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A Strategic Management Analysis on Activity Level

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Global Sourcing of Advanced Services - A Strategic Management Analysis on Activity Level

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ABSTRACT

In this exploratory study, we apply a strategic management approach to global sourcing of advanced services. We discuss the ways in which conventional sourcing differs from strategic sourcing, and the factors that impel firms to aim for the latter (or prevent them from doing so). The strategic global sourcing of services can offer high returns but it is also associated with high risks and needs for organizational change. Strategic global sourcing may therefore be outside firms' "comfort zones", which are determined by their organizational knowledge transferability, structural inertia, managers' risk preferences, and their ability to mitigate the risks of strategic global sourcing. One important risk-reducing measure is the internalization of (out)sourced service activities. Many firms move into global sourcing from conventional offshore outsourcing. However, as the human-asset specificity of the outsourcing operation increases, firms find themselves out of their comfort zones and a desire for internalization arises. An illustrative company case highlights how internalization may be accomplished in practice without losing valuable human assets held by local service providers.

Keywords:

Global sourcing, services, strategic management, comfort zone, internalization.

1. Introduction

In March 2008, SimCorp, a successful provider of advanced software for asset management, announced the opening of a wholly owned subsidiary in the Ukrainian city of Kiev. The establishment of the subsidiary kicked off the phasing out of the company's large-scale outsourcing operation in the Ukraine, which had begun in the spring of 2005 as a small pilot project venture with two local service providers. In the intervening years, the offshoring activities were transformed from a small-scale, conventional outsourcing operation into a large-scale strategic undertaking involving significant investments in local human assets. From March 2008 and over the next year and a half, SimCorp's Kiev subsidiary was staffed by a few expatriates from the Danish headquarters and around 100 software developers from the two service providers. This massive transfer of personnel, which took place in full agreement with the two local service providers, ensured the successful safeguarding of SimCorp's extensive human asset investments in Ukraine.

The SimCorp case provokes several intriguing questions related to the global sourcing of advanced services. First, how does the shift from conventional to strategic global sourcing unfold? Second, what are the drivers and obstacles of this change process? Third, when does a sourcing operation become "strategic" and what are the risk-return tradeoffs of strategic global sourcing? In this paper, we endeavour to answer these questions, which are pertinent not only because managers are under pressure to adopt global sourcing strategies, but also because these managers are challenged by evidence indicating that many international sourcing operations fail to achieve the expected benefits (see, e.g., Kumar *et al.*, 2009; Lacity and Rottman, 2008).

Drawing on the literature streams in international business (IB), innovation, strategy, and organizational learning and change, we take an activity-based perspective (Johnson *et al.*, 2003) of *strategic global sourcing* of services –the international sourcing of advanced, high-value service activities that are executed by highly skilled personnel. More specifically, we distinguish strategic sourcing from conventional sourcing by looking at three strategy-related dimensions of an activity-specific sourcing operation: the knowledge transferred, the exclusivity allotted, and the managerial discretion delegated to the local service provider(s). The three dimensions capture the strategic potency of irreversibility, interdependency and ambidexterity, respectively.

These features unfold within what we refer to as the "radar zones" and the "comfort zones" of the sourcing firms. The "radar zone" epitomizes managers' imaginative capacities in relation to global sourcing. Do managers conceive of strategic global sourcing as an option or do cognitive limitations restrain them from even considering this opportunity, and – at best – limit them to conventional sourcing? The "comfort zone" embodies the attributes of the sourcing firm that define the extent to which the sourcing firm – including its management and various stakeholders – can tolerate and accept engagement in strategic global sourcing. One important attribute of the sourcing firm is the risk preferences of its decision makers, as global sourcing is characterized by high returns but also high risks. Internationalization theory indicates that risk-averse decision makers will tend to shun the risk/return trade-off of strategic global sourcing, as it exceeds their tolerable risk threshold (Johanson and Vahlne, 1977). In other words, the comfort zones of risk-averse decision makers oblige them to only engage in conventional sourcing. Other sourcing-firm attributes making up the comfort zone include organizational flexibility (e.g., the level of resistance to the changes caused by sourcing), the site specificity of the firm's knowledge base (e.g., whether tacit

knowledge is difficult to transfer to a foreign service provider), and the firm's ability to introduce risk-reducing measures. However, the radar and comfort zones of a firm can change over time, and strategic global sourcing can be exercised in "smart ways" that reduce or encircle the downsides risks and/or overcome organizational resistance. In this paper, therefore, we provide examples of methods of mitigating the downside risks and organizational resistance to strategic global sourcing.

A firm's shift from conventional to strategic global sourcing may have profound human resource implications, especially if the sourcing operation originates as an offshore outsourcing operation. As the strategic importance of the sourcing operation to the outsourcing firm increases, a need for a stronger bond with the service provider's key personnel will almost inevitably emerge. More often than not, such needs for stronger bonding imply internalization of the sourcing operation, i.e., a dramatic change in human resource relations where employment contracts with key local personnel become a substitute for an outsourcing contract with the service provider. The IB and strategy literature provides a great deal of information about the antecedents of internalization but is less informative about the internalization *process* (Petersen, Welch and Benito, 2010), including the transformation of service provider consultants into trusted employees. The employment of key personnel may be preceded by various initiatives in the outsourcing firms, such as the formation of equity joint ventures with the service provider, the socialization of consultants, or the inclusion of real options for transferring personnel in outsourcing contracts. This paper looks specifically at such management instruments, which are designed to facilitate changes in human resource relations.

The paper is organized as follows. In section 2, we examine prior contributions in the strategic management, organization, and global sourcing literature. We focus, in particular, on research that takes a more detailed perspective on the nature of the activities subjected to global sourcing, which serve as a foundation for our arguments. In section 3, we outline the proposed analytical framework, which includes the three strategic features of global sourcing. Subsequently, we discuss the attributes of the sourcing firm – its radar and comfort zones – and highlight the importance of imaginability and willingness to engage in strategic global sourcing in section 4. In section 5, we present the SimCorp case in detail and discuss several risk-reducing measures introduced by the Danish company to ensure its supply and safeguard its human-asset investments in the Ukraine. Subsequently, the gradual internalization of SimCorp's offshore outsourcing operation is mirrored in our analytical framework in section 6. In particular, we demonstrate how SimCorp's comfort zone expanded prior to, and during the course of, the sourcing operation in Ukraine. Section 7 presents our conclusions and a discussion of the managerial implications of our study.

2. Theory

From conventional to strategic global sourcing

The global sourcing of business activities is addressed in the international business literature in the seminal works of Buckley and Casson (1976), Dunning and Lundan (2008), Hennart (1982), Vernon (1966) and Kotabe (1992), as well as in other literature streams, most notably supply chain management (e.g., Trent and Monczka, 2003). Despite these classic roots, authors have recently highlighted the shortage of

contributions to the development of a coherent theory able to capture the evolution of the global sourcing of business activities in recent years (Mol *et al.*, 2005). These authors also indicate that there is a need to revisit existing theories of international business in view of the emergence of global sourcing (Doh, 2005) and that a framework drawing on many theoretical perspectives is needed to understand global sourcing (Kedia and Lahiri, 2007; Kedia and Mukherjee, 2009; Hansen *et al.*, 2008). The international sourcing of service activities is a relatively recent phenomenon, and, as argued by Lewin *et al.* (2009), the foreign sourcing of advanced, high-value services in particular is not well understood. Furthermore, given the rapid evolution of services offshoring since the late 1990s, Dossani and Kenney (2007) suggest that this business practice will evolve and deepen during the coming decade. This evolution will be driven by a number of enabling factors, especially advances in information and communication technologies ICT, although it is important to note that even though technology supports the offshorability of services that were previously location bound, national institutional factors and occupational regulations in certain fields bar the global sourcing of certain services on a larger scale (Yu and Levy, 2010).

At the same time, one group of authors have stressed that something “new” is happening, i.e., that global sourcing is moving into its next phase (Dossani and Kenney, 2007; Lewin and Peeters, 2006; Manning *et al.*, 2008). In this respect, foreign sourcing increasingly encompasses research and innovation activities, and design, engineering or other advanced business activities (Lewin and Couto, 2007). This trend, however, is not merely motivated by lower wages in the destination country. It is driven by a different set of strategic motives, not least a competitive race for talented employees that have completed a tertiary education (Lewin *et al.*, 2009). The global sourcing of advanced, high-value activities influences the organizational and geographical configuration of the firm across firm and national boundaries (Contractor *et al.*, 2010; Mudambi and Tallman, 2010), and it affects the location choices and patterns for various activities – for example, advanced manufacturing activities are typically relocated to destinations that are different from those selected for simpler manufacturing activities (Jensen and Pedersen, 2011).

Throughout the remainder of this paper, we refer to this new trend of sourcing advanced, high-value business activities to foreign locations as *strategic global sourcing*. The sourcing of this type of activity can be contrasted with *conventional global sourcing* – the long-standing business practice of sourcing comparatively simple, highly codified and standardized routine activities to foreign locations. These latter activities can be executed at the foreign location by unskilled or low skilled labour.

The notion of strategic (out)sourcing has been discussed by academics and practitioners for some time. In particular, the seminal works of Quinn and Hilmer (Quinn and Hilmer, 1994; Quinn, 1999) have influenced this discussion. These authors stress the potential benefits of strategic outsourcing and, based on the “core competence” perspective (Prahalad and Hamel, 1990), they argue that firms need to “concentrate the firm’s own resources on a set of ‘core competencies’ where it can achieve definable pre-eminence and provide unique value for customers”, and “strategically outsource other activities – including many traditionally considered integral to any company” (Quinn and Hilmer, 1994, p. 43). According to this argument, firms should capitalize on the specialized capabilities of partner firms rather than invest significant resources in building a wide range of in-house capabilities. Along similar lines, other authors have recently argued that foreign sourcing offers a possibility to enhance existing resources or build new resources by providing access to complementary resources (Kedia and Lahiri, 2007; Kedia and Mukherjee, 2009; Mudambi and Tallman, 2010).

There are also counter-arguments to these largely positive views. In several publications, Kotabe and co-authors (e.g., Kotabe, 1989; Kotabe *et al.*, 2008) warn against the “hollowing out” firms through global sourcing. In such situations, firms unlearn skills and process knowledge over time and, hence, become uncompetitive. This risk is particularly important when foreign sourcing involves critical knowledge assets that, to a large degree, are embedded as tacit knowledge in employees. Furthermore, relational problems between partnering firms may arise, and the management of a difficult inter-firm relationship entails additional costs. In such situations, potential synergies are unlikely to be realized (Ellram *et al.*, 2008; Kern *et al.*, 2006; Williamson, 2008)

In short, these contrasting views outline a central management dilemma. On the one hand, there are significant potential benefits associated with strategic global sourcing. These benefits are amplified as more firms and countries become involved in global knowledge flows. As markets become more globally integrated, strategic global sourcing may even become a competitive imperative. On the other hand, global sourcing entails notable risks. In the next section, we focus on the implications of engaging in strategic global sourcing and outline various conditions that, individually and in combination, lead to situations in which firms may shift from an inter-firm relationship towards the internalization of activities in order to mitigate, at least partly, the problems and risks related to strategic global sourcing that is based on human knowledge assets.

Towards an activity-based view of global sourcing

In a review of the literature on the offshoring of services, Jensen (2008) notes that the vast majority of journal articles adopt a general level of analysis. Few articles address the global sourcing of services on a more specific level where the specific activities were taken into consideration. Jensen (2008) finds that in the relatively few cases in which journal articles adopt a more specific focus on the nature and type of business activities that focus mainly concerns information technology (IT). Other types of services were not addressed in great detail. However, the IT domain encompasses a vast subset of different activities with varying attributes, and a range of coordination needs. In this regard, firms “slice” their value chain activities more finely, and they seek to find an optimum location for each closely defined activity and an optimum governance mode for that activity in the given specific location (Buckley and Ghauri, 2004). We therefore argue that research on global sourcing needs to adopt a detailed perspective on the nature of the business activities – manufacturing as well as services – involved in foreign sourcing operations. We elaborate on this argument below. Interestingly, this view seems to be shared by the authors of several recently published articles (Doh *et al.*, 2009; Jensen, 2009; Kedia and Mukherjee, 2009; Kumar *et al.*, 2009; Mudambi and Tallman, 2010), who use different approaches to analyze and discuss how the characteristics of business activities relate to other variables in global sourcing arrangements.

Over the past decade, a number of scholars in strategic management and organization have argued for a need to change the level of analysis from the “macro level” (i.e., the firm level) to a “micro level” that takes the motives and behaviours of individuals, and the nature and characteristics of activities (Felin and Foss, 2005; Felin and Hesterly, 2007; Foss, 2009; Johnson *et al.*, 2003; Rouse and Daellenbach, 1999; Whittington, 2003) into consideration. In their introductory article to a *Journal of Management Studies*

special issue on an activity-based view of strategy, Johnson *et al.* (2003) argue for a shift in the strategy debate towards a micro perspective. According to the editors of that issue, such a perspective would include an increased emphasis on the detailed processes and practices that constitute the day-to-day activities of organizational life *and* that relate to strategic outcomes. This activity-based perspective on strategy proposes, first, that value increasingly lies in the micro activities of managers and others in organizations, and, second, that the macro-perspective that is dominant in the literature is too remote from the action in organizations. As Johnson *et al.* note: “Quite simply, a strong instrumental reason for the importance of a more micro activity based view of strategy ... is that managers manage activities” (2003, p. 5).

Foss (2009) presents similar arguments, and sees the “macro bias” in strategic management and organization research as problematic because it fails to capture the individual-level skills, motives and actions that shape organizational-level or industry-level outcomes. According to Foss (2009), a more promising approach is to take a fine-grained view of organizations that focuses on individuals, including the actions and transactions in which individuals are involved.

A focus on individuals seems particularly relevant in the context of services, where the strategic assets are typically human assets. Human assets consist of the explicit and tacit knowledge, the routines, experience, know-how and know-who embedded in individuals. It is therefore relevant to apply both an activity-based perspective and an individualized perspective to research on the global sourcing of services. We revert to this topic in the discussion section.

Whereas the authors discussed above do not specifically relate their arguments to the field of global sourcing, we extend the micro-perspective on activities to global sourcing. In the following section, we draw on different theoretical strands from the strategic management literature to propose three central features of the activities involved in global sourcing.

3. Features of strategic global sourcing

We adopt the activity-based view of strategy to suggest that the *nature of the activities* in sourcing is a key determinant of how international sourcing operations and workflow should be organized in order to achieve a successful long-term outcome in the home firm. We further propose that three features of an activity-specific sourcing operation, and the combination of these features, distinguish strategic global sourcing from conventional global sourcing, and, in turn, shape the strategic nature of an activity.

Therefore, we look at the extent to which the sourcing operation: (1) reveals and transfers strategic knowledge to the local service provider; (2) allows the local service provider to become an *exclusive* supplier of the specific service, i.e., global specialization rather than the replication of the service activity from one market to another; (3) gives the local service provider discretionary judgment in carrying out the activity, i.e., authorization to engage in both exploration and exploitation. These three features, or dimensions, of strategic global sourcing may be seen as three continua (axes) in a triangle formation. The tips of the triangle signify the extremes of strategic global sourcing: revelation, specialization, and exploration (Figure 1). Conventional sourcing is contained in the inner triangle, whereas strategic global

sourcing fills the outer space. In reality, sourcing is not always an “either/or” situation; the sourcing of an advanced service activity may be “strategic” on one triangle axis and “conventional” on another axis.

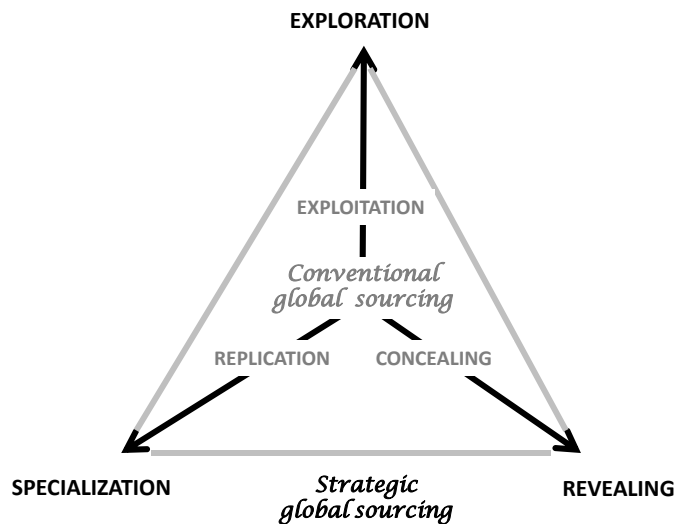


Figure 1: *Three features of strategic global sourcing*

In the following subsections, we elaborate these three features.

Revelation: the degree to which strategically important knowledge is transferred to the local service provider

The first feature of strategic global sourcing concerns whether the sourcing firm conceals or reveals strategically important knowledge to the local service provider. The potential benefit of revealing strategic knowledge is that such knowledge can augment the comparative advantages that the local service provider has due to its low-cost location. However, comparative advantages do not lead to sustainable competitive advantages because they can be imitated by other local and multinational firms (Porter, 1990; Barney, 1991). As a consequence, they are exhausted after some years. Comparative advantages, therefore, must be supplemented with competitive advantages of the sourcing (client) firm and the local service provider – ideally in a synergetic combination.

In order to optimally perform the service activity, the local service provider must have a fundamental understanding of the client/outsourcing firm’s business model, which implies a need to transfer strategic knowledge about, e.g., market and product strategies.

A major challenge emerges in relation to this transfer: the strategic knowledge has to be transferable. The conversion of tacit knowledge, i.e., knowledge embedded in individuals in an intangible, non-codified

manner (Polanyi, 1958), into explicit knowledge may be very difficult or quite costly. In some cases, internal business routines and procedures must be standardized before the codification process can begin. In other words, the outsourcing firm has to define its best practices throughout its value chain. In the worst case, multiple, diverse practices may co-exist within the organization that compete for the status of “best practice”.

Only when the internal standardization process is complete can the outsourcing firm consider the question of what knowledge to transfer for a given service activity that is to be performed abroad. The human capital input required for a given activity consists of a mix of *general* knowledge and *specific* knowledge. General and specific knowledge differ in terms of pervasiveness and availability in both high- and low-wage countries. The more widespread the knowledge, the more general and generic it is (Nelson, 1990). General knowledge requirements are no hindrance to the sourcing of activities, as the availability of this knowledge is, by definition, the same across countries. For example, engineering knowledge about the physical laws and mechanical principles that apply to the construction of a suspension bridge is considered to be general knowledge, as it is available in the engineering schools of most countries. In countries like India and China, where hundreds of these schools exist, such engineering expertise is abundant and easy accessible. These stylized facts narrow down the question of the extent to which the *specific* knowledge required for executing a given service activity is *transferable*.

Transferability can be defined in terms of the costs associated with the transfer of specific knowledge and whether those costs make global sourcing economically impractical. Inspired by Jensen and Meckling (1992) and Szulanski (1996, 2003) we distinguish specific knowledge by its transferability, i.e., the costs of transferring the knowledge among economic agents. In this regard, “transfer” means effective transfer, not merely communication and the recipient is presumed to understand the message well enough to act on it (Jensen and Meckling, 1992: 254). The more costly the knowledge is to transfer, the more location-specific or *sticky* (Szulanski, 1996, 2003) that knowledge is. Knowledge stickiness may arise for three, somewhat related, reasons:

First, the required knowledge may be *co-specialized* (Barney, 1991; Conner, 1991; Teece, 1986a/b), i.e., the knowledge required for one activity has strong complementarities with knowledge of other activities in the value chain (Porter, 1985). An obvious solution to this interface problem is to offshore *all* co-specialized activities to a single foreign location. In the extreme situation, the entire value chain – including the firm itself – would be relocated to the low-wage country.

Second, relocation is not feasible in situations where co-specialized, complementary assets related to a certain value chain activity are not owned and controlled by the firm, and where these assets are *embedded* or *contextualized* in the home country. Hence, the creation and utilization of the knowledge required for a given activity may take place in interaction with local individuals, teams, and institutions outside the boundaries of the prospective sourcing firm. For example, a software firm’s creation of innovational process and product knowledge may be heavily dependent on close collaboration with employees of other firms or research institutions domiciled in the same local cluster (Maskell *et al.*, 1998; Maskell and Malmberg, 1999). Similarly, knowledge creation and utilization may be closely linked to relationships with local suppliers and customers (von Hippel, 1994; Eriksson *et al.*, 1997). At a higher level of aggregation, the knowledge may be embedded in the national business system (Whitley, 1995), the

national innovation system (Lundvall, 1985; Lundvall and Maskell, 2000), or the national culture of the high-wage country (Hofstede, 1978).

The third reason for stickiness lies in the fact that the specific knowledge may be more or less tacit. In principle, tacit knowledge can be transferred either by re-locating (expatriating) the individuals embodying the knowledge required for the value chain activity – which makes little sense from a cost perspective – or by intimate socialization (Nonaka, 1994). The latter solution is extremely time-consuming and probably even more costly. Some evidence of the localization effect is found in studies by Teece (1977, 1981) and Martin and Salomon (2004), all of which use the tacitness of a certain technology as a proxy for knowledge stickiness. Teece finds that high levels of tacitness encourage domestic rather than foreign investments. Martin and Salomon (2004) confirm this finding, albeit with the reservation that both high and low levels of tacitness mean that MNCs are inclined to locate at home, while an intermediate level of tacitness has the opposite effect. In combination, co-specialization, local embeddedness and tacitness may render the global sourcing of advanced services infeasible because the transfer of the required knowledge is excessively costly. Even if the outsourcing firm manages to codify the required knowledge, there might be some slippage of knowledge because the knowledge might become less usable to the local service provider during the transformation and transfer processes.

Another major challenge related to revealing knowledge is the risk of uncontrolled dissemination. The outsourcing firm may transfer a considerable amount of knowledge to local staff through training and education. Hence, the outsourcing firm makes considerable idiosyncratic investments (Williamson, 1983) in human capital that are employed by an independent party – the service provider. These investments, which are characterised by a high degree of human-asset specificity, may prove difficult to safeguard. The knowledge transferred through costly training and education may leak out of the service provider's organization to projects for other clients or to competing firms through the turnover of key personnel. The outsourcing firm has a vested interest in safeguarding its human-asset investments and avoiding the leakage of its knowledge to competitors. Safeguarding measures – otherwise known as knowledge-protection strategies – include internalization (Williamson, 1983); quasi-integration, e.g., the introduction of options for internalization (Kogut and Kulatilaka, 1994) or for transferring key personnel to the firm's own organization (Petersen *et al.*, 2010); the socialization of key personnel (Schuller *et al.*, 2000); and the holding of complementary assets (Levin *et al.*, 1987; Cohen *et al.*, 2000).

Specialization: the degree to which the local service provider is assigned exclusivity

A second main difference between conventional and strategic global sourcing lies in the firm's configuration of its global value chain in terms of whether the local service operator is the sole provider of the service ("specialization") or one of several providers ("replication"). While neither the foreign sourcing of advanced business activities nor foreign sourcing in general are confined to MNCs, different organizational models of the MNC presented in the international business literature are helpful in explaining the link between sourcing and firm organization. A traditional model of the organization of the MNC is the "multi-domestic MNC" (Bartlett and Ghoshal, 1989), which is characterized by a dispersed value chain in which foreign subsidiaries are mini-replicas of the parent firm (see also, e.g., Perlmutter, 1969, who

refers to this model as the “ethnocentric” MNC). As argued by Winter and Szulanski (2001), replication strategies may reward firms with maximum appropriable value creation when applied in situations where the firms’ business models/templates are specified fully or in part and then replicated in a different setting. In contrast, the concentrated value chain configuration (Porter, 1986), in which a particular activity is situated in one location that then serves the entire MNC, is driven by the fundamental purpose of building critical mass and specialization in regional or global clusters. These clusters might, for example, serve as “centres of excellence” in the firm or shared services centres. This configuration of the global value chain is connected to a network-based view of the MNC in which there is a more equal and, hence, more complex, balance of power, and division of responsibilities among the parent company and foreign subsidiaries. The international business literature refers to this organizational model using different constructs, such as “network-based MNC” (Forsgren *et al.*, 2005; Nohria and Ghoshal, 1997), the “MNC heterarchy” (Hedlund, 1986), the “meta-national MNC” (Doz *et al.*, 2001) and the “transnational MNC” (Bartlett and Ghoshal, 1989).

When MNCs change their global organization from the multi-domestic (replication) model to the transnational (or similar) model with a high degree of local specialization, the location/relocation of value chain activities comes into focus. Our research on firms from Denmark and other countries over a number of years suggests that this trend towards the concentrated value chain configuration underpins a significant portion of the cross-border relocation of value-chain activities (see also Beugelsdijk *et al.*, 2009). For activities in strategic global sourcing the data indicate that the objective of creating global or regional clusters/centres with critical mass and specialized know-how is an important motive.

In our model of global sourcing (Figure 1), a replication strategy is related to conventional global sourcing, while a specialization strategy is related to strategic global sourcing. On the conventional level, Kumar *et al.* (2009) take their point of departure in data indicating that companies have retreated from global sourcing due to the lack of efficient implementation. In other words, they find that after the necessary strategic decisions have been made, the operational problems and costs of work transfer, communication and coordination tend to outweigh the expected savings and benefits on the strategic level. Building on Thompson (1967) and other contributions in the organization literature, Kumar *et al.* (2009) point to the degree and type of inter-task interdependence as key determinants of inter-site interaction and communications in global sourcing. They extend extant theory by introducing three types of interdependence. The first of these is *integration interdependence*, which Kumar *et al.* (2009) position between sequential and reciprocal interdependence Thompson’s (1967) scale of interdependence intensity. Integration interdependence is characterized by the task that is being subdivided and by the different actors that are working separately but in parallel. For such tasks, there is a need for continuous fit or integration processes in order to acquire value as a whole. Second, the concept of *hand-offs* refers to the existence of an interface when work segments are handed off to actors performing parallel tasks, and when outcomes are delivered to the fitting or integration process. Hand-off functions as a foundation for the interaction between sequential and reciprocal interdependence. It is, therefore, necessary to differentiate between tasks requiring minimal hand-off efforts and hand-offs requiring high levels of information sharing and knowledge exchange. Third, *stickiness*, where the authors distinguish between normal, non-sticky tasks, such as routine and standardized work, and sticky forms of task interdependence. The degree of stickiness in information and knowledge transfer depends on the characteristics of the sender, the receiver,

the organizational context of information transfer and the content of the information. Transfer stickiness will be high "... for large volumes of tacit, ambiguous, equivocal, uncertain and complex tasks" (Kumar *et al.*, 2009, p. 655).

We find that these constructs allow for a more elaborate understanding of the importance of the nature of the activities involved in global sourcing. Activities in strategic global sourcing are characterized by a high level of integration interdependence and stickiness, and they require significant hand-off efforts to transfer information and knowledge. In our global sourcing model, this implies that the higher the degree of specialization, the greater the interdependence among the activities, and the greater the amount of communication and coordination effort required. Consequently, when tasks are located across global distances, the greater the risk of a breakdown and a corresponding loss of control.

Managers can apply a range of techniques to ease such transfers, simplify interfaces, and make sticky information and knowledge more transparent and accessible (see Grant *et al.*, 2000, for an overview of such techniques). These techniques help to simplify advanced activities over time (a process sometimes referred to as *commoditization*).

Exploration: the degree to which the local service provider is authorized to innovate

March's (1991) influential distinction between *exploration* and *exploitation* in organizational learning is relevant for our purposes. March (1991) defines exploration as "search, risk taking, experimentation, play, flexibility, discovery and innovation", and exploitation as "refinement, choice, production, efficiency, selection, implementation and execution" (March, 1991, p. 71). Although each of these constructs represents different strategies for the acquisition and use of knowledge and capabilities, they are also highly complementary. Thus, as March (1991) notes, it is necessary to have an appropriate balance between the two elements. Too much exploration without exploitation leads to high costs of experimentation without the corresponding benefits. Conversely, exploitation without exploration leads organizations to a suboptimal equilibrium (March, 1991, p. 71). March (1991) further argues that an organization should not seek to establish fully standardized processes. Instead, they should leave room for exploration, which will foster innovation (a similar point has also been made by Nonaka, 1994). March's distinction between the dimensions of exploration and exploitation is central because it is connected to the home firm's motives for global sourcing.

The exploration-exploitation distinction is a recurrent theme in streams of literature that are related to the topic of this paper, although this theme is discussed using slightly different terms. Notably, as firms' global sourcing strategies and operations evolve, there seems to be an increasing emphasis on exploration relative to exploitation. First, a similar discussion is evident in the field of R&D internationalization. Gammeltoft (2006) summarizes these different approaches when he describes a "traditional view" versus a "new view" with regards to R&D internationalization. The traditional view, which dominated until the late 1970s, describes the R&D activities of MNCs as mainly located in the home base and suggests that R&D outside the home base predominantly consists of minor, local adaptations related to sales and production in the foreign markets. The new view emphasises the ways in which knowledge and innovation processes are increasingly becoming globally polycentric, i.e., R&D located outside the Triad (the US, the EU and Japan) is

no longer merely for local adaptation but encompasses a wider range of R&D activities, including some high-value R&D functions. Based on studies of foreign direct investments in the pharmaceutical and electronics industries, Kuemmerle (1999) identifies two strategies for R&D investments in foreign locations. In a home-base *exploiting* strategy, firms seek to exploit specific capabilities of the host country. In this situation, as firms become aware of differences in local needs and local demand becomes more advanced, local R&D partners may help the firm to adapt existing products. In contrast, the main driver of a home-base *augmenting* strategy is the firm's need for knowledge that is not location specific.

Second, within the innovation literature stream, Archibugi and Iammarino (1999) argue that MNCs tend to move beyond the international *exploitation* of nationally produced innovations to engage in global generation of innovation and techno-scientific collaborations. Similar to Kuemmerle (1999), Archibugi and Iammarino (1999) argue that firms seek to augment their knowledge capabilities and will seek the knowledge they require wherever it is best created. Other authors within the field of innovation describe global and "open" sourcing of knowledge as increasingly important competitive strategies for modern firms (Cantwell 2003; Chesbrough 2003; Christensen 2006; Laursen and Salter, 2006). An open innovation strategy implies that firms recognize that knowledge is distributed globally, and that it is possessed by a range of public and private agents. Firms must seek to collaborate with these agents because it is financially and practically difficult, even for large MNCs, to possess cutting-edge knowledge and capabilities in every field. One implication is that the home firm will seek to develop an extensive collaboration with the partnering firm/institution in order to explore and benefit from strategically important partner capabilities. An open innovation strategy, therefore, differs from more traditional strategies that emphasize the control and protection of firm-specific capabilities. Hence, in traditional strategies, partnerships with other firms will be less extensive.

Exploration activities tend to have a low degree of codification and they are typically based on tacit knowledge. Such activities require that the staff in the host firm be able to exercise independent judgment based on their educational background and professional experience. This is particularly true for activities relying on intensive technologies, where the understanding of problems and solutions are defined and redefined through iterative and co-evolutionary work processes (Stabell and Fjeldstad, 1998; Thompson, 1967). Such activities are expert-knowledge activities for which full responsibility for problem definition and activity execution is given to individuals or units that possess a high level of knowledge and skills.

In contrast, exploitation activities tend to be sourced to the host firm along with a precise set of specifications. Such activities demand a much lower degree of independent judgment and decision-making on the part of the host firm. Such activities include basic assembly-line activities with little or no need for host firm staff to exercise their own judgment. For rule-based activities the need for independent judgment is slightly higher than for basic activities. Such activities are found, for example, in customer service centres, where front-office personnel try to resolve customer problems based on manuals and standard operating procedures. In other words, in these organizations, the definitions of problems and their solutions are pre-defined and rely on routines. Complications occur when a customer problem has a unique character and does not fit into the pre-defined categories, and, hence, is difficult to solve using pre-defined solutions. These situations require a much higher degree of knowledge and independent judgment but often such organizations are ill equipped to tackle them. There is, therefore, a mismatch between the nature of the

problem (unique) and the applied solution (standardized). Hence, the solving of exploration-type problems with exploitation-type solutions, or vice versa, will most likely result in poor problem solving

Also embedded in this dimension is the level of managerial control applied by the home firm in the day-to-day operations of the host firm. For example, the delegation of an extremely high level of discretion to the host firm would represent a management-by-objectives approach, in which the home firm would define the problem to be solved upfront but allow the host firm to decide how to solve the problem, including which output/solution would be best. Given the nature of the problem-solving process in intensive technology processes, such an approach could even include the detailed breakdown of the various parts of the problem. The other end of the continuum would be represented by a model in which the home firm maintains full control of operational management (e.g., through expatriate managers stationed on the premises of the host firm) and makes all management decisions. These decisions would then be implemented by host firm's staff.

4. The radar and comfort zones of strategic global sourcing

The strategic global sourcing of advanced services offers significant potential payoffs but their realization depends on the nature of the service activity as well as the attributes of the firm. Strategic global sourcing has to be *imaginable* and *tolerable* to the individual firm. In other words, a firm's cognitive limitations, a lack of motivation, and knowledge transfer difficulties may hamper a shift from conventional to strategic global sourcing. In this section, we account for these firm attributes, which we refer to as the "radar" and "comfort" zones of the sourcing firm.

Cognitive limitations: delineating the "radar zone" of the sourcing firm

The managers of the sourcing firm must first envisage the opportunities of strategic global sourcing as a means for improving performance. The ability to identify opportunities for improved performance is similar to Teece's notion of "sensing capacity" (Teece, 2007) and Hohenthal *et al.*'s "antecedents of market discoveries" (Hohenthal *et al.*, 2003). Internationalization process theory (Andersen, 1993; Bilkey and Tesar, 1977; Cavusgil, 1980; Johanson and Vahlne, 1977/1990; Luostarinen, 1979) points to the importance of cognitive constraints when companies search for business opportunities beyond their home market. Hence, strategic global sourcing has to be within the "radar zone" of the managers in the sourcing firm. One obvious determinant of a firm's radar zone is the international orientation of its top managers (Perlmutter, 1969) in terms of the extent to which they have a global or local mindset (Levy *et al.*, 2007). By introducing the EPG framework (Ethnocentric, Polycentric and Geocentric management orientation) Perlmutter (1969) emphasizes the importance of the orientation of top managers towards the internationalization of the firm's operations in the overseas markets for the degree of a firm's commitment to internationalization. Top managers abiding to an ethnocentric orientation believe domestic strategies, techniques and personnel are superior to their foreign counterparts, and that they therefore provide the most effective framework for competing overseas. In contrast, managers operating from a polycentric orientation recognize the importance of overseas markets and establish overseas subsidiaries to handle various international activities. Only firms with a geocentric orientation – a global mindset – view the entire world as their

potential market without geographical boundaries. In these organizations, management policies and organizational setups in both headquarters and foreign sourcing operations are designed to reflect the full integration of worldwide operations. The local service providers are managed neither as extended branch operations nor as autonomous entities. Rather, geocentric firms consciously create their organizations, whether domestic or foreign, as an integral operating unit.

In light of the above, we suggest that these cognitive antecedents should be included in our understanding of strategic global sourcing.

Limitations related to motivation and knowledge-transfer capabilities: delineating the “comfort zone” of the sourcing firm

In addition to being imaginable, strategic global sourcing must also be *tolerable* (or *acceptable*) to the sourcing firm – including not only its managers but also its stakeholders in general (owners, employees, suppliers, customers, etc.). The risk preferences of a firm’s managers constitute an obvious determinant of that firm’s comfort zone. Strategic global sourcing offers potential for considerable returns from the arbitraging of global factor endowment differentials, but it also entails significant risks. All managers have their own risk/return trade-off points for investments, including investments in the global sourcing of specific service activities.

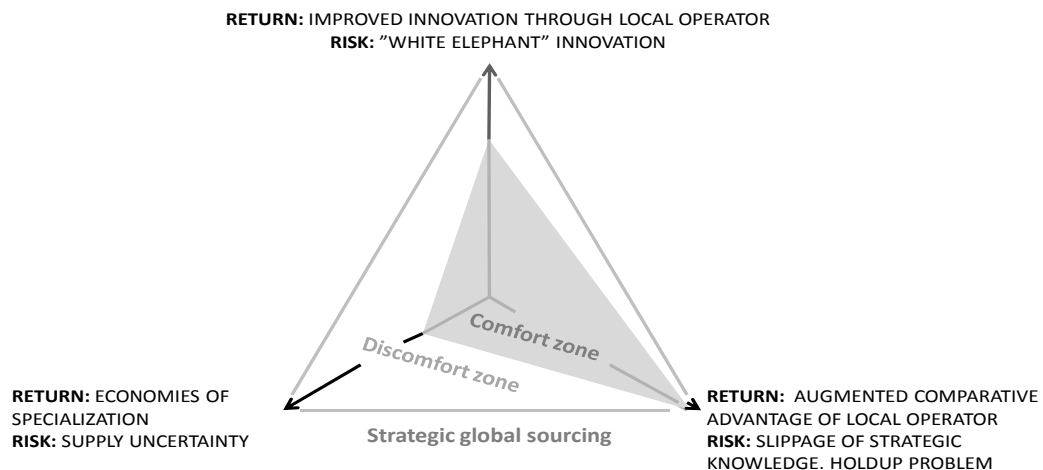


Figure 2: An example of a firm’s comfort zone in relation to risk/return tradeoffs in strategic global sourcing

Figure 2 illustrates the expected risk/return tradeoffs associated with the three dimensions of strategic global sourcing. The potential returns, e.g., the economies of specialization of the local service provider, impel managers of the sourcing firm to assign the provider supply exclusivity.

However, risk-averse managers eschew supply uncertainties and will, therefore, deny the service provider exclusivity in order not to avoid leaving their comfort zone. The managers will appoint operators in different countries to perform the activity in question. In other words, the managers of the sourcing firm will choose “replication” rather than “specialization” as a guiding principle for their global sourcing. At the same time, these managers do not mind transferring strategic knowledge to the service providers. All relevant knowledge – including highly confidential information – is transferred to the service provider. The firm manages to do this without exiting its comfort zone. With regards to empowering the service provider in its exploration of the activity, the comfort zone is somewhat more restrictive. The firm shuns the risk of “white elephant” innovation – i.e., the development of technologically advanced, but commercially irrelevant, novelties.

Hence, the figure illustrates a situation in which a firm renounces full-blown strategic global sourcing as an option because it would threaten the firm’s comfort zone.

In addition to the risk preferences of decision makers the organizational flexibility of the (home) organization towards global sourcing is important. A company’s ability to meet strategic challenges, such as global sourcing opportunities, will be greatly influenced – and often constrained – by existing asset configurations, its historical definition of management responsibilities and the ingrained organizational norms. A company’s organization is shaped not only by current external task demands but also by past internal management biases. In particular, each company is influenced by the path of its development – its organizational history – and the values, norms and practices of its management – its management culture. Collectively, according to the strategic management theorists Bartlett and Ghoshal (1989), these factors constitute a company’s administrative heritage. The population ecologists, Hannan and Freeman (1984), portray companies as entities that stubbornly cling to their old ways, regardless of whether those ways are effective or not. They suggest that structural inertia characterizes most organizations. Furthermore, path-dependency exists when the outcome of a process depends on its past history – on the entire sequence of decisions made by agents and resulting outcomes – and not just on contemporary conditions (Nelson and Winter, 1982). Administrative heritage, structural inertia and path-dependence can simultaneously be great assets and sources of stability in turbulent environments, and significant liabilities because they resist change, which prevents the realigning or broadening of strategic capabilities. Thus, the inverse of these change-resistant factors is dynamic capabilities, i.e., the ability of an organisation to continually adapt and innovate in the face of business and environmental change (Teece and Pisano, 1994).

We find a third determinant of a firm’s comfort zone in knowledge-related antecedents. As mentioned earlier, strategic knowledge may be site-specific and thus difficult to transfer to a local service provider in need of the knowledge. The knowledge residing in the outsourcing firm may be tacit and managers may not even know where to find best practices in their organization. Hence, the standardization and codification efforts that are required for carrying out a strategic global sourcing operation may constitute an almost insurmountable barrier for managers.

The sum of the risk-reducing measures that a sourcing firm has at hand constitutes a fourth comfort-zone constituent. The literature indicates that managers play an important role in the realization of strategic global sourcing to the extent that they can use different organizational tools to reduce the risks related to the global sourcing of advanced services without sacrificing returns. We elaborate on this element in the next section.

Radar and comfort zone dynamics

In the two preceding sub-sections, we argue that the various firm and activity attributes that constitute the radar and comfort zones of the sourcing firm co-determine the extent to which the firm engages in strategic global sourcing. However, these attributes are not completely deterministic. First, a strong sense of urgency – such as the threat of bankruptcy – may drive the firm out of its comfort zone into a discomfort – or “panic” – zone, remove organizational resistance, and encourage managers and owners to accept higher risk/return ratios than they would otherwise. Second, from a dynamic perspective the sourcing firm may, more or less deliberately, manage to extend its radar and comfort zones by, for example, hiring internationally oriented board members and managers, or by fostering a sense of urgency in efforts to overcome resistance to change (Armenakis *et al.*, 1993; Kotter, 1995). The latter may be seen as a valuable element of managers’ global sourcing implementation capabilities and points to a potentially important role for management in terms of nurturing strategic global sourcing. Third, the above-mentioned risk-reducing measures that managers may introduce also oppose a too deterministic view on strategic global sourcing. Some of these “smart” ways of practicing strategic global sourcing have already been discussed in the sections describing the features of revelation, specialization and exploration. Figure 3 summarizes some of these managerial tools.

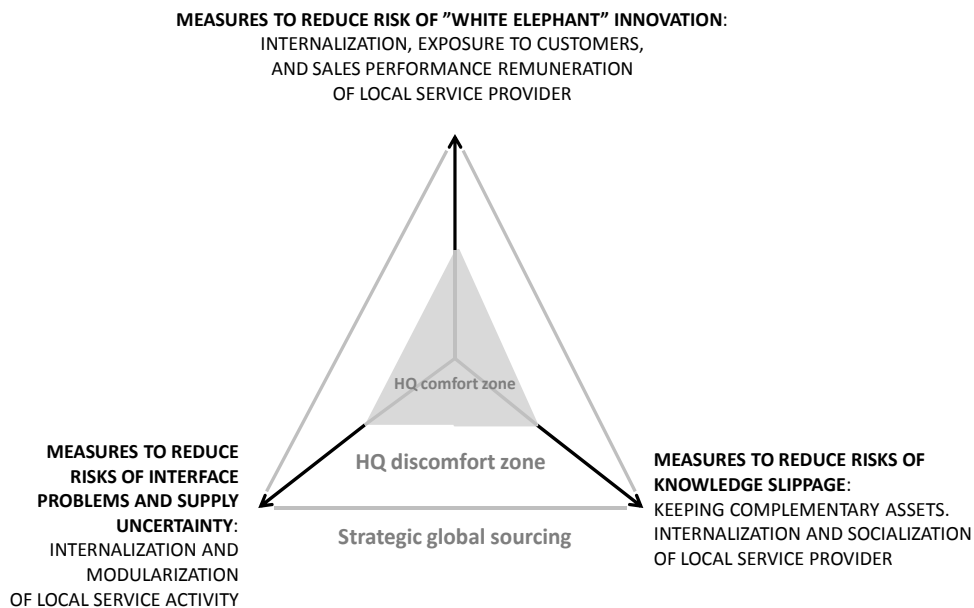


Figure 3: *Alleviating the downside risks of strategic global sourcing of services*

Internalization (Buckley and Casson, 1976) stands out as a general instrument for reducing the risks associated with global strategic sourcing. Internalization may alleviate the risks of knowledge slippage, supply uncertainty and futile innovation projects. However, it is important to note that internalization *alleviates*, but rarely *completely eliminates*, the downsides risks of strategic global sourcing. For example,

the sourcing firm may transfer key personnel from an independent service provider to its own subsidiary and insert strict competition clauses into its employment contracts in order to mitigate the leakage of strategic knowledge. However, competition clauses are difficult to enforce in (low-cost) countries with weak IPR regimes. Therefore, internalization is not a stand-alone panacea but should be supplemented with other risk-reducing measures.

It is also notable that the *antecedents* of internalization are well-described in the IB and strategy literature, but the same literature streams generally fail to provide evidence of or prescriptions for the unfolding of the internalization process in practice (Petersen *et al.*, 2010). Hence, a pertinent issue in relation to sourcing of advanced services is how the outsourcing firm can transfer key personnel from the local service provider to its newly established subsidiary. Such a transfer requires both the approval of the service provider (presumably in return for suitable economic compensation) and the consent of the individuals, who may have to cut financial and emotional bonds with their local employer. In the absence of a negotiated agreement with the local service provider, the success of the internalization operation will depend on whether “hostile” headhunting of key persons against the will of the service provider is possible. As indicated in the introduction, SimCorp’s global sourcing operation in the Ukraine serves as an example of a seemingly frictionless transfer of key personnel from a service provider to the outsourcing firm. Hence, SimCorp’s global sourcing operation may inspire other outsourcing firms and may even constitute a best practice for safeguarding investments in specific human assets. For that reason, we elaborate on SimCorp’s shift from conventional to strategic global sourcing in the next section.

5. From conventional to strategic global sourcing: SimCorp’s outsourcing of advanced services to the Ukraine¹

Two motives drove SimCorp’s quest for outsourcing: cost reduction and the expansion of the company’s development capacity. SimCorp first considered offshore outsourcing opportunities in 2002-2003 but it quickly dropped the idea, as the company’s management did not feel comfortable with the available options. At the same time, on-shore opportunities were investigated but were not found attractive. However, spurred by the aggravated shortage of qualified IT personnel in Denmark, SimCorp’s management revisited the possibility of offshore outsourcing in 2004. In the following year management decided to outsource software development tasks to two Ukrainian service providers: Infopulse and ProFIX. SimCorp appointed two vendors for several reasons. First, the company wished to achieve better supply security. Second, the dual appointments would allow for performance benchmarking of two providers against each other. Third, the inclusion of multiple vendors was expected to induce internal price and performance rivalry and, as a corollary, increase SimCorp’s bargaining power.

¹ Our information about SimCorp and its sourcing operations in Ukraine originates from the company’s website (www.simcorp.com), annual reports, press releases and, in particular, from a presentation – “The Challenge from Local to Global Development” – given by the CEO of SimCorp Ukraine LLC, Jens Brinksten, at the IAOP (International Association of Outsourcing Professionals) European Outsourcing Summit in Copenhagen on 15 and 16 October 2009. The authors are greatly indebted to Jens Brinksten for his responses to our queries following the IAOP presentation.

SimCorp at a glance

SimCorp is the developer and marketer/licensor of the asset-management system software, *SimCorp Dimension*[®]. Based in Denmark, SimCorp is listed on the NASDAQ OMX Copenhagen exchange. In 2009, the company generated revenue of EUR 180m and profit after tax of EUR 27m. The majority of SimCorp's business is conducted outside of Denmark. The company is present in 16 countries and has around 1,100 employees worldwide, of which 140 are located in Kiev.

Business model: The company's business model is based on three elements: sales of software licenses, maintenance income, and fees from professional services.

Staff: Employees are located at the Copenhagen headquarters and at 19 offices on 4 continents, including subsidiaries in Europe, the Ukraine and North America. More than 80% of SimCorp's employees hold academic degrees, most of which are within financing, economics, IT or engineering. Some 40 nationalities are represented in SimCorp's staff.

The product: *SimCorp Dimension*[®] has been the company's sole product since 2007. *SimCorp Dimension*[®] is a comprehensive software solution for professional investment managers. It is an enterprise solution that supports all of the elements of the investment management process: analysis of investment opportunities; order placement; order management; performance measurement; reconciliation; bookkeeping; reporting; and risk monitoring and control. It is used in the international financial sector. The programming language of *SimCorp Dimension*[®] – APL/W – is highly specialized and rarely used. As such, it is difficult to find APL programmers in the labour market.

Market and customers: Around 60 financial organisations, most of which are European, have chosen to base their investment management activities on the *SimCorp Dimension*[®] software platform. Whereas sales of software licenses have varied considerably, a significant portion of the company's revenue is derived from professional service fees and maintenance fees, which are generated with a high degree of predictability and are relatively robust.

Key financial figures:

€ 1,000:	2005	2006	2007	2008	2009
Sales revenue	102,254	127,127	156,780	174,737	180,375
Profit from operations (EBIT)	21,839	34,100	38,396	38,432	39,670
Profit for the year	16,201	26,609	38,999	31,159	26,925
Total assets	104,811	121,38	109,652	96,46	116,390
Equity	77,818	88,271	73,525	62,699	74,654
ROE (%)	20.7	30.2	33.1	42.8	36.3

Source: *SimCorp annual reports*

From 2005 to 2009, SimCorp's large-scale offshore outsourcing operation in the Ukraine moved through three phases: (1) a pilot project phase (March-August 2005), (2) a full cooperation phase (August 2005-September 2007), and (3) a staff transfer phase (October 2007-May 2009). SimCorp established a wholly owned subsidiary in the Ukraine in March 2008 but the internalization *process* started long before then. In fact, the "full cooperation phase" encompassed three years of numerous internalization steps that paved the way for formal internalization in the form of SimCorp's formal employment of Infopulse and ProFIX staff team members (= staff transfer). The central features of the three phases are outlined below.

In the "Pilot Project Phase", SimCorp tested the qualifications of the local service providers, Infopulse and ProFIX, and its "fit" with the companies using equivalent small-scale projects. A Memorandum of Understanding (MoU) was signed with the two vendors. The MoU, which is comparable to a "letter of intent", detailed the pilot projects' terms and conditions. In addition, the MoU included two options: an option for SimCorp to expand the cooperation if the pilot projects were satisfactorily completed and an exit option. SimCorp exercised the first option.

The phase of full cooperation began with the signing of long-term outsourcing contracts that included the terms and conditions for each party, and detailed their responsibilities. The two service providers were made responsible for the search and selection of qualified personnel, while SimCorp invested heavily in training and education of the local team members. From the beginning of this phase, SimCorp embarked on the socialization of the Ukrainian staff. Individuals from the service provider development teams were socialized through bi-annual attendance at the local SimCorp Academy. The aim was to help the local team members feel integrated into the SimCorp organization, and to encourage them to adopt the company's way of thinking and doing business. Furthermore, SimCorp pressured the two service providers to allow for individual pecuniary incentives to be defined and rewarded by the client firm. The two vendor firms were reluctant to agree to this quasi-integration initiative and, instead, the two firms agreed to a compromise.

Over the three-year period, SimCorp's spent, on average, the equivalent of €20,000 on the training and education of each team member. In order to safeguard these idiosyncratic human asset investments, SimCorp incorporated a joint venture option into the outsourcing contracts. This option allowed SimCorp to establish a JV with the service providers and acquire a majority share (51%). Under this option, SimCorp had the right to decide which team members should be employed by the JV and to appoint the managing director of the JV as well as the chairman of the board. However, SimCorp never exercised this JV option.

In the autumn of 2007, SimCorp's top management decided to establish a greenfield subsidiary in Kiev. The challenge was to ensure the transfer of key personnel from Infopulse and ProFIX to this subsidiary. In an attempt to avoid the hostile headhunting of key personnel, SimCorp suggested a cooperative solution to the two service providers. The company succeeded in reaching a legally binding agreement with both vendors in which SimCorp had rights, rather than obligations, to transfer personnel that would have minimum 18 months of team experience. Infopulse and ProFIX were, in turn, compensated with the equivalent of three to four months' salary per transferred consultant. To show good faith and bolster the collaborative spirit, the two service providers were invited to assist – in exchange for pre-specified compensation – SimCorp in identifying and selecting new Ukrainian staff even *after* the formal

establishment of the subsidiary in March 2008. From March 2008 through May 2009, about 100 Infopulse and ProFIX employees were transferred to the SimCorp subsidiary in accordance with the contractual agreement. Additional staff members were recruited with the assistance of the two (former) service providers.

Figure 4 summarizes the steps in SimCorp’s internalization of offshored, advanced services in phases 2 and 3, spanning the period between August 2005 and May 2009. The steps may also be seen as risk-reducing measures that extended SimCorp’s comfort zone and thus moved the company away from conventional and towards strategic global sourcing. In the next section, we elaborate on this comfort zone extension using SimCorp as a case in point.

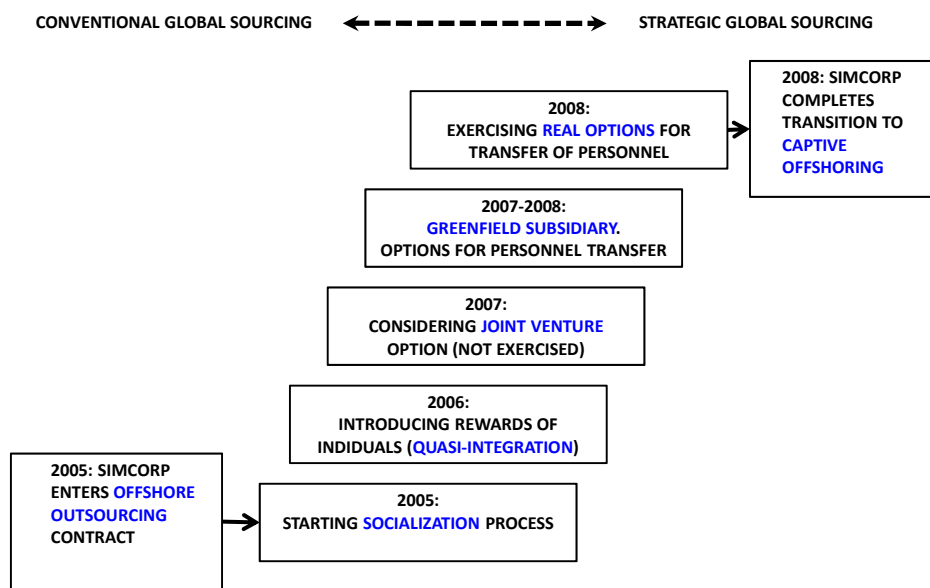


Figure 4: Steps in SimCorp’s internalization of offshored, advanced services 2005-2009

6. Discussion

The risk/return trade-off associated with revealing (transferring) strategic knowledge to the two Ukrainian service providers is key to understanding of SimCorp’s internalization process. While SimCorp’s extensive investments in the training and education of local software developers augmented the comparative cost advantage of using low-salaried programmers, they also entailed risks of knowledge slippage, holdup threats and excessive haggling costs. Knowledge slippage may occur due to project staff turnover. Penalties in case of staff turnover exceeding specified maximums are standard in outsourcing contracts on advanced services, which was true for SimCorp’s contracts as well. However, the penalties rarely fully compensate for the annoyance and project delay caused by high attrition rates. Second, as SimCorp increased its human-assets investments, the threat of being held up by the two service providers grew. By threatening non-

renewal of the outsourcing contracts, Infopulse and ProFIX might have been able to negotiate better contract terms up to the point where they expropriated the entire quasi-rent of SimCorp's human-asset investments. Third, even though the two service providers abstained from acting opportunistically (in terms of holding up SimCorp), the quasi-rent issue might have absorbed substantial management time and effort, as settling a "fair deal" in terms of sharing the quasi-rent is not an easy task when renegotiating outsourcing contracts. Furthermore, client confidentiality requirements, and SimCorp's aspiration to apply its own behaviour and outcome-based incentives to individual project team members should be mentioned as additional HR-related drivers of internalization.

Altogether, the problems and risks associated with SimCorp's intensive training and education of Infopulse and ProFIX employees seemed to push SimCorp's management out of its comfort zone in relation to the concealing-revealing strategy parameter. However, by introducing a range of risk-reducing measures – the internalization steps – SimCorp managed to expand its comfort zone to the point, it seems, of almost unlimited knowledge transfer to the Ukrainian project team and the leveraging of that team.

In order to derive a full picture of SimCorp's comfort zone in relation to the Ukrainian outsourcing operation, however, we should also look at the two other strategy dimensions of global sourcing: the degree to which the two service providers were given mandates of specialization and exploration. With regards to "specialization", SimCorp seemed uncomfortable with using a single, exclusive service provider. Therefore, two service providers were appointed – Infopulse and ProFIX – not only to benchmark the two against each other and induce internal rivalry, but also to enhance supply security. We assume that the internalization of the sourcing operation – the merging of the former Infopulse and Profix employees into a single integrated team – entailed an expansion of SimCorp's comfort zone, although not to the extent where the Ukrainian subsidiary was allotted a worldwide software development mandate. In 2008, the software development tasks were shared with the Danish headquarters team and remain so today. Hence, some replication of software development activities continues within SimCorp's international organization.

The internalization of the Ukrainian sourcing operations also went hand-in-hand with an expansion of SimCorp's comfort zone in relation to delegating more "exploration" to local teams. During the observed period (2005-2009), the sourced activities shifted from being minor, fairly well-specified programming assignments to more comprehensive, advanced programming projects, a shift that implied a progression in the characteristics of the activities from exploitation towards exploration. After the full internalization of the Ukrainian operations, the question of extending the local mandate from one of "competence exploitation" to one of "competence creation" (Kuemmerle, 1999; Cantwell and Mudambi, 2005) is no longer a question about governance structures but about location-specific advantages and cultural predominance: to what extent is the Danish headquarters comfortable with a complete handover of software development activities to the Ukrainian subsidiary? With most of SimCorp's clients located in northern Europe, lead-user and co-creation arguments (see, e.g., von Hippel, 1986; Prahalad and Ramaswamy, 2004) for keeping innovation in the northern European/Copenhagen headquarters remain valid. In the absence of client proximity and customer orientation, the risk of Ukrainian "white elephant" innovation – the development of technologically advanced, but commercially irrelevant, novelties – persists. Even though the Ukrainian employees possess the necessary innovative skills, putting the future of SimCorp in their hands might still be outside the comfort zone of SimCorp's Danish top management.

Figures 5 and 6 indicate SimCorp's comfort zone in relation to its sourcing operation in the Ukraine in 2005 and 2008, respectively.

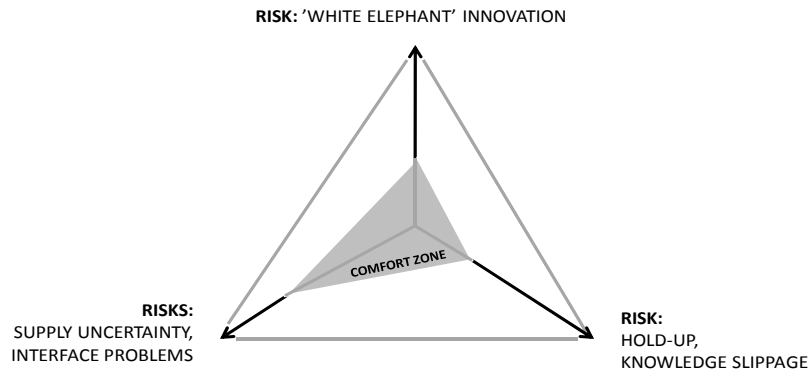


Figure 5: *SimCorp's initial comfort zone (2005)*

SimCorp's initial (2005) comfort zone is quite limited with regard to the revelation of strategically important knowledge and the delegation of innovation activities to the two Ukrainian service providers. SimCorp's top management feels uncomfortable due to the risks of knowledge slippage and hold-up, as well as the risk of "white elephant" innovation. The comfort zone is relatively extensive with regards to specialization, although Infopulse and ProFIX duplicate the programming tasks requested by SimCorp during the pilot project phase (2005). In phase 2 (2005-2008), the replication of software development activities by the local teams and the team in Copenhagen is reduced, seemingly at the expense of SimCorp's supply security. However, the internalization process – including the establishment of long-term partnership agreements with the two service providers – that begins in 2005 effectively increases the supply security. In particular, the internalization process expands SimCorp's comfort zone in relation to the revelation/transfer of strategically important knowledge to Infopulse and ProFIX. Hence, Figure 6 indicates that the unlimited transfer of all relevant knowledge to the two service providers was achievable within SimCorp's comfort zone by 2008.

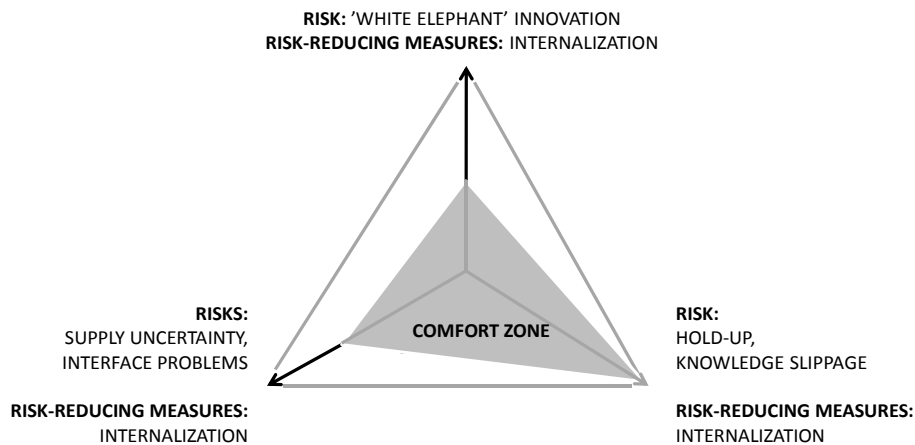


Figure 6: *SimCorp's extended comfort zone (2008)*

What are the strategic management implications for firms and employees when client firms exit the comfort zone of conventional global sourcing and enter the “discomfort zone” of strategic global sourcing? As described earlier, our analytical framework is founded on the assumption that firms are pulled in the direction of strategic global sourcing when they begin to source advanced, high-value service activities from foreign locations. The farther the firm moves on each of the three dimensions, the closer it comes to “full-blown” strategic sourcing and the greater is the distance to the well-known comfort zone of conventional global sourcing. This is, however, only part of the story. The strategic global sourcing of more advanced activities is the manifest action that is related to a coherent set of interrelated elements. It is, so to speak, the tip of the iceberg, where the foreign sourcing of advanced business activities is the only visible part of an underlying greater whole.

To recapitulate, conventional global sourcing usually unfolds within firms’ comfort zones. The strategic global sourcing of advanced service activities has the potential to be more rewarding but tends to pull firms out of their comfort zones. In other words, although the returns associated with strategic global sourcing are higher than those associated with conventional sourcing, so are the risks. One strategic option to alleviate the challenges and manage the change from conventional to strategic global sourcing is to internalize activities that were previously undertaken by a foreign partner. Clearly, shifting from an external governance mode to an internal governance mode brings a number of changes in the relations between the sourcing firm and the local staff. These changes concern the type of contract that formally governs the behaviour of the service provider firm and the employees involved, and the incentive structure, which may

include both pecuniary and non-pecuniary rewards designed to influence the behaviour and performance of the firm and the individuals.

With regard to the type of contract, the collaboration between a client firm and a service provider is normally governed by an outsourcing contract that stipulates rights, obligations, remunerations, output and performance requirements at the level of the firm. If contractual obligations are not met, the service provider firm, not individual employees working for the client, are held accountable by the client firm. In contrast, a captive governance mode employs personnel on individual contracts, which means that a different regime of rights and obligations is applied at the level of the individual employee. Therefore, while the outsourcing contract “liberates” the client firm of the responsibility and administrative costs of managing offshore staff, it may also limit the managerial influence of the client firm. This is demonstrated in the SimCorp case. During phase 2 of full cooperation (2005-2008), SimCorp’s management attempted to work with the two service providers to offer various pecuniary incentives to individual team members with the intention of boosting learning and productivity. However, as those staff members were still employees of Infopulse and ProFIX, this quasi-integration attempt inevitably came into conflict with employment contract law and, as such, found its natural limitation.

Second, the incentive structure in an outsourcing relationship usually differs significantly from that found in situations of captive governance. In an offshore outsourcing operation, the incentive structure, which is intended to guide the actions of the service provider, is typically part of the contract. The outsourcing contract, therefore, typically stipulates the regime of rewards (e.g., bonuses for certain types of performance) and sanctions (e.g., fines for late task completion, non-delivery or poor service quality) on the contract party level. Such rewards and sanctions normally only include pecuniary measures. Conversely, in a captive governance mode, the incentive structure may include both pecuniary and non-pecuniary measures for the individual employees. The pecuniary measures may include promotions, higher salaries (or a lack thereof), and dismissals in cases of poor performance. Recent data show that salaries for in-house personnel are higher than for outsourced personnel, at least for some functions in call centres (van Jaarsveld and Yanadori, 2011), which suggests that transforming to a captive governance mode would be attractive from the employee perspective. Non-pecuniary incentives may include a broader set of measures, ranging from honorary awards to high-performing employees, the establishment of an individual plan for career and competency development, access to education and training programmes, and the offering of social activities to employees, such as sports facilities and cultural excursions, in order to facilitate the integration of offshore staff into the client/home firm’s organizational culture.

In the case of SimCorp, Danish managers considered changing from an external governance mode to a captive mode mainly to be able to apply a broader set of pecuniary and non-pecuniary measures. In addition to the primary goal of retaining high-performing employees, the Danish managers also prioritized social integration to facilitate knowledge sharing between Danish and Ukrainian staff, and, hence, the efficiency and effectiveness of the latter. In other words, the company wanted the Ukrainian software developers to feel like they were SimCorp employees even though they were not formally employed by the company.

7. Conclusions and strategic management implications

In this paper, we have focused on the drivers and the means of changing governance modes in global sourcing, specifically in relation to a shift from offshore outsourcing to captive offshoring. We have argued that internalization – or insourcing – is typically an ongoing process rather than a one-off event. In SimCorp’s case, the internalization of the outsourcing operation unfolded as a multi-step process, which included socialization, quasi-integration, options for joint venture formation, and options for the transfer of key personnel to SimCorp’s own organisation. These steps were essentially risk-reducing measures meant to safeguard SimCorp’s specific human-asset investments. The apparently successful internalization process gives us reason to believe that these risk-reducing measures represent useful takeaways for managers involved in global sourcing.

In addition, our paper offers one additional – and more profound – suggestion for managers involved in (or contemplating) global sourcing. As stressed by several scholars, global sourcing tends to fundamentally transform company organisations in terms of organizational configuration, the standardization of operational procedures, knowledge articulation, supply security, etc. Therefore, managers should consider global sourcing as a portfolio of *strategic* decisions made on the activity level. For that reason, we have presented an analytical framework that describes the global sourcing of services as a matter of strategic decision-making in relation to three features: (1) the revelation of knowledge to local service suppliers, (2) the extension of world mandates to local service suppliers, and (3) the authorization of local service suppliers to explore or innovate new products and processes.

Our analytical framework also features the “comfort zone” as defining the degree to which managers are willing and capable of pursuing *strategic* – in contrast to *conventional* – global sourcing. The comfort zone is a composite of firm attributes and indicates that strategic global sourcing conflicts with the risk preferences, values, sentiments, or capabilities of some firms. In other words, strategic global sourcing is not universally desirable or attainable – some firms are better off sticking to conventional sourcing given their comfort zones and expected risk/return tradeoffs for the service activity in question. We hope, therefore, that the suggested framework can assist managers in finding the right balance between conventional and strategic global sourcing of service activities.

8. References

- Andersen, O. (1993). 'On the internationalization process of firms: a critical analysis'. *Journal of International Business Studies*, 24: 209-231.
- Archibugi, D. and Iammarino, S. (1999). 'The policy implications of the globalisation of innovation'. *Research Policy*, 28: 317-36.
- Armenakis, A., Harris, S. and Mossholder, K. (1993). 'Creating readiness for organizational change'. *Human Relations*, 46: 681-703.
- Aron, R. and Singh, J.V. (2005). 'Getting offshoring right'. *Harvard Business Review*, 83(12): 135.
- Barney, J. B. (1991). 'Firm resources and sustained competitive advantage'. *Journal of Management*, 17: 99-120.
- Bartlett, C. and Ghoshal, S. (1989). *Managing Across Borders: The Transnational Solution*. Boston, MA: Harvard Business School Press.
- Beugelsdijk, S., Pedersen, T. and Petersen, B. (2009). 'Is there a trend towards global value chain specialization? An examination of cross border sales of US foreign affiliates'. *Journal of International Management*, 15: 126-41.
- Bilkey, J. and Tesar G. (1977). 'The export behavior of smaller-sized Wisconsin manufacturing firms', *Journal of International Business Studies*, 8: 93-8.
- Buckley, P.J. and Casson, M. (1976). *The Future of the Multinational Enterprise*. London: Macmillan.
- Buckley, P.J. and Ghauri, P.N. (2004). 'Globalisation, economic geography and the strategy of multinational enterprises'. *Journal of International Business Studies*, 35: 81-98.
- Cantwell, J. (2003) 'Innovation and information technology in the MNE'. In A.M. Rugman and T.L. Brewer (Eds.), *The Oxford Handbook of International Business*. Oxford: Oxford University Press.
- Cantwell, J. and Mudambi, R. (2005). 'MNE competence-creating subsidiary mandates', *Strategic Management Journal*, 26: 1109-1128.
- Cavusgil, S.T. (1980). 'On the internationalization process of firms', *European Research*, 8:273-281.
- Chesbrough, H. (2003). *Open Innovation - The New Imperative for Creating and Profiting from Technology*. Boston, MA: Harvard Business School Press.
- Christensen, J. F. (2006). *Whither Core Competency for the Large Corporation in an Open Innovation World?* Oxford: Oxford University Press.

- Cohen, W.M., R.R. Nelson and J.P. Walsh (2000). 'Protecting their intellectual assets: appropriability conditions and why US manufacturing firms patent (or not)', *NBER Working Paper 7552*, Cambridge, MA: National Bureau of Economic Research.
- Conner, K. R. (1991). 'A historical comparison of resource-based theory and five schools of thought within industrial organization economics: do we have a new theory of the firm?' *Journal of Management*, 17: 121-154.
- Conner, K.R. and C.K. Prahalad (1996): 'A resource-based theory of the firm: knowledge versus opportunism'. *Organization Science*, 7: 477-501.
- Contractor F.J., Kumar V., Kundu S. and Pedersen T. (2010). 'Reconceptualizing the firm in a world of outsourcing and offshoring: the organizational and geographical relocation of high-value company functions'. *Journal of Management Studies* (Forthcoming)
- Cowan, R. and D. Foray (1997), 'The Economics of Codification and the Diffusion of Knowledge', *Industrial and Corporate Change*, 67: 595-622.
- Doh, J.P. (2005). 'Offshore outsourcing: implications for international business and strategic management theory and practice'. *Journal of Management Studies*, 42: 695-704.
- Doh, J.P., Bunyaratavej, K. and Hahn, E.D. (2009). 'Separable but not equal: the location determinants of discrete services offshoring activities'. *Journal of International Business Studies*, 40: 926-943.
- Dossani R. and Kenney, M. (2007). 'The next wave of globalization: relocating service provision to India'. *World Development* 35: 772-791.
- Doz, Y., Santos, J. and Williamson, P. (2001). *From Global to Metanational - How Companies Win in the Knowledge Economy*. New York, NY: Harvard Business School Press.
- Dunning, J.H. and Lundan, S.M. (2008). *Multinational Enterprises and the Global Economy*. Cheltenham: Edward Elgar Publishing.
- Ellram, L.M., Tate, W.L. and Billington C. (2008). 'Offshore outsourcing of professional services: a transaction cost economics perspective'. *Journal of Operations Management*, 26: 148-63.
- Eriksson, K., Johanson, J., Majkgaard, A., and Sharma, D. D. (1997): 'Experiential knowledge and cost in the internationalization process'. *Journal of International Business Studies*, 28: 337-360.
- Felin, T. and Foss, N.J. (2005). 'Strategic organization: a field in search of micro-foundations'. *Strategic Organization*, 3: 441-55.
- Felin, T. and Hesterly, W.S. (2007). 'The knowledge-based view, nested heterogeneity, and new value creation: philosophical considerations on the locus of knowledge'. *Academy of Management Review*, 32: 195-218.
- Forsgren, M., Holm, U. and Johansson, J. (2005). *Managing the Embedded Multinational: A Business Network View*. London: Edward Elgar.

- Foss, N. (2009). 'Alternative research strategies in the knowledge movement: from macro bias to micro-foundations and multi-level explanation'. *European Management Review*, 6: 16-28.
- Gammeltoft, P. (2006). 'Internationalisation of R&D: trends, drivers and managerial challenges'. *International Journal of Technology and Globalisation*, 2: 177-99.
- Grant, R.M., Almeida, P. and Song, J. (2000). Knowledge and the Multinational Enterprise. In C. Millar, R. Grant and C. Choi (Eds.), *International Business: Emerging Issues and Emerging Markets*. New York: St Martin's Press, pp. 102-29
- Hannan, M. and J. Freeman (1984). 'Structural inertia and organizational change.' *American Sociological Review*, 49; 149-64.
- Hansen, M.W., Schaumburg-Müller, H. and Pottenger, E. (2008). 'Towards a developing country firm perspective on outsourcing'. *Strategic Outsourcing Journal*, 1: 210-29.
- Hedlund, G. (1986). 'The hypermodern MNC: a heterarchy'. *Human Resource Management*, 25: 9-35.
- Hennart, J. (1982). *A Theory of Multinational Enterprise*. Ann Arbor, MI: University of Michigan Press.
- Hofstede, G. (2003). *Culture's Consequences. Comparing Values Behaviors, Institutions, and Organizations Across Nations*. London: Sage Publications (2nd ed).
- Hohenthal, J., Johanson, J. and Johanson, M. (2003). 'Market discovery and the international expansion of the firm'. *International Business Review* 12: 659-72.
- Jensen, P.D.Ø. (2008). *Offshoring of Advanced and High-Value Technical Services: Antecedents, Process Dynamics and Firm-Level Impacts*. Copenhagen: Copenhagen Business School.
- Jensen, P.D.Ø. (2009). 'A learning perspective on the offshoring of advanced services'. *Journal of International Management*, 15: 181-93.
- Jensen, M. and Meckling, W. (1992). 'Specific and general knowledge, and organizational structure'. In L. Werin and H. Wijkander (Eds.), *Contract Economics*. Oxford: Blackwell, pp. 251-274.
- Jensen, P.D.Ø. and Pedersen, T. (2011). 'The economic geography of offshoring: the fit between activities and local context'. *Journal of Management Studies*, 48: 352-72.
- Johanson, J. and Vahlne, J.-E. (1977). The internationalization process of the firm: a model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, 8: 23-32.
- Johanson, J. and J.-E., Vahlne, 1990. 'The mechanism of internationalisation'. *International Marketing Review*, 7: 11-24.
- Johnson, G., Melin, L. and Whittington, R. (2003). 'Micro strategy and strategizing: towards an activity-based view'. *Journal of Management Studies*, 40: 3-22.

- Karmarkar, U. (2004). 'Will you survive the services revolution?' *Harvard Business Review*, 82: 100-7.
- Kedia, B.L. and Lahiri, S. (2007). 'International outsourcing of services: a partnership model'. *Journal of International Management*, 13: 22-37.
- Kedia, B.L. and Mukherjee, D. (2009). 'Understanding offshoring: a research framework based on disintegration, location and externalization advantages'. *Journal of World Business*, 44: 250-61.
- Kern T, Willcocks L, and van Heck. E. (2006). 'The winner's curse in outsourcing: how to avoid relational trauma'. In L. Willcocks and M. Lacity (Eds), *Global sourcing of business & IT services*. New York: Palgrave Macmillan, pp. 114-44.
- Kogut, B. and Kulatilaka N. (1994). 'Operating flexibility, global manufacturing, and the option value of a multinational network'. *Management Science*, 40: 123-39
- Kogut, B. and Zander, U. (1993). 'Knowledge of the firm and the evolutionary selection: Interrelated processes of change'. *Organization Science*, 2: 140-5.
- Kotabe, M. (1989). 'Hollowing-out of U.S. multinationals and their global competitiveness'. *Journal of Business Research*, 19: 1-15.
- Kotabe, M. (1992). *Global Sourcing Strategy: R&D, Manufacturing and Marketing Interfaces*. New York, NY: Quorum Books.
- Kotabe, M., Mol, M. J. and Ketkar, S. (2008). 'An evolutionary stage model of outsourcing and competence destruction: a triad comparison of the consumer electronics industry'. *Management International Review*, 48: 65-93.
- Kotter, J. P. (1995). 'Leading change: why transformation efforts fail'. *Harvard Business Review*, 73: 59-67.
- Kuemmerle, W. (1999). 'The drivers of foreign direct investment into research and development: an empirical investigation'. *Journal of International Business Studies*, 30: 1-24.
- Kumar, K., Van Fenema, P.C. and von Glinow, M.A. (2009). 'Offshoring and the global distribution of work: implications for task interdependence theory and practice'. *Journal of International Business Studies*, 40: 642-67.
- Lacity, M. and Rottman, J. (2008). 'Offshore outsourcing of IT work'. In M. Lacity and J. Rottman (Eds.), *Offshore Outsourcing of IT Work*. Houndsmill: Palgrave Macmillan, pp. 1-53
- Laursen, K. and Salter, A. (2006) 'Open for innovation: The role of openness in explaining innovation performance among UK manufacturing firms'. *Strategic Management Journal*, 27: 131-150.
- Levy, O., Beechler, S., Taylor, S. and Boyacigiller, N. A. (2007). 'What we talk about when we talk about 'global mindset': Managerial cognition in multinational corporations'. *Journal of International Business Studies*, 38: 231-258

- Levin, R., Alvin, C., Klevorick, K., Nelson, R.R. and Winter, S.G. (1987). 'Appropriating the returns from industrial research and development'. *Brookings Papers on Economic Activity*, 3: 783-831.
- Lewin, A.Y. and Couto, V. (2007). *Next Generation Offshoring - the Globalization of Innovation*. Raleigh, NC: Duke University.
- Lewin, A.Y., Massini, S. and Peeters, C. (2009). 'Why are companies offshoring innovation? The emerging global race for talent'. *Journal of International Business Studies*, 40: 901-25.
- Lewin, A.Y., and Peeters, C. (2006) 'Offshoring work: business hype or the onset of fundamental transformation?' *Long Range Planning*. 39: 221-39.
- Loustarinen, R., (1979). *Internationalization of the Firm*. Acta Academiæ Oeconomicae Helsingiensis, Series A: 30, Helsinki.
- Lundvall, B.-Å. and Maskell, P. (2000). 'Nation states and economic development - From national systems of production to national systems of knowledge creation and learning'. In G.L. Clark, M.P. Feldmann and M.S. Gertler (Eds.), *The Oxford Handbook of Economic Geography*. Oxford: Oxford University Press pp. 353-72.
- Lundvall, B.-Å. (1985). *Product Innovation and User-Producer Interaction*. Industrial Development Research Series no. 31. Aalborg: Aalborg Universitetsforlag
- Manning, S., Massini, S. and Lewin, A.Y. (2008). 'A dynamic perspective on next-generation offshoring: the global sourcing of science and engineering talent'. *Academy of Management Perspectives*, 22: 35-54.
- March, J.G. (1991). 'Exploration and exploitation in organizational learning'. *Organization Science*, 2: 71-87.
- Martin, X. and Salomon (2004). 'Tacitness, learning, and international expansion: a study of foreign direct investment in a knowledge-intensive industry'. *Organization Science*, 14: 297-311.
- Maskell, P., Eskelinen, H., Hannibalsson, I., Malmberg, A. and Vatne, E. (1998). *Competitiveness, Localised Learning and Regional Development. Specialisation and Prosperity in Small Open Economies*. London: Routledge.
- Maskell, P. and Malmberg, A. (1999): 'Localised learning and industrial competitiveness'. *Cambridge Journal of Economics*, 23: 167-85.
- Mol, M.J., van Tulder, R.J.M. and Beije, P.R. (2005). 'Antecedents and performance consequences of international outsourcing'. *International Business Review*, 14: 599-617.
- Mudambi, S.M. and Tallman, S. (2010). 'Make, buy or ally? Theoretical perspectives on knowledge process outsourcing through alliances'. *Journal of Management Studies* (Forthcoming)
- Nelson, R.R. and S.G. Winter (1982), *An Evolutionary Theory of Economic Change*. Cambridge, MA: Belknap Press of Harvard University Press.

- Nelson, R.R. (1990). 'What is public and what is private about technology?' Consortium on Competitiveness and Corporations, *Working Paper No 90-9*, Center for Research in Management, University of California at Berkeley, CA.
- Nohria, N. and Ghoshal, S. (1997). *The Differentiated Network - Organizing Multinational Corporations for Value Creation*. San Francisco: Jossey-Bass.
- Nonaka, I. (1994). 'A dynamic theory of organizational knowledge creation. *Organization Science*, 5: 14-37.
- Perlmutter, H.V. (1969). 'The tortuous evolution of the multinational corporation'. *Columbia Journal of World Business*, 4: 9-18.
- Petersen, B., Welch, L.S. and Benito, G.R.G. (2010). Managing the internalisation process. *Management International Review*, 50: 137-54.
- Polanyi, M. (1958) *Personal Knowledge*. New York, NY: Harper & Row.
- Polanyi, M., 1966. *The Tacit Dimension*. Gloucester, MA: Peter Smith - Doubleday.
- Porter, M.E. (1985): *Competitive Advantage – Creating and Sustaining Superior Performance*. N.Y.: Free Press.
- Porter, M.E. (1986). *Competition in Global Industries*. Cambridge, MA: Harvard Business School Press.
- Porter, M.E. (1990): *Competitive Advantage of Nations*. New York, NY: Free Press.
- Prahalad, C.K. and Hamel, G. 1990. 'The core competence of the corporation'. *Harvard Business Review*, 68: 79-91.
- Prahalad, C.K. and Ramaswamy, V. (2004). 'Co-creation experiences: The next practice in value creation', *Journal of Interactive Marketing*, 18: 5-14.
- Quinn, J.B. (1999). 'Strategic outsourcing: leveraging knowledge capabilities'. *Sloan Management Review*. 40: 9-21.
- Quinn, J.B. and Hilmer, F.G. (1994). 'Strategic outsourcing'. *Sloan Management Review*, 35: 43-55.
- Rouse, M.J. and Daellenbach, U.S. (1999). 'Rethinking research methods for the resource-based perspective: isolating sources of sustainable competitive advantage'. *Strategic Management Journal*, 20: 487-94.
- Sako, M. (2006). 'Outsourcing and offshoring: implications for productivity of business services'. *Oxford Review of Economic Policy*, 22: 499-512.
- Schuller, T., Baron, S., and Field, J. (2000). 'Social capital: a review and critic'. In S. Baron, J. Field and T. Schuller (Eds.), *Social Capital*. Oxford: Oxford University Press.

- Stabell, C.B. and Fjeldstad, Ø.D. (1998). 'Configuring value for competitive advantage: on chains, shops, and networks'. *Strategic Management Journal*, 19: 413-37.
- Szulanski, G. (1996). 'Exploring internal stickiness: impediments to the transfer of best practice within the firm'. *Strategic Management Journal*, 17: 27-43.
- Szulanski, G. (2003). *Sticky Knowledge – Barriers to Knowing in the Firm*. London: Sage Publications.
- Teece, D.J. (1977). 'Technology transfer by multinational firms: the resource cost of transferring technological know-how. *The Economic Journal*, 87: 242-61.
- Teece, D.J. (1981). 'The R&D and technology transfer activities of multinational firms'. In R. Hawkins (Ed.), *Technology Transfer and Economic Development*. Greenwich, CT: JAI Press.
- Teece, D. J. (1986a). 'Firm boundaries, technological innovation, and strategic management'. In L. G. Thomas (Ed.), *The Economics of Strategic Planning: Essays in Honor of Joel Dean*. Lexington, MA: Lexington Books.
- Teece, D. J. (1986b). 'Profiting from technological innovation: implications for integration, collaboration, licensing and public policy'. *Research Policy*, 15: 785-805.
- Teece, D. J., and Pisano, G. (1994). 'The dynamic capabilities of firms: an introduction'. *Industrial & Corporate Change*, 3: 537-556.
- Teece, D. J., Pisano, G. and Shuen, A. (1997). 'Dynamic capabilities and strategic management'. *Strategic Management Journal*, 18: 509–33.
- Teece D.J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28: 1319–30.
- Thompson, J.D. (1967). *Organizations in Action*. New York, NY: McGraw-Hill.
- Trent, R.J. and Monczka, R.M. (2003). 'International purchasing and global sourcing — what are the differences?' *Journal of Supply Chain Management*, 39: 26-38.
- von Hippel, E. (1994). "'Sticky information" and the locus of problem solving: implications for innovation'. *Management Science*, 40: 429-39.
- von Hippel, E. (1986). 'Lead users: a source of novel product concepts'. *Management Science*, 32: 791-805
- Yu, K. and Levy, F. (2010). 'Offshoring professional services: institutions and professional control'. *British Journal of Industrial Relations*, 48: 758-83.
- van Jaarsveld, D.D. and Yanadori, Y. (2011). 'Compensation management in outsourced service organizations and its implications for quit rates, absenteeism and workforce performance: Evidence from Canadian call centres'. *British Journal of Industrial Relations*, 49: 1-26.
- Vernon, R. (1966). 'International investment and international trade in the product cycle'. *Quarterly Journal of Economics*, 80: 190-207.

- Whitley, R., (Ed.) (1995). *European Business Systems. Firms and Markets in their National Contexts*. London: Sage Publications.
- Whittington, R. (2003). 'The work of strategizing and organizing: For a practice perspective'. *Strategic Organization*, 1: 117-25.
- Williamson, O. E. (1983). 'Credible commitments: Using hostages to support exchange'. *American Economic Review*, 73: 519-40.
- Williamson, O.E. (2008). 'Outsourcing: Transaction cost economics and supply chain management'. *Journal of Supply Chain Management* 44: 5-16.
- Winter, S.G. and Szulanski, G. (2001). 'Replication as strategy'. *Organization Science*, 12: 730-43.