanishing as activities are relocated organizationally and geographically, which potentially entails hidden costs.

FRAGMENTATION OF THE VALUE CHAIN

The practice of relocation and fragmentation of the value chain is not new. However, what is new is the conceptualization of these practices as offshoring
and outsourcing. For more than 50 years, firms have practiced various forms of offshoring (Ferdows, 1997). In the 1960s, firms (particularly from the United States) began to relocate blue-collar manufacturing activities to low cost countries, such as Singapore and South Korea. To cut production and labor costs, firms would close domestic facilities and establish factories in locations with favorable factors. In the early 1990s, the information and communication technologies revolution increasingly enabled firms to rapidly organize and locate activities and processes almost anywhere in the world (UNCTAD, 2004). Factors such as dramatic drops in IT costs, domestic shortages of skilled technological and managerial personnel, accelerated rates of technological change, and greater codification of corporate knowledge enabled firms to relocate tasks and activities to more distant and preferable locations (Contractor, Kumar, Kundu, & Pedersen, 2010). This trend is often described pedagogically by the smile of the value chain — see Fig. 1 — that propose some activities (low value adding activities) are more exposed to spatial fragmentation than other activities (high value adding activities).

However, in recent years, firms have gone beyond the mere relocation of labor-intensive manufacturing activities, and to a larger extent targeted service activities such as information technology and other business processes, but also more complex and higher value-added tasks, such as innovation and product development, to foreign locations (Jensen & Pedersen, 2012; Lewin & Peeters, 2006; Manning, Massini, & Lewin, 2008). From an evolutionary point of view, the practice has shifted from the sole relocation of labor-intensive manufacturing activities to also encapsulate more knowledge-intensive business service activities.

When activities are collocated, firms may not see the rationale of formalizing organizational mechanisms for coordination and knowledge transfer through standardized interfaces and clear division of labor since day-to-day problems

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![Value Chain Diagram](image_url)

**Fig. 1.** Smile of the Value Chain. *Source:* Own development inspired by CEO Stan Shih, ACER.
and challenges can more easily be solved in an informal face-to-face manner (Storper & Venables, 2004). However, when distinct organizational activities are relocated to foreign locations, firms face increasing complexity and coordination challenges (Kumar, van Fenema, & von Glinow, 2009; Srikanth & Puranam, 2011). Opportunities for informal coordination are reduced (Allen, 1977) and project teams may find it more difficult to build collegial social environments and common ground due to less communication and shared context (Clark & Brennan, 1991; Martinez & Jarillo, 1989). In contrast to a firm consisting of only collocated activities, a firm that relocates organizational tasks and sub-components abroad must thus coordinate an international network of activities across cultures and different institutional systems (Kumar et al., 2009; Niederman, Kundu, & Salas, 2006; Srikanth & Puranam, 2011). This may prove challenging on a number of dimensions. For example, not only may relocation provoke internal resistance (e.g., Lewin & Couto, 2007), but it may also hamper operational efficiency due to lack of trust, status differences between domestic and foreign units, and lack of understanding and communication in the process of delivering tasks, and interacting with offshore units (e.g., Levina & Vaast, 2008). Employees with cultural and language differences at geographically dispersed locations are constrained from informal face-to-face coordination, and are forced to rely on less superior technology-based coordination mechanisms (Storper & Venables, 2004). Above all, the dispersion of organizational activities challenges bounded rational decision makers’ ability to understand the true interdependency structure underlying various design efforts (cf., Simon, 1955). Larsen, Manning, and Pedersen (2013) argue that the complexity of offshoring foster hidden costs where decision makers’ ability to accurately estimate the costs of implementing activities abroad is undermined. As firms are required to implement coordination mechanisms that accommodate the added distance between interdependent activities (Srikanth & Puranam, 2011), decision makers’ need knowledge of how the underlying components in the organizational system are related to each other.

**ORGANIZATIONAL RECONFIGURATION**

Conceptually, the fragmentation of the value chain can be regarded as a three-staged process of organizational reconfiguration that must all be effectively managed to optimize performance: disintegration, relocation, and reintegration (cf., Mudambi & Venzin, 2010).

First, fragmentation entails that firms disintegrate collocated organizational activities. Driven by the potential of economizing the organizational structure by identifying specific tasks to be offshored, firms consequently break down their organizational activities into a larger number of sub-processes. For example, rather than offshoring production as one distinct activity, firms typically offshore activities such as fabrication, assembly, and maintenance. However, a
consequence of this disaggregation is that firms are faced with a larger number of interdependencies between the sub-processes (Contractor et al., 2010; Larsen et al., 2013). Firms are thus facing increasing complexity, to which they typically embark on a process of standardizing and codifying the interdependencies between the organizational activities so that these more easily can be detached from the domestic organization.

Second, fragmentation of the value chain involves a relocation of the disaggregated business tasks and activities from the home country to a foreign host location so that objectives such as access to lower cost levels, new resources and markets can be achieved. The organization is reconfigured on issues such as the contractual ownership and relationship of the offshoring setup (Hutzschenreuter, Lewin, & Dresel, 2011), the geography of the host location (Graf & Mudambi, 2005), the interdependencies and coordination mechanisms between the spatially differentiated organizational tasks and activities (Kumar et al., 2009; Srikanth & Puranam, 2011), and the overall coherence of the globally dispersed organizational system (Ernst & Kim, 2002). Consequently, firms experience that cultural and geographic distances between the home and host location obscure the effective knowledge transfer, coordination, and control in the organization (Dibbern, Winkler, & Heinzl, 2008). Firms are, therefore, required to apply mechanisms that can accommodate for the inclusion of distance in the organization (Kumar et al., 2009).

Third, once the disaggregated activities are relocated, firms need to reintegrate these with the remaining organizational activities so that coordinated action may be fulfilled. As such, firms need to ensure that aspects such as knowledge transfer, coordination, and control are not obscured by the geographic, political and institutional distances between the onsite organizations and relocate activities. However, it is at this stage that firms typically encounter the unexpected challenges or hidden costs of offshoring (Larsen et al., 2013; Stringfellow, Teagarden, & Nie, 2008). Firms may experience that the act of coordinating offshored activities is more costly and difficult than expected and that additional coordination efforts are required to achieve an effective global organization. Thus, firms rely on mechanisms such as mutual trust, ongoing communication, and knowledge transfer between the onsite and foreign organizations so that the activities become reintegrated. The less codified, replicable and standardized the fragmented activities and tasks, the greater the importance, and the challenge, of transferring appropriate knowledge efficiently and effectively in the relocation process.

The separation of value chain activities across organizational and geographic boundaries, however, might impair innovation and cross-activities problem solving, as pipes for communication and knowledge exchange are weakened. Knowledge flows are not the only phenomena that benefit from close physical proximity. Theories of agglomeration economies suggest that the clustering of related firms can yield advantages both from knowledge
externalities (spillovers) and pecuniary externalities (achieving economies of scale in local markets and suppliers). Others argue that the “industrial commons,” defined as the supporting infrastructure (stemming from high quality of suppliers, universities, competitors, etc.), are threatened by separating key activities geographically as important interdependencies are broken (e.g., Pisano & Shih, 2012).

**RESHORING**

One response to these organizational challenges and ex-post hidden costs of relocation value chain activities has been to bring back (again) some of the activities to the home country, that is, reshoring. The fact that reshoring is gaining in importance implicitly means that the home (typically developed) countries for some reasons are becoming more attractive for conducting some activities after decades of offshoring to emerging countries. As noted in an OECD-report (De Backer et al., 2016) several reasons have been put forward for why firms might reshore some of the previously relocated activities:

- Changing cost structure in emerging countries (costs increasing more in emerging than developing countries);
- Digitalization making scale economies less important, but allowing for more flexibility;
- Companies have experienced significant “hidden” costs and redo their decisions;
- The collocation of R&D, innovation and production entails significant advantages;
- Potential threats to intellectual property when offshoring knowledge-intensive activities;
- Balancing costs savings and risk dispersion; and,
- Proximity to the market can support flexibility.

However, when putting all the data together and assessing the magnitude of the reshoring, the OECD-report expressed a more balanced view (De Backer et al., 2016): “First, in spite of the (headline) cases of companies reshoring certain activities, the evidence presented in this paper and in other studies remains mixed. Overall, the evidence at the more aggregate level suggest that reshoring is still rather ‘a trickle than a flood’; reshoring initiatives that are often publicly launched do not always materialize in reality…. Second, the phenomenon of reshoring does not mean the end of offshoring. Empirical evidence clearly indicates that offshoring is still taking place at times when reshoring is picking up, and this observation is valid on the level of national/regional economies, industries and even individual companies. Companies may indeed
bring some activities back to serve home and neighboring markets but at the same time still move other activities abroad to serve local markets. Proximity to markets is an argument both for reshoring and offshoring; it can be expected that companies will continue to be attracted to emerging economies because of the size and growth of their (consumer) markets. There is a lot of discussion about the relative importance of both phenomena and the current.”

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Many of the questions that follow from the fragmentation of the value chain are scrutinized in the following chapters. Questions like what happens when interdependent activities are separated from each other? What are the long-term consequences for firm competitiveness of separating activities? How can interfaces between the separated activities be maintained? How does the nature of knowledge flows differ when activities are collocated rather than separated? And, on a societal level, what happens with local clusters when some activities are relocated? Are they losing out in terms of competence and infrastructure (the industrial commons) or does the relocation enable the clusters to rejuvenate by focusing on the really valuable activities?

More specifically, the papers of the volume are divided into three parts: (1) case examples, (2) organizational forms and (3) consequences of fragmentation. The first part provides specific cases of the transition process in firms and industries including the longitudinal case of De’Longhi that is adapting to environmental changes, the case of Telenor that is currently facing significant changes in their business model, the development of the oil and gas industry as well as how the financial crises affect the global configuration Turkish subsidiaries. The second part includes four papers that discuss the many organizational forms that go with the fragmentation of the value chain including the relational contracting and back-shoring. The third and last part entails five papers that discuss the consequences of fragmentation in terms of firm performance, implications for the local district, competence development and industrial commons.

We hope that this volume of AIM will further facilitate the conversation on the fragmenting of the global value chain.

Timothy M. Devinney
Torben Pedersen
Laszlo Tihanyi
Series Editors
REFERENCES


CASE EXAMPLES
OWNERSHIP AND LOCATION IN THE SMALL DOMESTIC APPLIANCES INDUSTRY: THE DE’LONGHI CASE

Diego Campagnolo and Arnaldo Camuffo

ABSTRACT

Ownership and location decisions are at the core of the development of multi-national enterprises (MNEs) as they deeply impact the creation and appropriation of value in global value chains. Such decisions have been treated by extant literature mostly as oppositions characterized by trade-off alternatives, such as internalization versus externalization and domestic versus offshoring. In this chapter, we discuss the development of a multinational company, that is, De’Longhi, as it has adjusted both ownership and location choices several times over the last 15 years. The case shows that in growing firms, such as De’Longhi, ownership and location decisions are interrelated among each other and with several factors including: interdependences between value chain activities, corporate strategy, organizational culture and the time horizon of the above choices.

Keywords: Ownership; location; MNEs; global value chains
INTRODUCTION

Since the 1970s of last century a number of firms in developed countries have reconfigured their value chains leveraging mostly on globalization, information technology and governmental policy modifications. Consequently, firms have separated and (often) offshored their activities in captive, collaborative or outsourced governance modes (Contractor, Kumar, Kundu, & Pedersen, 2010; Pedersen, Bals, Jensen, & Larsen, 2013).

Disaggregating the value chain assumes that each activity can be divided from the rest of the activities and that the overall value proposition of a firm is separable and can be easily reassembled through appropriate coordination mechanisms. Overall, the disaggregation of the value chain implies that every activity can be compared to the market alternative and be allocated to an independent party if it is worth doing (i.e., outsourcing) or can be relocated to a country that permits to reduce costs or get access to valuable resources (i.e., offshoring), or, again, can be both outsourced and offshored. The result is a combination of ownership and location decisions that eventually leads to the creation of a so called *global factory* (Buckley, 2007).

Accordingly, the debate on location and ownership decisions has flourished, focusing mainly on *why* and *how* firms revise such choices (Buckley, 2007, 2009; Buckley & Casson, 2009; Buckley & Ghauri, 2004; Buckley & Strange, 2015; Ceci & Prencipe, 2013; Chen, 2005; Contractor et al., 2010; Jensen, Larsen, & Pedersen, 2013; Larsen, Manning, & Pedersen, 2013; Mudambi & Venzin, 2010; Srikanth & Puranam, 2011). This debate notwithstanding, we believe that extant literature is characterized by some speculations that risk over simplifying and leading to misleading conclusions.

First, existing literature is conditioned by the fact that both ownership and location decisions are usually presented as oppositions that imply to solve trade-offs, that is, the advantages of internalization are the disadvantages of externalization, as well as the advantages of producing in a domestic location are the disadvantages of producing abroad. Such approach does not leave space for reconciling the trade-off even if anecdotal evidence suggests that (several) firms reconcile alternatives in both the decisions. In other words, firms combine in-house and outsourced control modes as well as domestic and offshored locations alternatives even for the same activity.

Second, drawing on transaction cost theory to understand the potential in fine-slicing, mobilizing and reintegrating specific value chain activities (Williamson, 1975), international business literature has promoted an efficiency perspective on ownership and location choices. Without neglecting its role, the efficiency view needs to be complemented by other variables that are likely to jointly affect the final decisions of internalization/externalization and onshoring/offshoring in addition to internal resources and external resources available at the hosting location.
Third, the majority of the literature is inclined to support the advantages of increasing firms’ vertical disintegration accompanied by specialization (Buckley & Ghauri, 2004). Consequently, both offshoring and outsourcing are expected to earn growing magnitude over time due to product modularization, digitization of processes and the associated reduction of transaction costs. Again, empirical evidence highlights that some companies have revised prior offshoring choices through reshoring and prior outsourcing strategies through vertical reintegration (De Backer, Menon, Desnoyers-James, & Moussiegt, 2016).

Drawing on the above assumptions, in this chapter we take on the challenge of shedding further light on the relationships between location and control decisions adopting a longitudinal perspective. Through an in depth case study, we discuss the location and control choices of De’Longhi since the beginning of 2000s until today. De’Longhi is a leading player in the small domestic appliances (SDAs) segment that has offshored (and partially outsourced) its production quite recently compared to the majority of other firms. Notwithstanding, De’Longhi – which has constantly growth both in terms of revenues and margins in the last 10 years – has adjusted its original choices over time both as regard to location and control in line with its strategic plan.

Results demonstrate that ownership and locations decisions are interrelated and affected by a variety of factors in addition to transaction costs and cost differences across locations. Moreover, a long-term orientation combined with strict control over all value chain activities, allow the adoption of a portfolio approach in the configuration of a (global) value chain that in turns opens up sustainable paths of growth.

The chapter proceeds as follow. In the first section we briefly discuss the existing literature about ownership and location decisions in multinational enterprises (MNEs). In the second section we present the company and its main figures. In the next three sections we describe the internationalization process in China, the internationalization process in Romania and the current configuration of the global value chain of De’Longhi respectively. Discussion and conclusion sections follow.

OWNERSHIP AND LOCATION DECISIONS IN MNES

Ownership and location decisions are at the core of the development of MNEs as they profoundly impact a firm’s value creation and appropriation in global value chains (Buckley & Strange, 2015; Contractor et al., 2010). Since the 1970s of the last century, enterprises have changed locations and governance structures in line with the market liberalization that has characterized several developed and developing countries, the global integration of financial markets, the liberalization of trade and investments, as well as with the development of
information and communication technologies (ICTs) and transportation. As a consequence, production has globally fragmented and such concepts as “global value chain” and “global factory” have gained prominence in the international business literature (Buckley, 2007; Gereffi, Humphrey, & Sturgeon, 2005).

Ownership and locations decisions can be studied at different levels of analysis, that is, at the market or supply chain level (Alcácer & Chung, 2007, 2014), as well as at the single firm level. In this chapter we take the latter perspective and provide further insights about how ownership and location decisions interact among each other and with the overall strategy of the firm.

Existing literature has given vast credit to the idea that, because of product modularization and process digitization accompanied by ICT development, a more “fine-slicing” of value chain activities would have automatically made economic sense. Specifically, value chain activities have been broadly grouped into three main categories: upstream (input), downstream (output or market), and middle. Companies are finding that higher value is increasingly concentrated at the upstream and downstream ends of their value chain because the former are sustained by research, development and design, while the latter are supported by marketing and distribution (Mudambi, 2007). Coherently, and as a consequence of that, firms could have become more flexible delegating each single “slice” to third parties, and/or undertaking them in cost-effective or knowledge-enhancing (often offshore) locations (Mudambi & Venzin, 2010). Lower value-added activities (usually labor-intensive) could be assigned to independent firms (outsourcing) located in emerging countries (offshoring), while higher value-added activities (usually knowledge intensive) should remain under the full control of the firm (insourcing) in the domestic country (Jensen & Pedersen, 2012; Mudambi, 2007; Pyndt & Pedersen, 2006). The combinations of the former alternatives lead to a network of globally distributed operations—a global factory using the words of Buckley (2007)—that can be divided into three main parts. The first part of the global factory is made of the OEM controlling the brand and undertaking design, engineering, and research and development (R&D) activities. The second part is represented by contract manufacturers in charge of manufacturing and logistics, and the third part is warehousing, distribution and accommodation performed at local level to ensure fit between the efficiency of global standardization and the responsiveness of local adaptation.

Part of the literature went even further. It maintained that the vertically disintegrated and specialized firms that emerged would have been more agile owning no manufacturing facilities at all (due to offshoring and outsourcing of low-value-added activities) and that they would have outperformed “companies with a strong manufacturing culture, and a commitment to a fixed location” (Buckley & Ghauri, 2004, p. 88).

As a consequence of the above, existing literature on ownership and location has developed in a somehow disconnected way in which each of the decision is optimized separately from the other. Ownership decisions are optimized on the basis of the evaluation of transaction costs while location decisions on the basis
of possible international arbitrages in the cost differences between developing (low-cost) countries and developed (high-cost) countries (Mudambi & Venzin, 2010). Moreover, in the organization of MNEs ownership and location choices are often presented as oppositions (Kinkel, 2012, 2014; Kinkel & Maloca, 2009). Internalization is opposed to externalization as far as ownership is concerned, while offshored is opposed to domestic as far as location is concerned. This view has deepened the advantages and disadvantages of each single choice but has weakly discussed if and how firms can combine the supposed trade-offs. Some recent studies advance that ownership and location decisions are somehow related among each other, but due to the difficulties (in terms of data requirements) of the simultaneous optimization of both decisions, a sequential decision-making process is superior. Mainstream literature has therefore demonstrated that location decisions consider ownership decisions as given (Doh, Bunyaratavej, & Hahn, 2009; Kotabe, 1990), that is ownership decisions come first while location decisions come after (Graf & Mudambi, 2005; Hätönen & Eriksson, 2009).

Conversely, we believe that both decisions are interrelated and that a variety of other factors — in addition to cost differentials across locations or transaction costs in the transfer from one activity to the other — deserve to be accounted for when discussing ownership and location choices. Again, we maintain that embracing the opposition view that is promoted by (part of) the literature we risk suboptimal configurations in the global organization of MNEs while adopting a more holistic approach that discuss how internalization and externalization, as well as offshoring and domestic locations, combine among them, would promote more profound discussions and offer a vision closer to the reality.

In line with the supposed “ability to separate and relocate stages of production” (Buckley & Ghauri, 2004, p. 83), extant literature also assumes that in MNEs processes of value creation are (or tend to become) sequential. That is, a firm’s total value is the sum of smaller and independent subprocesses of value creation that can be easily modularized and recombined. However, the management of a global factory is not as simple. It entails three interrelated processes including the disaggregation of a firm’s value chain into distinct activities, the relocation of these activities, and the reintegration of the activities coordinating all the parts of their value chains and preserving their functioning in the long run through knowledge transfer across locations (Pedersen et al., 2013). Companies should develop interfaces and coordination mechanisms between modules that are dispersed both from the location and the ownership stand points (Contractor et al., 2010). The higher the number of “slices” and the geographical distance between them, the greater will be the associated complexity and the risk of value destruction if the entire process is not properly executed. Only recently, research has started to shed light on the role of interorganizational relationships and linkages among different parts of the value chain, recognizing that, because of those relationships, a firms’ value-creation process
is more than the sum of the value generated in single value chain activities (Alcácer, 2006; Alcácer & Delgado, 2016; Jensen et al., 2013; Pisano & Shih, 2012). Overall, the process of value creation and appropriation in MNEs is only partially sequential. Instead, it remains associated with both the capabilities of the firm of successfully excelling in each single value chain activity and of effectively integrating activities that are performed in different locations or through a variety of ownership modes (Ceci & Prencipe, 2013; Srikanth & Puranam, 2011).

**RESEARCH METHOD**

Since there is little theory and limited empirical research on how location alternatives (domestic-offshoring) as well as ownership choices (internalization-externalization) are linked among each other, our study cannot but be exploratory. Given the obvious limitations of exploratory research, it is widely acknowledged that such research may be effectively pursued using in-depth, inductive case studies (Gibbert, Ruigrok, & Wicki, 2008; Siggelkow, 2007). In management research, case studies are considered an appropriate way to describe and explore puzzling phenomena (Eisenhardt, 1989; Fiss, 2009; Handfield & Melnyk, 1998; Meredith, 1998; Yin, 2009).

Our case study is based on De’Longhi — a leading player in the appliances industry — and its supply chain configuration (in terms of ownership and location decisions) in the last 15 years (from the end of 1990s of the last century until now). From the point of view of our theoretical setting, De’Longhi represents a kind of “special” case. First, because De’Longhi has revised the configuration of its value chain activities several times in the last 15 years, reinternalizing prior outsourced activities. Second, as the protagonists of the first revision are still working in the Group, the case offers the possibility to interview the most knowledgeable people for all the revisions.

We conducted several rounds of interviews (from 2013 to 2016) with managers involved in ownership and location decisions and with those who still manage (some of) the foreign subsidiaries of the company. We interviewed corporate level managers in the headquarter of Treviso, as well as managers of the Chinese factory in Dongguan (China) that one of the authors have regularly visited in the last 4 years. Specifically, we interviewed the following managers: Roberto Ceschin (Group HR Director), Nicola Serafin (Chief Operation Officer), Stefano Cappellini (Commercial Director West & South Europe), Massimo Magnabosco (HR Manager), Monica Bettio (HR Manager) and Marzio Damiani (Operation Manager Dongguan factory).

Interviews lasted approximately 3 hours each. Each interview was recorded and transcribed for subsequent analysis. To triangulate our data, the information from the interviews was pooled with details obtained from other sources,
such as websites, archival sources, internal documents and site visits both in Italy and abroad.

**DE’LONGHI CASE STUDY**

De’Longhi was established in 1902 as subcontractor and in 1974 it started producing portable heaters with its own brand. Currently, the Group employs about 7,000 people, its revenues approximate €1.9 billions, 34% of which coming from emerging markets, and is listed in the Milan Stock Exchange since 2001.

De’Longhi is one of the leading players in the industry in all the segments in which it competes including coffee makers, food preparation, home care (ironing and cleaning) and comfort (portable heaters and air-conditioners).

In addition to the house brand De’Longhi, which accounts for 61.2% of total revenues, the Group manages three other brands: Kenwood, Braun and Ariete. Kenwood has been acquired in 2001 and competes in the food preparation category with a specific leadership in the kitchen machine segment; currently Kenwood brand accounts for 25.3% of total revenues. Braun belongs to De’Longhi since 2012 when the Group acquired its perpetual licence (only for SDA) from P&G. Currently, Braun is a remarkable brand in the food preparation category and generates 10.4% of the total revenues. The house brand (De’Longhi) is present in several product categories and is the leading brand in the coffee machines one. De’Longhi, Kenwood and Braun compete in the high and medium-high segments of the market, while Ariete targets the mid- and low-end segment. The high-end segment of the market generates the 52% of Group’s total revenues, while high-end and mid-high segments together generate the 78% of total revenues. This peculiar price positioning makes De’Longhi different from all its main competitors, including SEB Group, Philips, Bosch and Siemens, that do not have such a fraction of their products in the high-end segment of the market. Moreover, De’Longhi differs from its competitors because it focuses only on SDA, while some of the above competitors compete also in other segments (e.g., personal care), in the large appliances segment (including washing machines, dishwashers, refrigerators, etc.) as well as some of them diversified in unrelated businesses (including but not limited to power tools, garden tools, building technologies, automation, etc.).

As a sign of its technological leadership in the coffee machine category (that De’Longhi has introduced since 1994), the Group has established a partnership with Nespresso and Nestlé (in 2007) for the development, production and/or distribution of co-branded coffee machines.

From the location point of view, De’Longhi operates in 5 production facilities (3 in China, 1 in Italy, and 1 in Romania), 5 R&D centers (1 in China, 2 in Italy, 1 in United Kingdom, and 1 in Germany) and has 32 commercial
subsidiaries in 32 countries all over the world (the first one established in 1986 in the United States).

OWNERSHIP AND LOCATION DECISIONS IN CHINA

De’Longhi has produced almost all its products in Italy up to the first years of 2000 where all its facilities were located. Only from early 2000s the company started rethinking its production and sourcing strategy, therefore only after the massive delocalization wave that occurred during the 1980s and 1990s of the last century involving a variety of industry and the SDA industry in particular. Differently from its competitors, which transferred (part of) their production to low-cost countries, De’Longhi maintained it in Italy. This choice was sustained by two complementary elements. On the one hand the organizational culture of the company that assigns fundamental values to the industrial heritage of the company, to the quality of the product, and to the protection of the know-how. On the other hand, the Group has constantly invested to introduce the most advanced process technologies, often anticipating technologies that only later would have become standard at the industry level. In 2000, for example, this investment logic made Italy still preferred to other low-cost countries (including China) according to the evaluation the management did when they increased the production capacity and decided to open a new factory in Ampezzo (North East of Italy) in addition to the three factories the company was running in Italy at that time. This new plant was opened in 2000 but closed only few years later, in 2004.

Indeed, between 2001 and 2003 the competitive situation of the industry started to change and China became a credible threat both because some of the Group’s competitors already produced there at lower costs, and because Chinese firms were able to launch products of acceptable levels of quality at cheaper prices (often copying those of the world largest competitors that have already offshored their production in China and/or outsourced it to Chinese manufacturers). Moreover, at the time, the range of products of the Group did not include the automatic and the so called “bean-to-cup” coffee machine segment (which was introduced in 2003 and turned out to be very promising in terms of growth) and other premium products, that would have probably sustained the choice of internalizing production in the domestic country to keep such production under stricter control. Therefore, the combination of rising environmental uncertainty and outdated choices of product positioning, unfolded the dramatic risks the company would have faced in the near future. Again, the decision to list the company in the Milan Stock Exchange in 2001 changed the perspective of the management, and created more pressure toward mid-term profitability, while keeping long-term sustainability. Therefore, it became evident that – to preserve both its market share and financial
performances — De’Longhi would have been forced to revise the configuration of the production activities of its value chain, approaching the form of a global factory.

De’Longhi started planning the relocation of its production in China in the second half of 2001, after the acquisition of Kenwood that at the time was used to produce its entry level products in one factory (Tricom) located in Dongguan (Guangdong province). The plant was not equipped with advanced technologies and did not follow the high manufacturing standards De’Longhi was used to set in its own factories. In 2002 (1 year after the acquisition), De’Longhi started a substantial investment plan in Tricom (subsequently renamed DGDK) introducing new molding machines, reengineering production lines and transferring the equipment the Group was using in the production plant of Ampezzo. The year after (2003), De’Longhi relocated in Dongguan the production of the (most simple) products it was producing in Ampezzo, starting from fan heaters. The transfer of products from Italy to China continued for 3 years, until 2006. At the end of this period all products De’Longhi was used to produce (in Italy) in 2000 were produced in China both in its plant in Dongguan, in the two joint ventures De’Longhi established with two Chinese manufacturers in the same years and through independent contract manufacturers. One of the two joint ventures is still in place (TCL DL JV in Zhongshan) and produces portable air-conditioners and dehumidifiers. The other joint venture was established in 2004 and in 2009 De’Longhi decided to acquire the remaining 30% owned by the partner. This company (On Shiu, located in Zhongshan) is dedicated to the production of heaters and products for cooking and breakfast.

The relocation of the production has required substantial investments that went even beyond the original plan of the Group. Specifically, the relocation has required intense training programs to transfer to China, the (sophisticated) manufacturing competences the Group developed in Italy over time. To do so, De’Longhi temporarily transferred in China a considerable number of corporate and middle-level managers, employees and blue collars. In particular, middle managers and employees were in charge of setting up the production plant, hiring Chinese employees and starting the production process, while blue collars were in charge of training local employees on technologies they did not know. The great majority of the expatriates were at their first international experience. The cultural distance and the language difference have represented significant barriers that hindered the transfer of knowledge and competences. For this reason, the relocation process took 3 years and forced the company to dramatically increase the investment in quality control to keep (at least) the same quality standard of the Italian plants. De’Longhi transferred existing procedures, introduced new ones (e.g., pre-shipment inspection quality control systems) and reorganized production shifts accordingly (e.g., competent employees dedicated to quality control are always present both in day and night shifts, while in Italy they are present only during the day). Overall, while in Italy 1%
of the employees are dedicated to quality control, in China the quality control departments employ 8% of the entire workforce. In addition, to reduce the complexity of the relocation process, De’Longhi decided to keep initially in Europe part of the supply chain without relocating there the provision of strategic components. The Italian headquarter held the purchasing of the most important components, which were sent directly to Dongguan. Therefore, at that time the supply chain was partially Europe-based and partially Chinese-based, as some of the most low-value added components (commodities) were already bought in China since the 1990s.

In sum, the entrance of De’Longhi in China is a kind of combination between a brownfield and a greenfield investment. On the one hand, De’Longhi leveraged on the availability of the Tricom plant and on the supply relationships of Kenwood, on the other hand, the Group has completely revised the plant, its resources and organization to keep it consistent with the Group’s values and performances. In so doing, De’Longhi has been able to quickly catch up with its competitors that already took advantage of production platforms in low-cost countries.

Over time, De’Longhi has continued investing in its Chinese operations. Particularly, De’Longhi has doubled the size of DGDK (in 2012) and increased the production capacity and quality. Today, DGDK is the factory with the largest production capacity of the Group, for example, DGDK has four times the molding machines De’Longhi currently operates in Italy and two times the molding machines installed in the plant in Romania (see next section “Ownership and Location Decisions in Romania”). Presently, De’Longhi sources in China the 60% of its total production value.

At the time in which De’Longhi decided to relocate its production, China was the only possible alternative, even if the Guangdong province was only one of the Chinese provinces the management took into consideration. The Group decided for Guangdong both for the lower cost of labor and for the availability of competent suppliers in all the component categories, though De’Longhi did not leveraged on them since the very beginning. As we anticipated above, it decided to continue importing (strategic) components from Europe and to fully relocate the supply chain in China only gradually. Another element that played a not negligible role has been the logistic infrastructure already available at the time (and further improved in the subsequent years). Indeed, by operating in the Guangdong area, De’Longhi could count on reliable vectors and easily send products all over the world. Subsequently, when operating there, De’Longhi also recognized other opportunities (in addition to low-cost resources) associated with the characteristics of the labor market and of the overall external environment. As far as the labor market is concerned, the company managed to take advantage of the higher flexibility and of a different business calendar (with a reduced number of day offs and vacations). Specifically, the high turnover of the employees could have represented an issue, but the management exploited it to more efficiently deal with the
seasonality of the production. Concerning the external environment, De’Longhi exploited the possibility to increase the flexibility and the speed of some processes such as the production of mold. Even if these advantages did not affect the original evaluation of the Chinese economic environment (in 2001) – thus do not explain the reasons why the company moved to China – they are at the base of the later investments in the Chinese operations as it can be recognized from the words of one of the managers we interviewed:

Flexibility of the labor market and speed in the execution of outsourced operations are not the reasons why we went to China originally, probably we were not even aware of them as we discovered such features of the Chinese environment only once we started working there. However, these characteristics are surely the main reasons why we have continued investing over the years. Just to give an example, in Italy suppliers need on average 3 months to produce a mold, in China they need 40 days.

Over time, the production base of the Group in China has increased its importance. As we reported above, in 2006 all the products that were part of the offer of De’Longhi in 2000 have been relocated in China, including products with higher value added. This has been possible due to the rise of the production capacity and of the competences of the employees.

Relocation in China has been coupled with other strategic moves at the corporate level, including product repositioning and the introduction of new products (such as automatic and “bean-to-cup” coffee machines) that were designed and produced in Italy. In other words, as the Group was transferring production to China, it anyway continued producing in Italy new products thanks to the savings the relocation process has generated.

The approach De’Longhi used toward offshoring in China was in some way different from that of competitors. First, De’Longhi decided to relocate the entire production phase (i.e., the assembling of the final product) rather than only a part of it which would have created a higher degree of interdependence between on-shored and offshored activities even once the relocation process was completed. This choice, has therefore limited the degree of complexity and the need of coordination between distant locations. Second, De’Longhi decided to relocate also in its own factories instead of leveraging exclusively on contract manufacturing or on alliances with local partners even if the latters played a not negligible role at the outset of the offshoring period. This choice was aimed at preserving the quality of the product, the reliability of the schedule, and the knowledge of the processes. One of the managers we interviewed highlights:

We have always been a manufacturing company and we will remain so in the future. Having said that, in China we surely adopted a different approach than our competitors or many other firms that used modes of low commitment such as contract manufacturing. Contract manufacturing gives surely higher flexibility in the short term but you risk losing control over the medium term. Moreover, the quality of the product was not as high as we required and we could not even strongly impact on it.
Third, relocation in China was not a standalone project but it has been coupled with the repositioning of the entire offer toward higher value-added products to differentiate the brand and to escape from price competition. As one of the manager we interviewed reports:

Overall, at the beginning of 2000s we aimed at internationalizing our sourcing base, at repositioning our offer toward the high-end segments of the market and at increasing the quality level of all our products simultaneously. Consequently, these objectives explain why we were interested, since the very beginning, to understand China: we did not go to China to take advantage only of the low cost opportunities. We approached China in line with the cultural values of the company, therefore we have not exploited all the cost savings that were theoretically possible as we invested a lot in quality control and training. We took advantage of the lower costs to make the same or even higher quality but more efficiently. Moreover, we have never stopped producing in Italy and this has nurtured the creation of new products and competences that have permitted to gain market share in product categories of higher value.

OWNERSHIP AND LOCATION DECISIONS IN ROMANIA

In March 2012, De’Longhi took over a plant Nokia opened in Cluji (Romania) only few years before (in 2008) and started to move there part of the production it was used to assemble in Italy. The objective of the Group was to develop an alternative to the Italian plant in Mignagola (Treviso, Italy), which was the only one of the Group kept in Italy that, at the time, was running at its maximum capacity. Even if in the same years De’Longhi was planning to increase its investments in China (in 2012, the De’Longhi started to increase the space and the production capacity of DGDK), it decided to “limit” the commitment there and to enhance the European production platform. Strategic, operative and financial reasons motivated this choice. First, the Italian plant in Mignagola was producing high value-added products, such as the most advanced models of automatic and “bean-to-cup” coffee machines, and some products that were made for Nespresso (i.e., Lattissima coffee machines) and for Nestlé (i.e., Dolce Gusto coffee machines). Such products are characterized by special technologies and include patented components, over which De’Longhi preferred to maintain higher control to avoid possible risks of spill over. Second, China was not offering anymore the same (low cost) advantages of the past, especially on the labor cost, thus possible savings were constantly diminishing and the total cost of producing in (some areas of) the East Europe and China were almost equivalent (Sirkin, Zinser, & Rose, 2014). Third, the exchange rate of Chinese Renminbi was increasing, which in turn suggested not to expand further the total cost of the company in the Chinese currency to limit the currency rate risk.

The availability of a factory that De’Longhi could have used with limited adjustments, played also a not negligible role in the final decision for Romania, as the Group was considering other countries such as Hungary, Slovakia
and Slovenia but where De’Longhi would have been forced to commit to a greenfield investment that would have taken longer time to get ready to use.

Moreover, Cluji turned out being an appropriate area for recruiting skilled workers as the city has one of the most prestigious universities of Romania, which graduates 7,000 engineers every year. From the cultural differences point of view, Romania has a European culture that makes it much closer to the Italian one than any other country in the east Europe.

Currently, in Romania De’Longhi produces automatic coffee machines, the products included in the partnership with Nestlè (i.e., Dolce Gusto) and some products for food preparation of Braun. Overall, the production process in Romania covers the 18% of total cost of goods sold (COGS).

VALUE CHAIN CONFIGURATION OF DE’LONGHI

Currently, De’Longhi assembles its products in Italy (Mignagola plant), in China (DGDK plant in Dongguan, On Shiu plant and TCL DL JV in Zhongshan) and in Romania (Cluji plant). Fig. 1 shows the trend of the total value of production (using the COGS, as a proxy) and the proportion between internalized (in-house) and externalized (outsourced) production of the last 15 years. At the same time, Fig. 2 shows the distinction between in-house and outsourced alternatives considering also the location in which the operations are completed.

Fig. 1. Cost of Goods Sold (COGS) and In-House versus Outsourced Alternatives of De’Longhi’s Finished Products Assembly between 2000 and 2015. Source: Authors’ adaptation from company data.
Fig. 1 demonstrates that over time De’Longhi has constantly increased its volume of production. As we discussed above, that happened thanks both to internal growth (such as the introduction of the automatic and “bean-to-cup” coffee machines) and to external growth through acquisitions (e.g., Kenwood Appliances and the perpetual licence of Braun household) and alliances (e.g., the partnership with Nespresso). Moreover, the company has coupled the growth in volumes with the growth in margins, repositioning the entire offer toward products of higher value added. The trend shows also that De’Longhi has initially (between 2000 and 2005) massively leveraged on the flexibility and efficiency allowed by outsourcing rather than producing internally, even if De’Longhi has never stopped producing internally. In 2005, two-thirds of the volumes (€396 million over €600 million) were outsourced, while one-third (€204 million) was produced internally in Italy and in China (in the Group’s plant). After this first period of outsourcing, the internalized share of the total production has constantly regained importance, doubling in 2010 (from €204 million to €400 million) and increasing of 50% in 2015, when it reached more than 60% of total volumes (€620 million over a total volume of €1,030 million).

Fig. 2. Ownership and Location Choices of De’Longhi’s Finished Products Assembly between 2000 and 2015 (in %). Source: Authors’ adaptation from company data.
As far as Fig. 2 is concerned, it is interesting to see where the production has moved over the years. Originally (in 2000), De’Longhi was used to produce (internally) all its volumes in its Italian factories. Five years later (in 2005), when the Group outsourced 66% of its volumes, it was massively leveraging on Chinese suppliers. The remaining part of production (34%) was equally distributed between the Group’s plant in China and the plant in Mignagola (17% of total production each). In 2010, De’Longhi has reduced the share of production outsourced to Chinese suppliers. That percentage reduced at the 50% of total volumes, which was basically the same amount of production in absolute terms of 5 years before. If we consider that from 2005 to 2010 volumes have increased of more than 30% (from €600 million to €800 million), the growth has been completely absorbed by the growth of the internalized production equally distributed between Italy and China, each one producing 25% of total volume, respectively. In 2015, total volume has continued increasing of about 25% (from €800 million to €1,030 million). Interestingly, the share of outsourced production has nearly remained the same in absolute terms, as it increased only of 25% (from €400 million to €410 million, see Fig. 1). Again, the outsourced share of production leveraged not only on Chinese suppliers but also on European suppliers. Chinese suppliers accounted for the 34% of total production, while European suppliers for 6% of total production.7 This implies that the externalized share of production to Chinese suppliers reduced from €400 million in 2010 to €350 million in 2015. On the contrary, the internalized share of production has increased of more than 50% compared to 2010 (from €400 million to €620 million). While the share of internalized production allocated to proprietary Chinese plants have remained substantially unchanged in relative terms (25% in 2010, 26% in 2015), in absolute terms, it increased from €200 million to €265 million. On the contrary, Italian operations decreased both in relative and in absolute terms. As far as the relative terms are concerned, the share of the Italian plant passed from 25% of 2010 to 16% of 2015 because of the parallel development of the plant in Romania. While in absolute terms the same plant passed from €200 million in 2010 to €165 million in 2015.

At the same time, if we look at the data from a European perspective, the share of volume De’Longhi assembles in Europe has more than doubled, passing from €165 million in 2010 to €350 million in 2015 including both the volume of Mignagola plant and the volume of Cluji plant.8 As we already discussed, the increased quantity in Europe does not correspond to a reshoring from China but to the introduction of new products and to a new offshoring wave from Italy to Romania of products that were originally produced in Mignagola. In 2015, Cluji plant alone accounted for 18% of production volumes corresponding to €185 million. In other words, in 3 years the production plant in Romania has surpassed the volumes of the Italian plant.

Currently, Chinese operations (in particular the DGDK plant) continue their growth, reinforcing their importance in the manufacturing strategy of De’Longhi, even if at a lower rate of development than in the past. According
to the words of one of the managers we interviewed, reshoring options from China are not included in any plan of De’Longhi:

Companies that are planning to reshore from China probably did not have a positive experience with this country. Companies that transfer their production to China must be equipped with the necessary resources, and even more to secure the investment. If you offshore having limited resources, or you think you can do under strict budget constraints, or, even worse, you do not adapt to the cultural conditions of the new location, you are going to experience severe problems and the investment is not worth undertaking. If so, there is no other alternative than reshoring at a certain point. This is not the case of De’Longhi that has adopted a long term orientation when entering China, investing all it was necessary to make the choice working in the long run, and obviously, losing part of the advantages that a short term view would have permitted.

From the production planning point of view, the location choices of De’Longhi follow a “local for global” approach, that is, it produces one product in only one factory independently from its target market of destination. This strategy maximizes the potential for economies of scale, reduces the risk of spill over, encourages knowledge sharing among products designed for different geographic markets, facilitates quality control and is in line with the characteristics of the company’s product portfolio (Skinner, 1974). Indeed, the portfolio of products is highly fragmented and the total volume of each stock-keeping unit (SKU) is quite low. Moreover, the incidence of the transportation cost is not as high to support the investments that a multisite production would require; therefore, it would not make any sense partitioning the production of a single SKU into different production plants on the basis of the geographic area of destination.

Fig. 3 summarizes the current location of the upstream and middle value chain activities of the three most relevant brands of the Group.

In the Italian plant, De’Longhi has concentrated Design, Marketing and Product Development for all De’Longhi-branded products. The other activities, that is, Process Engineering, Manufacturing and Sourcing, are completed as follows: in Italy for high-end coffee machines and Lattissima (in partnership with Nespresso), in Romania for medium-end coffee machines and Dolce Gusto (in partnership with Nestlé), and in China for all other De’Longhi-branded products. As far as Kenwood products are concerned, Design, Marketing and Product Development are located in Havant (UK), while Process Engineering, Manufacturing and Sourcing are located in China. As far as Braun products are concerned, Design, Marketing and Product Development are located in the Neusenbur site (Germany), while Process Engineering, Manufacturing and Sourcing are located either in Romania or in China.9

The decision to keep separate Design, Marketing and Product Development for each brand – in the country where each brand originated – is related to the fact that the three brands cover, at least partially, the same product categories. Therefore, it is fundamental to preserve each brand’s identity and to reduce the risk of design overlapping which in turn would translate into brand equity.
dilution. From an organizational standpoint, the three activities of design, marketing and product development are linked by reciprocal interdependences thus the outcome of the innovation process strictly depends on the effectiveness of the coordination mechanisms adopted to connect each other.

Coherently, to facilitate coordination and limit the coordination costs, De’Longhi has decided to co-locate the three activities in one single area. Process Engineering, Manufacturing and Sourcing are also linked by reciprocal interdependences among each other and by sequential interdependences with the upstream activities of marketing, design and product development.

In other words, the two sets of activities (a: design, marketing, product development; b: process engineering, manufacturing, sourcing) represent two discrete groups that can be more easily broken up and relocated to foreign locations. The lower degree of interdependences between the two groups ensures less complex integration processes as well as lower risks of unexpected circumstances related to control, coordination, specification and knowledge transfer, as reported by one of the managers we interviewed:

One of our core processes is the New Product Development where we have concentrated the activities of design (in charge of the aesthetic aspect of the products), marketing (in charge of understanding market trends and managing each brand image) and product development (in charge of design and product specification). Grouping these three activities in one process
and collocate them under one single roof, permit a more effective management of the entire flow as the three activities are strongly interrelated among each other and they simultaneously impact on the final output of the process. If we change one element during the development, it has to be rediscussed with marketing and design, therefore there is continuous back and forth of ideas between marketing, where all the projects start, design and product development, as long as all three functions agree on a specific project and “freeze” the design of the product. Differently, from the production stand point, each production plant — in Italy, China or Romania — receives clear indications from the Head Quarter. More specifically, once the design of a new product is validated, the plant receives specific indications concerning the products that will be produced there and is responsible to set up the most efficient production line. That is completing all the activities associated with process engineering, producing and testing molds, completing all the quality control activities before starting the production, and eventually assembling products according to the schedule, as well as the sourcing of materials and components from suppliers. Again, in this phase process engineering, manufacturing and sourcing are forced to work hand in hand, i.e. inputs from the engineering affect both manufacturing and sourcing and vice versa manufacturing provides insights to engineering and sourcing.

In line with the characteristics of the interdependences that exist among activities, the alignment between design, marketing and product development is ensured through periodic meetings of managers of the three functions and with sales managers. Those meetings are called every 3 months for each brand in the country where each brand is located. Differently, the alignment between the on-shored and the offshored activities is ensured through production planning and standard procedures (since the interdependences are mainly sequential). For example, as far as standard procedures are concerned, one of the managers we interviewed reported that:

As we were relocating the production of our products, we took also the chance to revise the quality control system of the entire Group. The objective was ensuring that the same quality standards were adopted everywhere independently from where the production were completed or from who was assembling the product, i.e. an internal factory, a joint venture or an independent supplier. Having common standards across locations was becoming fundamental as growing through acquisitions increased the variety of approaches used in different factories. Thus, we created quality control and insurance units in charge of identifying standard protocols and procedures and of verifying the quality of final products.

In the daily operations, when deciding where to locate the production of each specific SKU, De’Longhi takes into consideration the following criteria:

1. First, if the product is already included in the product offer, the Group considers the history of the product and strives to keep it in the same factory in which it has been assembled so far. This approach avoids the need of knowledge transfer and the risk of unintended spill over effects.
2. Second, the Group evaluates the supply network of the area to ensure the appropriate matching between the technological features of the product and the resources available in each location. In addition, the Group assesses the competences of each single plant in terms of quality control, engineering and manufacturing capabilities. For example, Kenwood products are assembled in China because they have larger quantities of steel and of die-casting
aluminum and demand a variety of mechanical processes. All these characteristics require resources and processes that are widely available either internally – in the DGDK plant – or in the supply network of the Dongguan area. Differently, products with the majority of components made of plastics can be produced also in Europe since a larger availability of competent suppliers.

3. Third, the Group takes into consideration the total cost of producing each SKU in each specific location. Albeit remaining one of the most influential, according to the words of one of the managers we interviewed, this factor has lost part of its importance:

Over time we have revised the criteria we use to decide where locating the assembly of our products. At the beginning of 2000s, cost reduction was the fundamental driver. Now that we have two or three possible locations for each product, and that we are not any more in the economic conditions of 15 years ago, we have the possibility to benchmark across locations looking at where assembling has already been in place, at the resources available in the supply network or at those available in our plants. We have the possibility to benchmark because we have retained the knowledge on each single operative process. Controlling the entire supply chain from raw materials to final products, and monitoring equally both the activities we perform internally and those we outsourced to suppliers, we have constantly expanded a knowledge base on the technical features, on the quality and on the costs of both components and processes. This knowledge base permits to remain flexible and responsive and to have all relevant information to decide where and how – i.e. whether internally or externally – producing our products.

**DISCUSSION**

In this chapter we have presented the ownership and location choices of De’Longhi since the early 2000s when the Group started revising both decisions under the pressure of increasing global competition. The objective was to shed further light on the factors that promoted such revision and how it evolved over the years. We maintained that only through the analysis of what firms have done over the years it is possible to deepen our understanding about the opportunities and consequences of breaking up a global value chain. Moreover, we also claim that research should study more how firms reconcile the trade-offs of both location and ownership modes respectively rather than looking at their alternatives as mutually excluding. Coherently, a case study permits to better investigate all the strategic, organizational design, and governance aspects entailed in the value chain disassembly. Beyond the reasons why firms decide to revise the governance of their value chain, a variety of other aspects associated with what and how firms did over time deserves to be investigated for a full comprehension of the phenomenon.

The story of the ownership and location decisions of De’Longhi can be summarized as follows. De’Longhi started offshoring its production quite recently,
compared to firms in the same or other manufacturing industries. Until 2000, De’Longhi strived to keep production in its Italian factories through continuous investments in high-tech manufacturing processes. At the beginning of 2000s the combination of internal and external factors pushed the Group toward a complete revision of the ownership and location choices. The availability of a plant in China – that became part of Group’s facilities since the acquisition of Kenwood – offered the possibility to move production in the Far East. Originally, when De’Longhi moved to China, it widely leveraged on international outsourcing as two-thirds of the 2005 production volumes was outsourced to Chinese suppliers. From that period on, De’Longhi has constantly increased its production volumes but has constantly reduced the part of production that was outsourced to independent suppliers, while it has progressively augmented the volume assembled internally, in its two proprietary plants in China. Interestingly enough, albeit all the products included in the range offered in 2000 moved to China by 2006, De’Longhi never stopped producing in its own plant in Italy, where it concentrated the production of the new products it has introduced regularly thanks to the savings generated by the offshoring-outsourcing decisions. More recently, De’Longhi has acquired a plant in Romania and has moved there products it was used to assemble in Italy, thus continuing offshoring (to East Europe and to China at a slower rate) but keeping production under strict control in its own propriety facilities. Currently, the configuration of the (global) value chain of De’Longhi combines offshored as well as domestic locations and in-house as well as outsourced ownership modes, with the former prevailing on the latter.

The case of De’Longhi provides some interesting insights that expand our understanding about ownership and location decisions.

First, the case demonstrates that ownership and location decisions are not separate but somehow interrelated. Originally, De’Longhi simultaneously revised both ownership and location choices, turning from a situation of internalized production in the domestic country to a mostly externalized production in an offshore location (China). Afterwards, the Group has moved from the first choice of externalizing the majority of the production to come back to its internalization, while keeping the offshore location.

Second, the case shows that it is possible to reconcile the usual trade-off associated to both ownership and location. While the literature supports opposite advantages (and disadvantages) of outsourcing versus in-house and of offshoring versus domestic operations, De’Longhi has never traded off among those alternatives. Conversely, the Group has always maintained both the alternatives on both decisions, combining production in different locations and under different ownership modes, demonstrating that under certain conditions, firms can exploit simultaneous advantages.

As a consequence of the first and second elements, a third one follows. While extant literature somehow advocates the sequential optimization of location and ownership decisions, the De’Longhi case suggests that concurrent
optimization is possible and depends on a variety of factors that add to traditional considerations on transaction costs (for ownership decisions) and country-level differences or international arbitrages (for location decisions). Specifically, in the De’Longhi case the strategy of the Group, its organizational culture, as well as the time horizon of its location decisions played an important role in determining location and ownership choices. The contingent financial situation of the Group mostly explained the reasons of the radical change in both location and ownership of the first period (between 2000 and 2005). The subsequent decisions to develop offshore but to internalize most of the operations depend: (a) on the organizational culture of the Group that assigns important values to its manufacturing heritage and (b) on the strategic repositioning that the company undertook since 2005. Indeed, De’Longhi decided to invest in high-end products which required specific innovations (eventually protected through patents) and strict quality control. It is also worth noting that the organizational culture of the company affected the time horizon of the location choice. Once the Group decided to offshore to China it knew that it was fundamental to learn about the context in order to fully exploit, in the medium and long run, all the possibilities this supply and production base could offer independently from the most evident short-term cost savings.

Fourth, the analysis of the case also suggests that location and ownership decisions need to be matched with the characteristics of the relationships that link all the activities of the value chain independently from those whose location and ownership choices are under discussion. While the mainstream literature — due to product modularization and process digitization — somehow supports the idea that value creation is becoming bound to single activities, thus sequential and separable, the De’Longhi case suggests that the study of the interdependences among activities is fundamental to promote coordination among distant activities or across autonomous firms. To facilitate such coordination, which is particularly relevant if interdependences across activities are reciprocal, the firm has been constrained to relocate not only manufacturing but also process engineering and sourcing to safeguard an effective and efficient integration between the three. The same reason justifies the colocation of marketing, design and product development. Therefore, any time in which the Group decided to relocate its production, it has also been forced to duplicate all the activities that are reciprocally interdependent with production (i.e., process engineering and sourcing). More easily remain the geographical and ownership separation of the activities that are connected through sequential or pooled interdependences.

Fifth, the simultaneous decisions on ownership and location opened up the possibility to adopt a portfolio approach to manage the international growth of the company and the arrangement of its ordinary production processes. De’Longhi is a multinational Group with manufacturing plants in different geographical areas that has the possibility to move production from one plant to the other or to benchmark internal and external production solutions on the base of the technological knowledge it has accumulated over time and on the
characteristics of the supply base. Such possibility is even more important if we consider that the Group adopts a local for global approach according to which one product is produced in only one single plant independently from the market of destination and the corresponding adaptation requirements. This approach substantially differs from what the mainstream literature prompts. In particular, the so called “global factory” (Buckley, 2007) substream advances that local market adaptation requirements are addressed through distributed manufacturing and local contract assemblers. Deciding where to locate the manufacturing of single products is a second-order choice, once location and ownership decisions are taken. While the latter have been mostly conceived as one-off choices in the mainstream literature, much less is debated about how firms decide where producing their own products once the firm is multilocalized. The De’Longhi case suggests this choice benefits from the possibility to benchmark across locations and that to do that firms need to preserve specific knowledge on each single part of the production process. Therefore, maintaining a strict control over all the activities of the value chain (independently from ownership and location) has been essential to remain flexible in the long run and the decision to internalize manufacturing activities even once offshored, responded, at least in part, to such request.

CONCLUSION

In this chapter we have discussed how ownership and location decisions of a leading player in the SDA segment have evolved over time and the associated factors influencing final decisions. We showed that ownership and locations choices are interrelated and affected by a variety of factors including strategy, organizational culture and degree of interdependences between activities. A long-term orientation as well as strict control over all the value chain activities, allow the adoption of a portfolio approach in the configuration of a (global) value chain that in turns opens up sustainable paths of growth. Our study is based on a single case in a specific industry, therefore it needs to be complemented by further empirical support. It would be worth comparing our case with competitors in the same industry or with firms adopting similar trajectories in different industries to account for possible firm or industry effects.

NOTES

1. If not indicated differently, all the numbers of this section refer to the 2015 data of De’Longhi Group.
2. In this paper we do not consider the products of Ariete as they generate a small fraction of the volume and revenues of the Group such as 3% (2015 data).
3. According to figures provided by the Company, the (West-Europe) market of Espresso machines doubled in 10 years from €631 millions (in 2004) to €1.246 billions (in 2013).

4. Nokia opened the factory in Cluji in 2008 and in September, 2011 it announced the plant would have been closed.

5. One of the managers of De’Longhi reports that when the company went to China for the first time the hourly wage was 4 Chinese Renminbi while in 2012 it was 12 Chinese Renminbi.

6. De’Longhi has initially separated (in 2012) and further sold (in 2015) the professional division on air conditioning. The volume of the latter is included in 2000, 2005 and 2010 data, but not in 2015, thus the growth in the SDA segments have been even higher that what Fig. 1 shows. Unfortunately, it is not possible to separate the data of the professional air conditioning division from 2000 COGS.

7. The 6% of production made by European suppliers corresponds to part of the production of Braun products already outsourced before the acquisition of De’Longhi. Therefore, it does not correspond neither to a reshoring initiative from Chinese suppliers to European suppliers nor to an outsourcing-offshoring process from the Italian plant.

8. This increase is partially due to the incidence of the acquisition of Braun, which accounts for about €90 million.

9. The current organization of the Group reckons on two sourcing units under the supervision of two directors located in Italy and in China, respectively. However, the Italian unit is composed of two teams, one located in Italy and one in Romania to keep sourcing close to manufacturing. For this reason, we have indicated that sourcing is in Italy, in Romania and in China.

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