

## **Global Sourcing of Advanced Services - A Strategic Management Analysis**

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### ABSTRACT

*In this exploratory study we take a strategic management approach to global sourcing of advanced services. We discuss in which ways conventional sourcing differs from strategic sourcing and what impels firms to aim for the latter (or, prevent them from doing so). Potentially, strategic global sourcing of services has high returns, but is also associated with high risks and needs for organizational changes. Strategic global sourcing may therefore be outside firms' "comfort zone" – a composite of organizational knowledge transferability, structural inertia, managers' risk preferences, and – most interesting in a strategic management perspective - their ability to mitigate risks of strategic global sourcing. One important risk reducing measure is internalization of (out)sourced service activities. Many firms instigate global sourcing via conventional offshore outsourcing. However, as the human asset specificity of the outsourcing operation increases, firms are pulled out of their comfort zones and a desire for internalization arises. An illustrative company case gives suggestions as to how, in practice, internalization may be accomplished without losing valuable human assets held by the local service providers.*

Key words:

*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 Kiev, Ukraine. The establishment of the subsidiary kicked off the phasing out of the company's large-scale outsourcing operation in Ukraine. SimCorp's offshore outsourcing operation started in Spring 2005 as a small pilot project venture with two local service providers. During the intermediate three years the offshoring operation transformed from a small-scale, conventional outsourcing operation to a large-scale strategic undertaking involving heavy investment in local human assets. Over the next year and a half SimCorp's subsidiary was staffed with a few expatriates from the Danish headquarters and around 100 software developers from the two service providers. This massive transfer of personnel - that took place in full agreement with the two local service providers –sealed the successful safeguarding of SimCorp's extensive human asset investments in Ukraine.

The SimCorp case – which we will revisit later - provokes several intriguing, general questions in relation to global sourcing of advanced services: How does the change from conventional to strategic global sourcing unfold? What are the drivers and obstacles of this change process? When does a sourcing operation become “strategic” – and what are the risk-return tradeoffs of strategic global sourcing? In this paper we endeavor answers to these questions – the answering of which is pertinent inasmuch as managers in client and supplier/provider firms are under pressure to adopt global sourcing strategies, but at the same time 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 literature streams of international business (IB), innovation, strategy, and organizational learning and change, we take an activity-based perspective (Johnson *et al*, 2003) on *strategic global sourcing* of services - the term we use for the international sourcing of advanced and high value service activities which are executed by highly skilled personnel.

More specifically, we distinguish strategic sourcing from conventional sourcing by looking at three strategy dimensions of an activity-specific sourcing operation. These strategy dimensions have to do with the knowledge transferred, the exclusivity allotted, and the managerial discretion delegated to the local service provider(s). The three dimensions capture strategic potency of irreversibility, interdependency, and ambidexterity, respectively. Furthermore, these features unfold within what we popularize as the “radar zone” and the “comfort zone” of the sourcing firm. The “radar zone” epitomizes managers' imaginative capacity in relation to global sourcing. Do managers conceive strategic global sourcing as an option, or do cognitive limitations restrain them from even consider this opportunity, and – at best – stick to conventional sourcing? The “comfort zone” embodies attributes of the sourcing firm which together define to what extent the sourcing firm – including its management and various stakeholders – can tolerate and accept engagement in strategic global sourcing. A very important attribute of the sourcing firm is the risk preferences of its decision makers. Compared to conventional sourcing strategic global sourcing is characterized by high returns, but also high risks. The risk averse decision makers will tend to shun the risk-return trade-off of strategic global sourcing as it exceeds their tolerable risk threshold – to use an internationalization theory term of Johanson and Vahlne (1977). In other words, the comfort zone of risk averse decision makers oblige the firm only to engage in conventional sourcing. Other sourcing firm attributes making up the comfort zone include organizational flexibility (e.g. resistance to changes as a

result of sourcing), site specificity of the firm's knowledge base (e.g. tacit knowledge is difficult to transfer to a foreign service provider), and the firm's ability to introduce risk-reducing measures. However, both the radar and comfort zones of a firm can change over time, and strategic global sourcing can be exercised in "smart ways" that reduces or encircles the downsides risks and/or overcome organizational resistance. In this paper we give examples of "smart ways" to mitigate downside risks and organizational resistance.

A development from conventional to strategic global sourcing along the three dimensions - and within the radar and comfort zones of the sourcing firm - may have profound human resource implications; in particular if the sourcing operation commences as an offshore outsourcing operation. As the sourcing operation becomes of increasing strategic importance to the outsourcing firm a need for stronger bonding of key personnel of the service provider emerges almost inevitably. 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 local key personnel substitute for an outsourcing contract with the service provider. The IB and strategy literature informs us well about the antecedents of internalization, but is less informative about the internalization *process* as such (Petersen, Welch and Benito, 2010) – including the transformation of service provider consultants to trusted employees. The employment of key personnel may be preceded by various initiatives of the outsourcing firms: e.g. formation of equity joint ventures with the service provider, socialization of the consultants, or outsourcing contract inclusion of real options for transferring personnel. This paper looks specifically at such management instruments for facilitating changes in human resource relations.

Hence, the paper is organized as follows: In the sections below we first (section 2) examine prior contributions in the literatures on strategic management, organization, and global sourcing with a particular emphasis on contributions which take a more detailed perspective on the nature of the activities subjected to global sourcing, and which therefore provide a foundation for our arguments. Next (section 3), we suggest and outline the proposed analytical framework with the three strategy features of global sourcing. Subsequently (section 4), we outline attributes of the sourcing firm – its radar and comfort zones – demarcating the imaginability and willingness of engaging in strategic global sourcing. In section 5 we return to the SimCorp case (mentioned in the very beginning of the paper) in more details and report some risk-reducing measures introduced by the Danish company in relation to supply security and safeguarding of specific human asset investments undertaken in Ukraine 2005-2008. Subsequently, the gradual internalization of SimCorp's offshore outsourcing operation is mirrored in our analytical framework (section 6). In particular, we demonstrate how SimCorp's comfort zone expands prior to, and in the course of, the sourcing operation in Ukraine. Section 7 concludes and indicates managerial implications of our study.

## **2. Theory**

### ***From conventional to strategic global sourcing***

Global sourcing of business activities is addressed throughout 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 strands of literature most notably supply chain management (e.g.

Trent and Monzcka, 2003). Despite the classic roots, recent authors have pointed out that there seems to be a shortage of research that seeks to contribute to the development of a coherent theory able to capture recent years' evolution in global sourcing of business activities (Mol *et al*, 2005), that there is a need to revisit existing theories of the international business in view 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). International sourcing of various services activities is a more recent phenomenon, but, as argued by Lewin *et al* (2009), in particular the foreign sourcing of more advanced, high-value services is presently not well understood. Furthermore, in view of 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 is driven by a number of enabling factors, especially advances in ICT, although it is important to note that even though technology supports the offshorability of services that were previously location-bound, there are national institutional factors and occupational regulations in certain fields, which bar the global sourcing of certain services at a larger scale (Yu and Levy, 2010).

Despite the existence of a substantial body of literature on the subject, several authors have stressed that something "new" is happening, that global sourcing is going into its "next" phase (Dossani and Kenney, 2007; Lewin and Peeters, 2006; Manning *et al*, 2008). This new trend includes that foreign sourcing increasingly encompasses research and innovation activities, design, engineering or similar types of advanced business activities (Lewin and Couto, 2007). The trend is not merely underpinned by lower wages in the destination country, but driven by a different set of strategic motives, not least a competitive race for talented employees, mostly with completed tertiary education (Lewin *et al*, 2009). Global sourcing of advanced and high-value activities influences the organizational and geographical configuration of the firm across firm boundaries and national boundaries (Contractor *et al*, Forthcoming; Mudambi and Tallman, Forthcoming) and it also affects the location choices and patterns for various activities where, for example, more advanced manufacturing activities are relocated to different destinations compared with more simple manufacturing activities (Jensen and Pedersen, 2011).

In the remainder of this paper we refer to this new trend of sourcing advanced and high value business activities to foreign locations as *strategic global sourcing*. Sourcing this type of activities is contrasted with a long-standing business practice that involves the foreign sourcing of comparatively simple, highly codified and standardized routine activities, which can be executed at the foreign location by unskilled or low skilled labour. We refer to the latter type as *conventional global sourcing*.

The notion of strategic (out)sourcing has been discussed by academics and practitioners for some time. In particular the seminal papers by Quinn and Hilmer (Quinn and Hilmer, 1994; Quinn, 1999) have influenced this discussion. The authors have stressed the potential benefits involved in strategic outsourcing and, based on the "core competence" perspective (Prahalad and Hamel, 1990), they have argued that firms need to "concentrate the firm's own resources on a set of 'core competencies' where it can achieve definable preeminence 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 benefit from the specialized capabilities of partner firms, instead of investing significant resources in building a wide range of capabilities in-house. Along somewhat similar lines more recent authors have argued that foreign sourcing represents a possibility to enhance

existing resources or build new resources through access to complementary resources (Kedia and Lahiri, 2007; Kedia and Mukherjee, 2009; Mudambi and Tallman, Forthcoming). However, 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) have warned against the risk of “hollowing-out” firms through global sourcing, i.e. where firms unlearn skills and process knowledge over time and hence become uncompetitive. Such a risk is particularly grave when foreign sourcing involves critical knowledge assets which to a large degree are embedded as tacit knowledge in employees. Furthermore, relational problems between partnering firms may arise, and managing a difficult inter-firm relation entails added costs and potential synergies are not likely to be realized (Ellram *et al*, 2008; Kern *et al*, 2006; Williamson, 2008)

In short, these contrasting views outline a central management dilemma. On one side there are great potential benefits involved in engaging in strategic global sourcing. In addition, these benefits amplify when more firms and countries become involved in global knowledge flows. As markets become more globally integrated, engaging in strategic global sourcing even becomes a competitive imperative. On the other side there are risks which firms need to be aware of and safeguard themselves against. In the discussion section below we focus on the implications of engaging in strategic global sourcing and outline various conditions that individually and combined lead to situations where firms may change from an inter-firm relationship and internalize activities in order to mitigate, at least partly, the problems and risks related to strategic global sourcing founded on human knowledge assets.

### ***Towards an activity-based view on global sourcing***

In a review of the literature on the offshoring of services, Jensen (2008) noted that vast majority of journal articles discussed the foreign sourcing of services at a general level of analysis. Only few articles addressed global sourcing of services at a more specific level where a focus on the activities in question was taken into consideration. In the relatively few cases where journal articles at the time had adopted a more specific focus on the nature and type of business activities, such a focus mainly concerned information technology (IT) but other types of services were not addressed in great detail or not addressed at all. However, the IT domain encompasses a vast subset of different activities with varying attributes and coordination needs between home and offshore teams. Firms “slice” their value chain activities more finely and seek to find optimum locations for each closely defined activity and optimum governance mode for this activity in a specific location (Buckley and Ghauri, 2004). In view of this we argue that research on global sourcing to a much greater extent needs to adopt a detailed perspective concerning the nature of the business activities – manufacturing as well as services – involved in foreign sourcing operations. We shall elaborate this argument below. Interestingly, this argument seems to be shared in some recently published articles (Doh *et al*, 2009; Jensen, 2009; Kedia and Mukherjee, 2009; Kumar *et al*, 2009; Mudambi and Tallman, Forthcoming) whose authors through different approaches analyze and discuss how the characteristics of business activities relate to other variables in global sourcing arrangements.

During the past decade especially, a number of scholars in strategic management and organization have argued strongly for the need to change the level of analysis from a “macro-level” (i.e. firm level) to a “micro-level” that takes into consideration the motives and behavior 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). In their introductory article to a special issue on an activity-based view on strategy in the *Journal of Management Studies*, Johnson *et al* (2003) have argued for a shift in the strategy debate towards a micro perspective on strategy. According to the editors of this special issue, this includes an increased emphasis on the detailed processes and practices which constitute the day-to-day activities of organizational life *and* which relate to strategic outcomes. This activity-based perspective on strategy proposes, first, that value lies increasingly in the micro activities of managers and others in organizations, and second, that a macro-perspective, which the authors see as dominant in the literature, is too remote from the action in organizations. As Johnson *et al* (2003) note: “Quite simply, a strong instrumental reason for the importance of a more micro activity based view of strategy, therefore, is that managers manage activities” (ibid., 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 skills, motives and actions at the individual level which shape organizational-level or industry-level outcomes. According to Foss (2009), a more promising research approach is to take a fine grained view on organizations that focus on individuals, including the actions and transactions in which these individuals are involved. A focus on individuals seems particularly relevant in the context of services since the strategic assets here mostly are 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 an activity-based perspective as well as an individualized perspective in research on the global sourcing of services. We shall revert to this discussion in the final section on employment relations effects.

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

### **3. Features of strategic global sourcing**

Following the activity-based view on strategy we 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 and conventional global sourcing and, in turn, shape the strategic nature of an activity.

Hence, 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 replace replication of the service activity from one market to another; (3) gives the local service provider discretionary judgment in carrying out the activity – in other words, the local service provider is authorized to engage in exploration, not only exploitation. The three features, or dimensions, of strategic global sourcing may be seen as three continua (axes) stretching a triangle. The tips of the triangle signify extremes of strategic global sourcing: revealing, specialization, and

exploration – see Figure 1. Conventional sourcing is contained in the inner triangle whereas strategic global sourcing fills out the outer space. In reality, it is not always either-or: it is a continuum and sourcing of an advanced service activity may be ‘strategic’ on one triangle axis and ‘conventional’ on another axis.

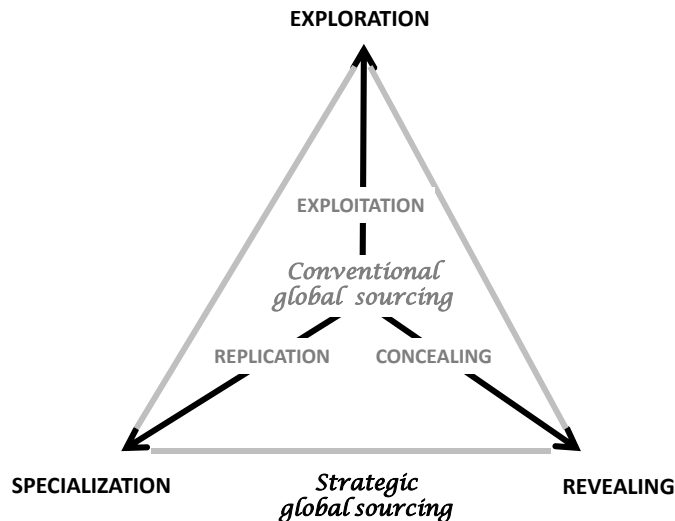


Figure 1: *Three features of strategic global sourcing*

In the following we will elaborate on each of the three features.

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

The first feature of strategic global sourcing (as contradicted by *conventional*) concerns the question of whether the sourcing firm conceals or reveals strategically important knowledge to the local service provider. The potential gain of revealing strategic knowledge is to ‘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 are imitable by other local and multinational firms (Porter, 1990; Barney, 1991) and, as a consequence, are exhausted after some years. Comparative advantages therefore have to be supplemented by competitive advantages of the sourcing (client) firm and the local service provider – ideally in some synergetic combination.

In order to perform the service activity in an optimal way the local service provider has to get a fundamental understanding of the business model of the client/outsourcing firm implying transfer of strategic knowledge about, e.g., market and product strategies. Two major challenges emerge in relation to this transfer:

First, the strategic knowledge has to be transferable. 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 – at best – quite costly. In some cases a standardization of internal business routines and procedures has to precede the codification process of the outsourcing firm. In other words, the outsourcing firm has to define its best practices throughout its value chain. In worst case, there may co-exist multiple, diverse practices within the organization that compete of being best. Only when the internal standardization process is completed can the outsourcing firm turn to the question of what knowledge to transfer for a given service activity performed abroad. The human capital input required for a given (service) activity consists of a mix of *general* knowledge and *specific* knowledge. General and specific knowledge differ in terms of pervasiveness and availability in high- as well as low-wage countries. The more widespread the knowledge, the more general and generic it is (Nelson, 1990). The requirements of general knowledge are no hindrance for sourcing of activities since the availability of this knowledge per assumption is the same across countries, including low-wage countries. As an example, engineering expertise about the physical laws and mechanical principles that apply to the construction of a suspension bridge is considered to be general knowledge since it is available in engineering schools of most countries. In countries like India and China, where one may find hundreds of these schools, 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*. This could also be translated into a cost issue: what are the costs associated with the transfer of specific knowledge and do these costs make global sourcing economically infeasible? 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. Transfer, as we use it, means effective transfer, not merely communication. The recipient of knowledge 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) it is. Knowledge stickiness may arise from three, somewhat related, reasons: First, the required knowledge may be *co-specialized* (Barney, 1991; Conner, 1991; Teece, 1986a/b), i.e. the knowledge required by 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 one and the same foreign location. In the extreme situation, the entire value chain – including the firm itself - is re-located to the low-wage country. However, this solution is not feasible in the situation where co-specialized, complementary assets related to a certain value chain activity are not owned and controlled by the firm, and where these assets, moreover, 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. As an example, the creation of innovational process and product knowledge of a software firm 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 have strong interfaces 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). As a third reason for stickiness, 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-saving perspective – or through intimate socialization (Nonaka, 1994). The latter transfer solution is extremely time-consuming and probably even more costly. Using tacitness of a certain technology as a proxy for knowledge stickiness some evidence of the localization effects is found in studies by Teece (1977, 1981) and Martin and Salomon (2004). Teece found that high levels of tacitness encouraged domestic rather than foreign investment. The study by Martin and Salomon (2004) confirmed this finding though with the reservation that high, as well as very low levels of tacitness inclined MNCs to locate at home, and an intermediate level of tacitness would have the opposite effect. In combination, co-specialization, local embeddedness, and tacitness, may render global sourcing of advanced services infeasible because the transfer of required knowledge is excessively costly. Even in the case where the outsourcing firm manages to codify the required knowledge there might still be some slippage of knowledge because the knowledge during the transformation and transfer process has become less usable to the local service provider.

The other major challenge related to revealing of knowledge is the risk of uncontrolled dissemination. The outsourcing firm may have transferred considerable knowledge to local people through training and education. Hence the outsourcing firm makes considerable idiosyncratic investments (Williamson, 1983) in human capital that is employed by an independent party, namely the service provider. These investments 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 organization through turnover of key personnel to other client projects or competing firms. The outsourcing firm has a vested interest in safeguarding its human asset investments and avoid leakage of knowledge to competitors. Safeguarding measures – or, knowledge protection strategies - include internalization (Williamson, 1983), quasi-integration, e.g. putting in place options for internalization (Kogut and Kulatilaka, 1994) or for transferring key personnel to own organization (Petersen *et al*, 2010), socialization of key personnel (Schuller *et al*, 2000), and holding 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 concerning lies in the firm's configuration of its global value chain – whether the local service operator is the sole provider (“specialization”) or just one of several providers (“replication”). While neither foreign sourcing of advanced business activities nor foreign sourcing in general is confined to MNCs, different organizational models of the MNC in the international business literature are helpful as one explanation of 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 implies a dispersed value chain, where the foreign subsidiaries are mini-replica 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-as-strategy may reward firms pursuing this strategy with maximum appropriable value creation, when this strategy is applied in situations where its business model/template fully or in part may be specified and then replicated in a different setting. In contrast, however, the concentrated value chain configuration (Porter, 1986), where a particular activity is situated in one location which then serves the entire MNC, is driven by the

fundamental idea to build critical mass and specialization in regional, or global, clusters, e.g. with “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 where there is a more equal, and hence more complex, balance of power and division of responsibilities between the parent company and foreign subsidiaries. The international business literature refers to this organizational model with different constructs, such as the network-based MNC (Forsgren *et al*, 2005; Nohria and Ghoshal, 1997), the MNC heterarchy (Hedlund, 1986), the meta-national MNC (Doz *et al*, 2001) or the transnational MNC (Bartlett and Ghoshal, 1989).

For strategic global sourcing, the point is that when MNCs change their global organization from the multi-domestic (replication) model to the transnational (or any similar) model with a high degree of local specialization, location/relocation of value chain activities becomes a product of this organizational change. Our research with firms from Denmark and other countries during a number of years suggests that this trend of change towards the concentrated value chain configuration is underpinning 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 to create 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. At the conventional level, Kumar *et al* (2009) take their point of departure in data indicating that companies have retreated from global sourcing due to lack of efficient implementation. That is, after the strategic decisions have been made, the operational problems and costs of work transfer and interaction communication and coordination outweigh the forecasted savings and benefits foreseen at the strategic level. For managers the problem lies in management expertise on a conventional level. Building on Thompson (1967), and other contributions in the organization literature, Kumar *et al* (2009) see the degree and type of inter-task interdependence as a key determinant of inter-site interaction and communications in global sourcing. Kumar *et al* (2009) extend extant theory with three types of interdependence in order to better portray and manage task interdependence. First, *integration interdependence*, which adds to Thompson’s (1967) scale of interdependence intensity. Kumar *et al* (2009) position this between sequential and reciprocal interdependence. Integration interdependence is characterized by the overall task being subdivided and with different actors working separately, but in parallel. This creates a need for continuous fit or integration process in order to acquire value as a whole. Second, *hand-offs*, which illustrates 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 form a more elaborate understanding of the importance of the nature of the activities involved in global sourcing. It follows that activities in strategic global sourcing are characterized by a high level of integration interdependence, they require significant hand-off efforts to transfer information and knowledge, and they contain a high degree of sticky information and knowledge. In our global sourcing model, this implies that the higher the degree of specialization, the greater the interdependence between the activities in the process, and the greater the amount of communication and coordination effort required. Consequently, when tasks are located across global distances the greater the risk of breakdown and the likelihood of control loss.

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) which helps turn advanced activities into more simple activities over time (a process sometimes referred to as *commoditization*). However, because an advanced activity at that point in time is driven by an exploration motive (which we turn to next) it comes with such attributes because it is positioned at the front end of known knowledge or in the borderland between known and not yet known knowledge.

### ***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 purpose. 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). While each of the two constructs represents different strategies for the acquisition and use of knowledge/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 reaping the subsequent benefits; conversely, exploitation without exploration leads the organization to a suboptimal equilibrium (March, 1991, p. 71). March (1991) further argues that an organization should not seek to establish full standardization of its processes, but leave room for exploration, since it will foster innovation (a similar point was made later by Nonaka, 1994). March's distinction between the dimensions of exploration and exploitation is central here because it is connected to the home firm's underpinning motives for global sourcing.

The exploration-exploitation distinction is a recurrent theme in literature strands that are related to the topic of this paper, albeit under slightly different terms. Notably, there seems to be an increased emphasis on the exploration dimension relative to exploitation as firms' global sourcing strategies and operations evolve into new forms.

First, a similar discussion exists in the field of R&D internationalization. Gammeltoft (2006) summarizes these different approaches when he describes a "traditional view" versus a "new view" as regards R&D internationalization. The traditional view, dominating until the late 1970s, describes the R&D activities of MNCs as mainly located in the home base. R&D outside the home base predominantly consists of minor, local adaptations connected with sales and production in the foreign markets. The new view emphasises

the ways in which knowledge and innovation processes are becoming increasingly globally polycentric, i.e. where the R&D located outside the Triad (i.e. US, EU, Japan) is no longer merely local adaptation but 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) identified two strategies for R&D investments at 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 Archibugi and Iammarino (1999) have argued that MNCs tend to move beyond the international *exploitation* of nationally produced innovations to also 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 capability, and will seek this knowledge wherever it is best created. Other authors within the innovation literature describe global and "open" sourcing of knowledge as an increasingly important competitive strategy 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 possessed by a range of public and private agents with whom firms must seek to collaborate 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 differs from a more traditional strategy which emphasizes control and protection of firm specific capabilities above other priorities. Hence, partnerships with other firms will also be less extensive.

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

At the other end of the spectrum, exploitation activities tend to be sourced to the host firm with a precise and detailed 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 demand for host firm staff to exercise judgment. A type of activity, which we may call rule-based activities, also requires a limited need for independent judgment, albeit it is slightly higher than the basic activities. Such activities are found e.g. in customer service centres where front level personnel try to solve customer problems based on manuals and standard operating procedures. In other words, for exploitation activities the definitions of problems as well as solutions are pre-defined and rely on routines. In such organizations complications occur when a customer problem has a unique character and does not fit into

the pre-defined categories and hence are difficult to solve with pre-defined solutions. These situations require a much higher degree of knowledge and independent judgment, but often such organizations are ill equipped to tackle the problems and there is a mismatch between the nature of the problem (unique) and the applied solution (standardized). Hence, solving exploration type problems with exploitation type solutions, and vice versa, will most likely result in a mismatch and poor problem solving

Embedded in this dimension is also the level of managerial control applied by the home firm in the day-to-day operations of the host firm. To illustrate the variance involved, an extremely high level of discretion delegated to the host firm would represent a management-by-objectives approach where the home firm upfront would define the problem to be solved but would leave it to the host firm to decide how to solve the problem, including which output/solution would best to solve the problem at hand. Moreover, this could even include a breakdown and detailing of the problem due to the nature of the problem-solving process in intensive technology processes. In contrast, the other end of the continuum would signify a model where the home firm maintains full control of operational management (e.g. through expatriate managers stationed at the premises of the host firm) and with great detail makes all management decisions which are then implemented by host firm staff.

#### **4. Radar and comfort zones of strategic global sourcing**

Strategic global sourcing of advanced services has great potential payoffs, but its realization - whether it is reachable to the individual firm - 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, cognitive limitations, lack of motivation, and knowledge transfer difficulties of the sourcing firm may hamper a shift from conventional to strategic global sourcing. In this section we account for these hampering firm attributes - popularized as the “radar” and “comfort” zones of the sourcing firm.

##### ***Cognitive limitations: Delineating the “radar zone” of the sourcing firm***

First of all, the managers of the sourcing firm have to envisage the opportunities of strategic global sourcing as a means for improving performance. The ability to identify opportunities for improved performance echoes Teece’s notion of “sensing capacity” (Teece, 2007) and Hohenthal and colleagues’ “antecedents of market discoveries” (Hohenthal *et al*, 2003). Internationalization process theory (Johanson and Vahlne, 1977/1990; Bilkey and Tesar, 1977; Luostarinen, 1979; Cavusgil, 1980; Andersen, 1993) points at 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. An obvious determinant of a firm’s radar zone is the international orientation of the top managers (Perlmutter, 1969) – to what extent they have a global or local mindset (Levy *et al*, 2007). By introducing the EPG-framework (EPG = Ethnocentric, Polycentric and Geocentric management orientation) Perlmutter (1969) emphasized the importance of the international orientation that top managers has towards the internationalization of the firm’s operations in the overseas markets, i.e. for the degree of a firm’s commitment towards internationalization. Top managers abiding to an ethnocentric orientation believe domestic strategies, techniques, and personnel are superior to foreign ones, and therefore provide the

most effective framework for competing overseas. In contrast, managers operating from a polycentric orientation recognize the importance of overseas markets and thus establish overseas subsidiaries to handle various international activities. It is only firms with a geocentric orientation – a global mindset - that view the entire world as their potential market without any geographical boundaries. Consequently, management policies and organization in both headquarters and foreign sourcing operations are designed to reflect full integration among worldwide operations. The local service providers are neither managed as extended branch operations nor autonomous entities. Rather, the geocentric firms consciously create their organizations, whether domestic or foreign, to be an integral operating unit. In conclusion, we should include these cognitive antecedents in our understanding of strategic global sourcing.

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

Besides being imaginable, strategic global sourcing also has to be *tolerable (or acceptable)*, to the sourcing firm – including not only its managers, but also its stakeholders in general (owners, employees, suppliers, customers, etc.). As mentioned in the introduction, the risk preferences of the managers constitute an obvious determinant of a firm’s comfort zone. Potentially, strategic global sourcing offers considerable returns from arbitraging global factor endowments differentials, but it also entails significant risks. Any manager has his/her own risk-return tradeoff point of investments – including investments in 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 attached to the three dimensions of strategic global sourcing. The potential returns, e.g. economies of specialization of the local service provider, impel the managers of the sourcing firm to assign the provider supply exclusivity.

However, the risk averse managers eschew supply uncertainties, and would therefore deny the service provider exclusivity in order not to leave their comfort zone. Instead, the managers would appoint operators in different countries to perform the activity in question, that is, the managers of the sourcing firm choose 'replication' rather than 'specialization' as a guiding principle for their global sourcing. In contrast, the managers do not mind transferring strategic knowledge to the service providers. All relevant knowledge – including very confidential information - is transferred to the service provider and the sourcing firm manages to do this without exiting its comfort zone. As regards empowering the service provider in exploring the activity the comfort zone is somewhat more restricted. Hence, the figure illustrates a situation where a firm renounces full-blown strategic global sourcing as an option because this would intimidate its comfort zone.

In addition to the risk preferences of decision makers the organizational flexibility of the (home) organization towards global sourcing matters. 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 by which it developed – its organizational history – and the values, norms, and practices of its management - its management culture. Collectively, these factors constitute a company's administrative heritage according to the strategic management theorists, Bartlett and Ghoshal (1989). The population ecologists, Hannan and Freeman (1984), have portrayed companies as entities that stubbornly cling to their old ways, effective or not. They pose that structural inertia characterizes most organization. Furthermore, path-dependence 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 be, at the same time, a great asset of a company and a source of stability in a turbulent environment, but can also altogether constitute a significant liability, since they resist change and thereby prevent realigning or broadening of strategic capabilities. Thus, the inverse of these change resistance factors translate into dynamic capabilities, i.e. the ability of an organisation to adapt and innovate continually in the face of business and environmental change (Teece and Pisano, 1994).

As a third determinant of a firm's comfort zone we would point at knowledge-related antecedents. As mentioned earlier, strategic knowledge may be very 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 basically be tacit and the managers may not even know where to find the best practices in the organization. Hence, the standardization and codification efforts that are required for carrying out a strategic global sourcing operation may constitute an almost insurmountable barrier to the managers.

The sum of risk-reducing measures that a sourcing firm has at hand makes up a fourth comfort zone constituent. The literature points out that managers play an important role in the realization of strategic

global sourcing inasmuch as they can use different organizational tools to reduce the risks related to global sourcing of advanced services – without sacrificing the returns. We elaborate on this in the next section.

### **Radar and comfort zone dynamics**

In the two sub-sections above we have argued that various firm and activity attributes – making up the radar and comfort zones of the sourcing firm – co-determine to what extent a firm engages in strategic global sourcing. However, these attributes should not be interpreted as being completely deterministic. First, a strong sense of urgency – e.g. a threatening bankruptcy – may drive the firm out of its comfort zone (into a discomfort – or “panic” – zone), remove organizational resistance and urge the managers and owners to accept higher risk-return ratios than they would usually do. Second, in a dynamic perspective the sourcing firm may, more or less deliberately, manage to extend its radar and comfort zones by, e.g. hiring internationally oriented as board members and managers, or foster a sense of urgency to overcome resistance to change (Armenakis *et al*, 1993; Kotter, 1995). The latter may be seen as a valuable ingredient of managers’ global sourcing implementation capability and points to a potentially important role of management in fostering strategic global sourcing. This leads us to the third call opposing a too deterministic view on strategic global sourcing, namely the above-mentioned risk-reducing measures that managers may introduce. Some of these “smart” ways of practicing strategic global sourcing have already been pointed at in the sections describing the (three) features: revealing, specialization, and exploration. Figure 3 summarizes some of these managerial tools.

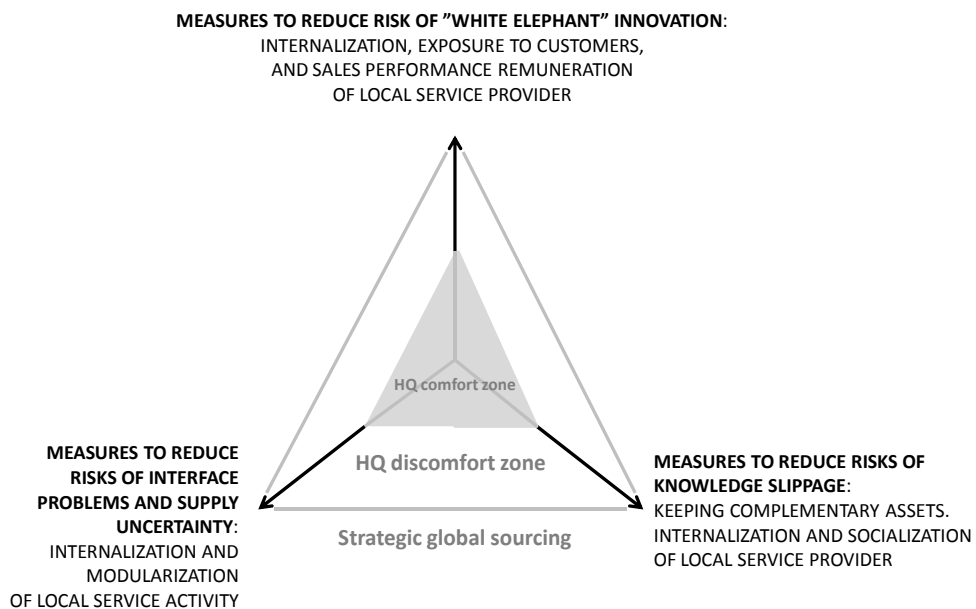


Figure 3: *Alleviating the downside risks of strategic global sourcing of services*



Internalization (Buckley and Casson, 1976) stands out as a general instrument to reduce the risks accompanying global strategic sourcing. Internalization may alleviate the risk of knowledge slippage, supply uncertainty, and futile innovation projects. However, it is important to note that internalization *alleviates*, but rarely *eliminates completely*, downsides risks of strategic global sourcing. As an example, the sourcing firm may transfer key personnel from an independent service provider to its own subsidiary and insert strict competition clauses in the employment contracts in order to mitigate leakage of strategic knowledge. Still, 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 some of the other risk-reducing measures. It is also noticeable that the *antecedents* of internalization are well-described in the IB and strategy literature whereas the same literature is pretty scarce when it comes to evidence and prescriptions of *how* the internalization process unfolds in practice (Petersen *et al*, 2010). Hence, a pertinent question in relation to sourcing of advanced services is how the outsourcing firm manages to transfer key personnel at the local service provider to its new-established subsidiary. Needless to say, such transfer requires both the approval of the service provider (presumably by means of a suitable economic compensation) and the consent of the individuals who may have to skip any financial and emotional bonds to 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 or not ‘hostile’ headhunting of key persons against the will of the service provider is possible. As was indicated in the introduction SimCorp’s global sourcing operation in Ukraine is an exemplar 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 even constitute a best-practice of 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 Ukraine**

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

Two motives drove SimCorp’s quest for outsourcing: Cost reduction and expansion of the company’s development capacity. SimCorp sought out offshore outsourcing opportunities first time in 2002-2003, but dropped the idea as the management of the company did not feel comfortable with the found options. Instead, on-shore opportunities were investigated, but were not found attractive, either. However, spurred by the aggravated shortage of qualified IT people in Denmark the SimCorp management revisited the offshore outsourcing opportunities and in 2005 decisions were made to outsource software development

### SimCorp at a glance

SimCorp is a Danish-based developer and marketer/licensor of the asset management systems software, *SimCorp Dimension*<sup>®</sup>. SimCorp is listed on NASDAQ OMX Copenhagen A/S. 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 Denmark. SimCorp is currently present in 16 countries and has around 1,100 employees worldwide, of which 140 are 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:** The employees are located at the Copenhagen headquarters and at 19 offices on 4 continents including subsidiaries in Europe, Ukraine and North America. More than 80% of SimCorp's employees hold an academic degree, most of them within financing, economics, IT, or engineering. Some 40 different nationalities are represented in SimCorp's staff.

**The product:** *SimCorp Dimension*<sup>®</sup> is the sole company product since 2007. *SimCorp Dimension*<sup>®</sup> is a comprehensive software solution for professional investment managers. It is an enterprise solution supporting all the elements of the investment management process: analysis of investment opportunities; order placing; order management; performance measurement; reconciliation; book-keeping; reporting; and risk monitoring and control and is delivered to the international financial sector. The programming language of *SimCorp Dimension*<sup>®</sup> is APL/W is highly specialized and rarely used. As such, it is difficult to find APL programmers in the labor market.

**Market and customers:** Around 60 financial organisations, mainly European, have chosen to base their investment management activities on the *SimCorp Dimension*<sup>®</sup> software platform. Whereas sales of software licenses vary considerably over the year a great part of the revenue derives from professional service fees and maintenance fees, which are generated with a high degree of predictability and business robustness.

#### 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	121,386	109,652	96,463	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: Annual Reports of SimCorp

tasks to two Ukrainian service providers: Infopulse and ProFIX. SimCorp had several reasons for appointing two vendors: One was to achieve better supply security; another was to enable performance benchmarking of the two providers against each other. Besides, and related to this, having more than one vendor was suspected to induce internal price and performance rivalry and, as a corollary, increase SimCorp's bargaining power vis-à-vis the two service providers.

SimCorp's large-scale offshore outsourcing operation in Ukraine 2005-2009 comprises 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 March 2008, but the internalization *process* started long before then. Actually, the “full cooperation phase” encompassed three years of numerous small and big internalization steps paving the way for the formal internalization: SimCorp's employment of former Infopulse and ProFIX staff team members (= the staff transfer). The central features of the three phases are outlined below.

In the first phase, the “Pilot Project Phase” SimCorp tests the qualifications and the ‘fit’ with the two, local service providers, Infopulse and ProFIX, on equivalent small scale projects. An MoU – Memorandum of mutual) Understanding – is signed with the two vendors. The MoU, comparable to a “letter of intent”, states the pilot project terms and conditions. In addition, the MoU includes two options: an option for SimCorp to expand the cooperation if the pilot projects are completed satisfactorily and an exit option if this is not the case (as deemed by SimCorp). SimCorp strikes the first option.

The second phase of full cooperation advents with the signing of long-term outsourcing contracts including terms and conditions for each party's responsibilities. The two service providers are responsible for search and selection of qualified personnel. SimCorp invests heavily in training and education of the local team members. From the very beginning of this phase, SimCorp embarks on a socialization of the Ukrainian staff. Individuals from the service provider development teams are socialized during their bi-annual attendance in the local SimCorp Academy. The aim is to make the local team members feeling integrated in the SimCorp organization and adopt the company's way of thinking and doing business. Furthermore, SimCorp puts pressure on the two service providers for allowing individual pecuniary incentives defined and rewarded by the client firm. The two vendor firms are reluctant about this quasi-integration initiative and agree only to a half-way compromise. Over the 3-year period SimCorp's spends, on average, the equivalent of € 20,000 on training and education of each team member. In order to safeguard these idiosyncratic human asset investments, SimCorp at a certain point in time incorporates a joint venture option in the outsourcing contracts. In case SimCorp strikes the option the company is entitled to a majority share (51 %) and has 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 exercises this JV option; instead the company decides to go for a sole venture.

In the Autumn 2007 the SimCorp top management decides to aim for establishing a greenfield subsidiary in Kiev. The challenge is to ensure a transfer of key personnel from Infopulse and ProFIX. Shunning a hostile headhunting of key personnel SimCorp goes for a cooperative solution with the two service providers. The company manages to reach a legally binding agreement with both vendors. SimCorp negotiates options for rights, not obligations, to transfer personnel reaching a 18 months threshold of team experience. Infopulse and ProFIX are compensated by the equivalent of 3-4 month salary per transferred employee. To show good faith and bolster the collaborative spirit, the two service providers are invited to assist – against pre-

specified compensation – SimCorp in identifying and selecting new Ukrainian staff also *after* the formal establishment of the subsidiary in March 2008. From March 2008 - May 2009 about 100 Infopulse and ProFIX employees are transferred to the SimCorp subsidiary in accordance with the contractual agreement, and additional staff is recruited with the assistance of the two (former) service providers.

Figure 4 summarizes the stepping-stones in SimCorp’s internalization of offshored, advanced services through phase 2 and 3 spanning the period between August 2005 till May 2009. The stepping-stones may also be seen as risk-reducing measures that extend SimCorp’s comfort zone and thus pull the company from conventional to strategic global sourcing. In the next section we will elaborate on this comfort zone extension of sourcing firms – taking SimCorp as a case in point.

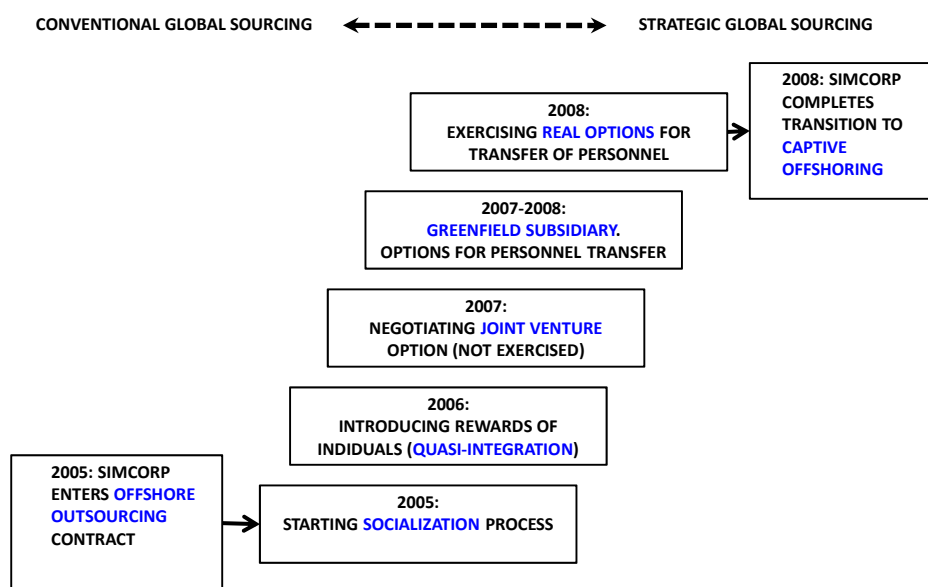


Figure 4: *Stepping-stones in SimCorp’s internalization of offshored, advanced services 2005-2009.*

## 6. Discussion

It seems quite evident that the risk-return tradeoff in relation to revealing (transferring) of strategic knowledge to the two Ukrainian service providers is key to an understanding of SimCorp’s internalization process. SimCorp’s extensive investment in training and education of local software developers augments the comparative cost advantage of using low-salaried programmers, but does also constitute risk of knowledge slippage, holdup threats, and excessive haggling costs. First, 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, and this goes for SimCorp’s contracts as well. However, the penalties rarely fully make up for the annoyance and project delay caused by high attrition rates. Second, as SimCorp increases its human assets investments the threat of being held up by the two service providers

grows. By threatening with non-renewal of the outsourcing contracts Infopulse and ProFIX may negotiate better contract terms up to the point where they expropriate the entire quasi-rent of SimCorp's human asset investments. Third, even though the two service providers abstain from acting opportunistically (that is, holding up SimCorp) the tussle about the quasi-rent may absorb substantial management time and efforts: to settle a "fair deal" in terms of sharing the quasi-rent is not an easy task when renegotiating outsourcing contracts. Also, client confidentiality requirements and SimCorp's aspiration of applying 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 accompanying SimCorp's intensive training and education of Infopulse and ProFIX employees seemed to push the SimCorp 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 stepping stones mentioned in the case – SimCorp managed to expand its comfort zone to the point, it seems, of almost unbounded knowledge transfer to, and leveraging of, the Ukrainian project team.

In order to give a full picture of SimCorp's comfort zone in relation to the Ukrainian outsourcing operation, though, we should also look at the two other strategy dimensions of global sourcing, namely the degree to which the two service providers were given a mandate of specialization and exploration. As regards 'specialization' SimCorp seemed uncomfortable of using one, exclusive service provider. Therefore, two service providers were appointed – Infopulse and ProFIX – in order to benchmark the two against each other and induce internal rivalry, but also for enhanced supply security reasons. We assume that the internalization of the sourcing operation – merging the former Infopulse and Profix employees into one integrated staff – entailed an expansion of SimCorp's comfort zone, although not yet 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 still are as today. Hence, some replication of software development activities remains within the existing SimCorp's international organization.

The internalization of the Ukrainian sourcing operations also goes hand in hand with an expansion of SimCorp's comfort zone in relation to delegating more 'exploration' to local teams. During the observed period (i.e. 2005-2009) the sourced activities changed from being minor and fairly well-specified programming assignments to more comprehensive and advanced programming projects implying a progressing 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 not any longer about governance structures, but about location-specific advantages and cultural predominance: to what extent is the Danish headquarters comfortable with a complete hand-over of software development activities to the Ukrainian subsidiary? With most of SimCorp's clients located in North Europe lead-user and co-creation arguments (see e.g. von Hippel, 1986; Prahalad and Ramaswamy, 2004) for keeping innovation in the North European/Copenhagen headquarters are still valid: in the absence of client proximity and undeveloped customer orientation the risk of Ukrainian "white elephant" innovation – i.e. the making of technological advanced, but commercially irrelevant novelties - persists. Even though the Ukrainian employees do possess the necessary innovative skills, to put the future of

SimCorp in their hands might still be outside the comfort zone of SimCorp’s Danish top management. Figure 5 and 6 indicate SimCorp’s comfort zone in 2005 and 2008, respectively, in relation to its sourcing operation in Ukraine.

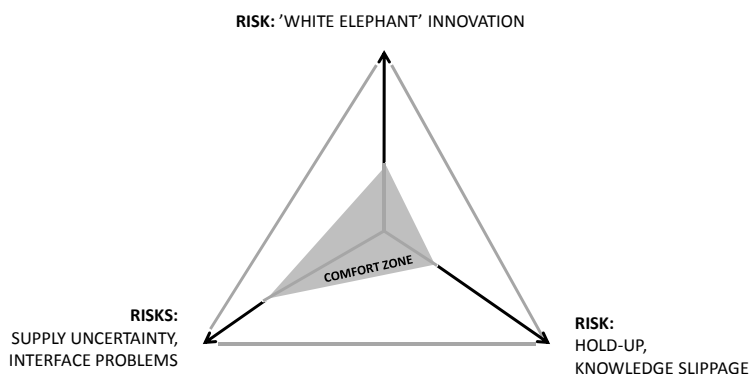


Figure 5: *SimCorp’s initial comfort zone (2005)*

SimCorp’s initial (2005) comfort zone is quite limited as concern the revealing of strategic important knowledge and the delegation of innovation activities to the two Ukrainian service providers; the SimCorp top management feels uncomfortable due to the risk of knowledge slippage and hold-up as well as “white elephant” innovation. The comfort zone is relatively extensive as regards specialization, although Infopulse and ProFIX during the pilot project phase (2005) duplicate the programming tasks requested by SimCorp. In phase 2 (2005-2008) the replication of software development activities between the local teams (and the team in Copenhagen) is reduced – seemingly at the expense of SimCorp’s supply security; but only seemingly, because the internalization process – including the entering of long-term partnership agreements with the two service providers – that unfolds from 2005 and onwards effectively increases the supply security. In particular, the internalization process expands SimCorp’s comfort zone in relation to the revealing/transfer of strategic important knowledge to Infopulse and ProFIX. Hence, figure 6 indicates that by 2008 an unlimited transfer of all relevant knowledge to the two service providers was doable within SimCorp’s comfort zone.

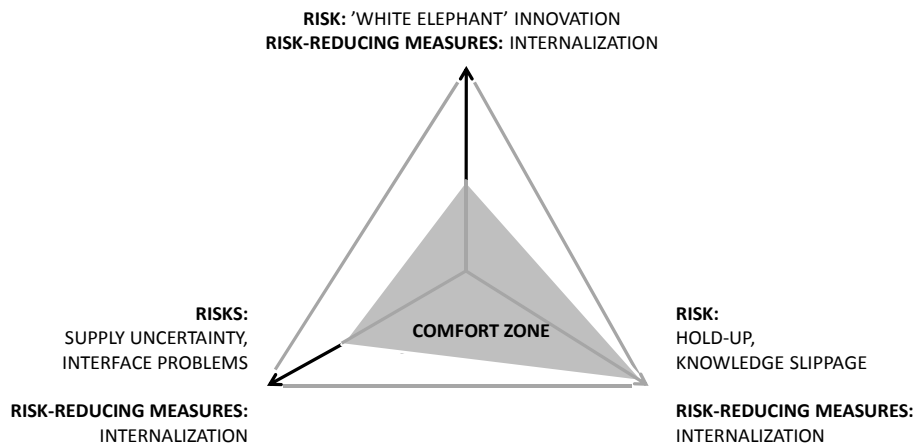


Figure 6: *SimCorp's extended comfort zone (2008)*

So, 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 start sourcing advanced, high value service activities to foreign locations. The farther the firm goes on each of the three dimensions in the framework, the more does it approach “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. Strategic global sourcing of more advanced activities is the manifest action which 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 part visible, but is one part of an underlying greater whole.

To recapitulate, conventional global sourcing usually unfolds within firms’ comfort zones. Potentially, strategic global sourcing of advanced service activities is more rewarding, but tends to pull firms out of their comfort zones: the returns of strategic global sourcing are higher than those of conventional sourcing, but so are also the risks. A strategic option for client firms to alleviate the challenges described earlier and manage the change from conventional to strategic global sourcing is to internalize activities that were previously undertaken by a foreign partner offshore. Clearly, changing from an external governance mode to an internalized governance mode brings a number of changes in the relations between the sourcing firm and the local staff. The changes concern the type of contract, which formally governs the behaviour of, respectively, service provider firm and the employees involved, and the incentive structure which may

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

First, concerning the type of contract: The collaboration between a client firm and a service provider is normally governed by an outsourcing contract stipulating rights, obligations, remunerations, output and performance requirements at the level of the firm. In case of failure to meet contract obligations, the service provider firm, not individual employees working for the client, are held accountable by the client firm (of course, such situations may have implications for individual employees, but that would be a matter between the management of the service provider firm and the individual employee). In contrast, a captive governance mode employs personnel on individual contracts and hence this includes a different regime of rights and obligations applied at the level of the individual employee. While the outsourcing contract thus “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, as indicated in the SimCorp case. During phase 2 of full cooperation (2005-2008) SimCorp’s management strived to inflict the two service providers various pecuniary incentives to individual team members with the intention of boosting the learning and productivity, but still being employees of Infopulse and ProFIX, this quasi-integration attempt inevitably came in conflict with employment contract law and, as such, found its natural limitation.

Second, but related to SimCorp’s quasi-integration attempt, the incentive structure in an outsourcing relationship usually differs significantly from that of a captive governance mode. In an offshore outsourcing operation the incentive structure, which is intended to guide the actions of the service provider, is typically included as part of the contract. The outsourcing contract will thus typically stipulate the regime of rewards (e.g. a bonus for certain types of performance) and sanctions (e.g. fines for late task completion, non-delivery or poor service quality) on contract party level. Such rewards and sanctions will 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 employee. Pecuniary measures include promotion, salary rise, or lack hereof, and dismissal 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, Forthcoming), which suggests that transforming the governance mode to a captive model would be attractive from the employee perspective. Non-pecuniary incentives may include a broader set of measures, ranging from e.g. honorary awards to high-performing employees, 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 the governance mode from an external to a captive mode mainly in order to be able to apply such a broader set of both pecuniary and non-pecuniary measures. Besides the primary goal of retaining high-performing employees, the Danish managers also considered the social integration of the local staff as an important measure to facilitate knowledge sharing between Danish and Ukrainian staff, and hence the efficiency and effectiveness of the latter. In other words, the Ukrainian software developers should feel like they were SimCorp employees without being so formally.



## 7. Conclusions and strategic management implications

In this paper we have focused on the drivers and the means of changing governance mode in global sourcing; *in casu* from offshore outsourcing to captive offshoring. We have argued that internalization – or insourcing – more often than not is an ongoing process rather than a one-off event. In SimCorp’s case, internalizing the outsourcing operation unfolded as a process of several stepping-stones, such as socialization, quasi-integration, options for joint venture formation, as well as options for transfer of key personnel to own organisation. The stepping-stones were essentially risk-reducing measures meant to safeguard SimCorp’s specific human asset investments. The apparently successful internalization process of SimCorp gives us reasons to believe that these risk-reducing measures represent useful take-aways for managers involved in global sourcing.

In addition to these take-aways, our paper has one additional – and more profound – offering to managers involved in (or still contemplating) global sourcing: As pointed out by several scholars global sourcing tends to transform company organisations fundamentally in terms of organizational configuration, standardization of operational procedures, knowledge articulation, supply security, etc. As such, managers should consider global sourcing as a portfolio of *strategic* decisions made on activity level. For that purpose we have presented an analytical framework that distils global sourcing of services to being a matter of strategic decision-making in relation to three features; namely the degrees of (1) revealing knowledge to local service suppliers, (2) extending world mandates to local service suppliers, and (3) authorizing local service suppliers to explore/innovate new products and processes. Our analytical framework also featured 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, to some firms, strategic global sourcing conflicts with their risk preferences, values, sentiments, or capabilities. In other words, strategic global sourcing is not universally desirable or attainable to (Western) firms – some are better off sticking to conventional sourcing given their comfort zones and expected risk-return tradeoffs for the service activity in question; but the suggested framework, we hope, can assist managers in finding the right balance between conventional and strategic global sourcing of service activities.

## 8. References

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