BREAKING UP THE GLOBAL VALUE CHAIN: OPPORTUNITIES AND CONSEQUENCES

ADVANCES IN INTERNATIONAL MANAGEMENT

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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.

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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

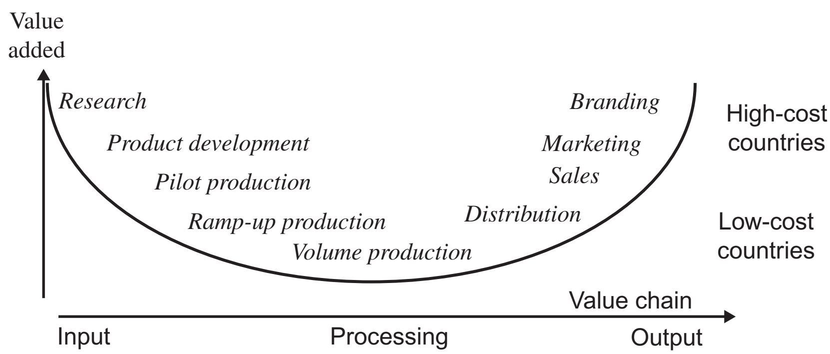

Fig. 1. Smile of the Value Chain. *Source*: Own development inspired by CEO Stan Shih, ACER.

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

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