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# Knowledge transfer between marketing functions in multinational companies: a conceptual model

Bodo B. Schlegelmilch, Tina Claudia Chini *

*WU Wien, Augasse 2-6, Vienna 1090, Austria*

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**Abstract**

A key competitive advantage of multinational companies lies in their ability to exploit locally created knowledge worldwide. This implies that such companies have to be able to transfer knowledge within organizational networks characterized by separation through time, space, culture and language. Given the pivotal importance of knowledge transfer for the competitiveness of multinationals, it is remarkable that the process of transferring knowledge effectively across dispersed units of multinational corporations has only attracted little and rather fragmented research interest. What appears to be missing is a unifying framework that serves as a basis for a research agenda. Our paper aims to develop such a framework. Specifically, we propose a conceptual model of knowledge transfer between marketing functions within multinationals and advance research propositions for future empirical testing.


*Keywords:* Knowledge transfer; MNC; Marketing knowledge

## 1. Introduction

This paper proposes a conceptual model of the knowledge transfer process across geographically dispersed marketing functions of multinational corporations (MNCs). As strategy, organizational structure, and marketing functions differ across MNCs,

* Corresponding author. Tel.: +43-1-31336-5103, fax: +43-1-31336-793.
*E-mail address:* tina.chini@wu-wien.ac.at (T.C. Chini).

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we suggest that no single best way of transferring marketing knowledge exists. On the contrary, we develop a model proposing that the transfer of marketing knowledge has to correspond to the strategic network position of the organizational unit as well as with the unit's internal capabilities to manage knowledge.

A major competitive advantage of MNCs is their ability to exploit locally created knowledge worldwide (Gupta & Govindarajan, 2000; Kogut & Zander, 1995; Nohria & Ghoshal, 1997; Ambos & Schlegelmilch, 2002). And as MNCs aim to replicate their success across borders, they "...will need to focus not just on 'what' they know, but 'how' they gain that knowledge and diffuse it throughout the enterprise" (Riesenberger, 1998, p. 97). In this context, marketing functions serve as corporate links between customers and organizational entities, such as R&D or manufacturing. In order to facilitate worldwide value creation in MNCs, marketing functions are highly dependent on knowledge transfer within the organization. Where promotion campaigns, packaging policies, pricing principles, or marketing research are concerned, marketing functions are required to create knowledge in their own cultural context, to source knowledge globally, and subsequently to balance global standardization against local adaptation in the application of knowledge.

Being in such a critical position, marketing functions face at least two major challenges. First, marketing knowledge is usually acquired in a specific cultural context and tends to be of 'experiential' nature. This makes marketing knowledge 'sticky' (Szulanski, 1995; von Hippel, 1994) and knowledge transfer often difficult or even impossible. Second, the strategic position of the MNC itself as well as the mandate of a particular organizational unit within its subsidiary network determines the channels, infrastructure, and processes provided for knowledge transfer. The existence of a central marketing research department, for example, might demand other network nodes and characteristics than regional marketing research units or country-specific marketing research functions. Thus, the effective transfer of marketing knowledge between organizational units of MNCs located in different cultures is characterized by a high degree of complexity.

Although the knowledge management literature has already provided useful insights into the processes of knowledge transfer in general, the thorny issue of knowledge transfer between organizational units of MNCs located in different cultures has only received little attention (Buckley & Carter, 1999; Gupta & Govindarajan, 1991; Teigland, Fey, & Birkinshaw, 2000). Notable exceptions are empirical studies by Teece (1981), Gupta and Govindarajan (1991, 1994, 2000), and Tsai (2001). But while these studies managed to elucidate the subject of intra-organizational knowledge transfer in general, the particular and pivotal role marketing functions play in this transfer has hardly been investigated. In fact, there are only two studies in this field that attempted more broad-based analyses: Bennett and Gabriel (1999) and Simonin (1999b). The few other contributions that do exist analyze isolated marketing tasks, e.g. customer relationship management (c.f. Davenport & Harris, 2001) and new product development (c.f. Corso, Matini, Paolucci, & Pellegrini, 2001). What is missing is a comprehensive model that provides a more holistic view of intra-organizational, inter-cultural knowledge transfer between marketing functions within MNCs.

In this paper, we aim to develop such a model and thus intend to shed light on the complex issue of marketing knowledge transfer in MNCs. The remainder of the paper is structured as follows: First, the literature on knowledge management is reviewed. Specifically, we address the concept of MNCs as knowledge networks, review the issue of knowledge as a strategic resource and its transfer across cultures, and discuss the critical relevance of the marketing functions in the knowledge transfer process. Subsequently, we introduce the major constructs used in the proposed model, such as the strategic mandate of a unit (Gupta & Govindarajan, 1991), the value of knowledge stock (Gupta & Govindarajan, 2000), absorptive capacity (Cohen & Levinthal, 1990) and knowledge transfer capabilities (Becerra-Fernandez & Sabherwal, 2001; Gold, Malhotra, & Segars, 2001). Following the development of a comprehensive model of marketing knowledge transfer, we then propose some testable hypotheses. The paper closes with a discussion of the limitations of the proposed model and suggestions for future research.

## 2. Theoretical underpinnings

### *2.1. The MNC as a knowledge network*

In international business research, the MNC is commonly conceptualized as a network of units. In this network, units have strategic mandates and thus access and transfer knowledge from different positions (c.f. Asakawa, 1995; Gupta & Govindarajan, 1991; Tsai, 2001). Although their network positions differ, the corporate embeddedness (Granovetter, 1985) of organizational units in this network provides a basic social context which is common for all units.

Knowledge management literature mostly refers to the knowledge-based view of the firm (c.f. Conner & Prahalad, 1996; Kogut & Zander, 1993). This view suggests that knowledge is a primary resource and that social networks facilitate knowledge sharing within an organization. Knowledge as a resource, however, requires organizational capabilities in order to be productive (Grant, 1995). Building on the distinction of Polanyi (1966) between tacit and explicit knowledge (see also Kogut & Zander, 1993; Nonaka & Takeuchi, 1995; Szulanski, 1995), we focus on knowledge management processes that facilitate the sharing of explicit or tacit knowledge in organizations. And when examining the transfer of marketing knowledge, we refer to procedural types of knowledge, i.e. know-how, in contrast to declarative knowledge, i.e. know-what (see also Becerra-Fernandez & Sabherwal, 2001; Gupta & Govindarajan, 2000; Kogut & Zander, 1993; Simonin, 1999b).

Analyzing knowledge transfer processes between marketing functions, we further take into account the relationship between strategy and structure on several levels. First, any knowledge management strategy, and consequently also the strategy behind transferring marketing knowledge, should correlate to a company's overall strategy (Doz & Schlegelmilch, 1999; Hansen, Nohria, & Tierney, 1999). Second, strategic positions of organizational units are likely to manifest in the development of specific characteristics, such as transmission channels, infrastructure, and capabilities.

"Although intended to rationalize individual functions or units within an organization, structural elements have often had the unintended consequence of inhibiting collaboration and sharing of knowledge across internal organizational boundaries" (Gold et al., 2001, p.188). Our fundamental assumption is that a fit between a unit's strategic positioning and the organization of knowledge transfer has to be achieved in order to improve the effectiveness of marketing knowledge transfer.

### 2.2. Knowledge as a strategic resource

In order to exploit an organization's knowledge stock and to support knowledge creation, functional units of MNCs have to share knowledge across organizational entities. In this regard, organizations as a whole, and in particular functional units such as marketing departments, are increasingly dependent on external sources of knowledge. The international strategy literature also tends to viewing knowledge as a corporate resource. Contributions by Perlmutter and Heenan (1979), Porter (1980), Bartlett and Ghoshal (1987), Prahalad and Doz (1987), Asakawa (1995) and many others have all focused on intra-company transfers and how MNCs attempt to optimize sourcing strategies in terms of location advantages and economies of scale. And all of these researchers address the central problem of organization in a setting of physical separation through time and space and separation of key members by culture and language. Thus, as Grant (1996, p. 118) puts it: "Many current trends in organizational design can be interpreted as attempts to access and integrate the tacit knowledge of organizational members while recognizing the barriers to the transfer of such knowledge."

### 2.3. The knowledge transfer process

Although there are a large number of contributions discussing knowledge transfer in general, only very few researchers address the issue of intra-organizational knowledge transfer across cultures. We have categorized some of the most relevant contributions (Table 1) addressing intra- or inter-organizational knowledge transfer. The latter mostly focus on knowledge transfer in joint ventures, strategic alliances or mergers and acquisitions. Moreover, we distinguish between theoretical contributions as well as qualitative and quantitative empirical studies. Bold letters indicate a particular focus on marketing.

A strong theoretical contribution is offered by Krogh and Köhne (1998), who identify three phases of knowledge transfer: initiation, actual transfer, and integration. Further, the authors also describe several factors, such as the nature of knowledge, the interaction of sender and recipient, motivation, and corporate and local culture that have a bearing on the knowledge transfer process. Dixon (2000) distinguishes between different types of knowledge transfer, namely serial, near, far, strategic and expert transfer and offers an integrated system.

Turning to the empirical contributions, we concur with Gupta and Govindarajan's (2000, p. 474) observation that "Very little systematic empirical investigation into the determinants of intra-MNC knowledge transfer has so far been attempted".

Table 1
Literature on knowledge transfer

| | Theoretical studies | Empirical studies qualitative | Empirical studies Quantitative |
|---|---|---|---|
| Intra-organizational | Asakawa, 1995<br>Corso et al., 2001<br>Doz and Santos, 1997<br>Dixon, 2000<br>Hansen, 1999<br>Krogh and Köhne, 1998<br>O'Dell and Grayson, 1999<br>Rissenberger, 1998<br>Sveiby, 2001 | Gilbert and Cordey-Hayes, 1996<br>Inkpen and Dinur, 1998<br>Lahti and Beyerlein, 2000<br>Teigland et al., 2000 | Arvidsson, 1998<br>Becerra-Fernandez and Sabherwal, 2001<br>Bennett and Gabriel, 1999<br>Foss and Pedersen, 2002<br>Gold et al., 2001<br>Gupta and Govindarajan, 1991<br>Gupta and Govindarajan, 1994<br>Gupta and Govindarajan, 2000<br>Kogut and Zander, 1993<br>Szulanski, 1995<br>Tsai, 2001 |
| Inter-organizational | Badaracco, 1991<br>Doz and Santos, 1997<br>Sveiby, 2001 | Griffith et al., 2001 | Foss and Pedersen, 2002<br>Lam, 1997<br>Makino and Delios, 1996<br>Moreau et al., 2001<br>Simonin, 1999b |

Among the notable exceptions are Griffith, Zeybek and O'Brien (2001), Gupta and Govindarajan (2000), Lahti and Beyerlein (2000) and Lyles and Salk (1996) who contribute comprehensive empirical studies on intra- or inter-organizational knowledge transfer. However, despite the overall dearth of empirical contributions, there are studies that are of particular relevance for the present work: Tsai's (2001) contribution discusses intra-organizational knowledge transfer in view of the units' centrality in the network and their absorptive capacity, while Inkpen and Dinur (1998) emphasize the importance of context in knowledge transfer and focus on context similarities between the knowledge source and the recipient in the transfer process. Simonin, 1999b) also has an important bearing on our work in that he focuses on marketing and identifies some key barriers to knowledge transfer, such as cultural and organizational distance. Of particular interest are also Szulanski (1995), who outlines the 'stickiness' of knowledge and emphasizes the importance of established linkages between units for knowledge transfer, as well as Kogut and Zander (1993), who focus on the problematic transfer of tacit knowledge.

### *2.4. Cross-cultural issues in knowledge transfer*

Culture has been widely recognized as a key dimension in international business (Adler, 1983; Hofstede, 2001; Rosenzweig & Singh, 1991). International knowledge transfer is no exception. Indeed, the management of cultural differences within an organization is especially relevant as far as knowledge transfer is concerned. "In the global arena, the complexities increase in scope as multinational firms grapple with cross-border knowledge transfers and the challenge of renewing organizational skills in various diverse settings" (Inkpen, 1998, p. 69). Doz and Santos (1997) argue that in MNCs, knowledge management becomes 'eventful' because of the dispersion in space and time and differentiation of context.

In order to transfer marketing knowledge successfully across cultures, the potential knowledge sources, exchange nodes, and exchange mechanisms of a dispersed MNC have to be identified. Moreover, it has to be recognized that human capability to capture and understand complex facts is rooted in a cultural setting and, thus, tends to differ across cultural areas. As (Riesenberger, 1998, p. 99) put it: "Cross-cultural knowledge management systems among global marketing organizations must take into account learning techniques in various cultures". Beyond the general recognition that cultural differences are likely to impinge on the success of international knowledge transfer, concrete problems emerging in cross-cultural knowledge transfer are hardly ever addressed in the literature.

### *2.5. The marketing function and knowledge transfer*

Intra-organizational knowledge management processes are especially critical when knowledge from different sources has to be combined (Buckley & Carter, 1999). Foss and Pedersen (2002) found that marketing and sales—on par with production—possess the highest level of competence among subsidiary functions. To this end, marketing functions lend themselves particularly well for an investigation of knowledge transfer within MNCs. By their nature, marketing tasks are very dependant on the cultural context. This is also emphasized by Simonin (1999b), who identified the following properties of marketing knowledge: a high degree of tacitness rooted in the socially complex nature of marketing, a high degree of specificity because of transaction specific skills, and a high degree of complexity. The importance of the cultural context on knowledge transfer in marketing also becomes evident by looking at typical tasks like the acquisition of knowledge on customers and their preferences, competitors, products, distribution channels, service providers, laws and regulations (Bennett & Gabriel, 1999, p. 215).

Despite the importance of marketing functions in knowledge transfer (Riesenberger, 1998), research largely focuses on manufacturing and R&D knowledge transfer (Arvidsson, 1998). Among the notable exceptions are studies by Simonin (1999b), who analyses the transfer of marketing know-how in strategic alliances and Arvidsson (1998) who looks at knowledge management in globally dispersed marketing departments. Most other contributions focus on particular aspects of marketing. A typical example is a comprehensive study by Bennett and Gabriel (1999) that points to the relevance of knowledge management in the context of relationship marketing, integrated marketing communications, customer support and liaison, database management and new product development. Similarly, Corso et al. (2001), Krell (2001), and Moreau, Lehnmann and Markamann (2001) focus explicitly on new product development, while Davenport and Harris (2001) analyze knowledge management in the area of customer relationship management. Other contributions, for example, deliberate the management of local market knowledge (Inkpen & Beamish, 1997; Makino & Delios, 1996; Nonaka, Reinmoeller, & Senoo, 1998), concentrate on information technology aspects (Holsapple & Joshi, 2001; Walsham, 2001) or elaborate on data mining for customer relationship management (Shaw et al., 2001).

Taken collectively, there is a dearth of research on knowledge transfer in the field of marketing. Moreover, the few contributions that do exist tend to be fragmented; typically they only focus on particular aspects of marketing knowledge and usually disregard the complexity of a cross-cultural dimension. What appears to be missing is a comprehensive model of cross-cultural marketing knowledge transfer within MNCs that can serve as a basis for more systematic empirical work. Subsequently, we propose such a model and develop accompanying research propositions.

## 3. Conceptual model and development of research propositions

Fig. 1 depicts the various constructs forming the proposed conceptual model. Subsequently, we elaborate on each of these constructs and develop our research hypotheses.

### *3.1. Strategic mandate*

Subsidiaries often vary in the nature of their operations. In turn, the range of value chain activities included within their operations is likely to influence the subsidiary's

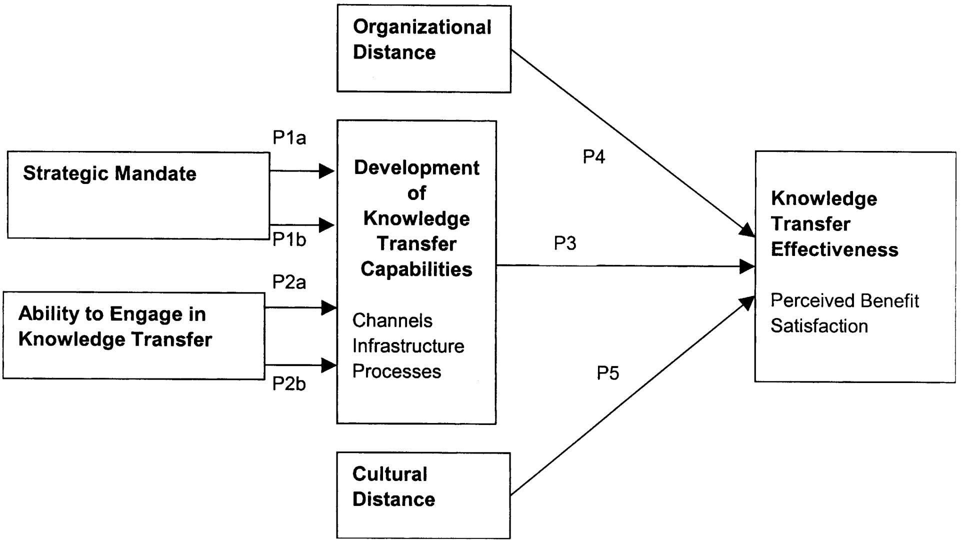


Fig. 1. Model of marketing knowledge transfer.

interaction with the headquarters and/or other subsidiaries. The presence of a primary up-stream activity like R&D and manufacturing or of a primary down-stream activity like marketing and sales is expected to moderate effects (Gupta & Govindarajan, 2000). Consequently, focusing on the analysis of marketing knowledge, the strategic role based on patterns of knowledge inflow and outflow is also likely to be a key construct within flows between headquarters and subsidiaries. Specifically, based on Gupta & Govindarajan, 1991, 1994), four generic subsidiary roles need to be distinguished: (i) global innovator (high outflow of marketing knowledge from the subsidiary to the corporation and low inflow from the corporation to the subsidiary), (ii) integrated player (high outflow, high inflow); (iii) implementer (low outflow, high inflow) and (iv) local innovator (low outflow, low inflow). Thus, our first proposition:

**Proposition 1a.** A unit's mandate as *integrated player* affects the development of marketing knowledge transfer capabilities more positively than a mandate as global innovator or implementer.

**Proposition 1b.** A unit's mandate as *local innovator* is associated with less developed marketing knowledge transfer capabilities compared to those found at integrated players, global innovators or implementers.

### *3.2. Ability to engage in knowledge transfer*

Organizational units require access to other units' knowledge and have to possess certain internal capabilities in order to engage in knowledge transfer (Tsai, 2001). In addition, the marketing knowledge actually transferred is likely to be influenced by the attractiveness of a unit's knowledge stock in relation to other units as well as the absorptive capacity of a unit.[1]

Normally, each organizational unit pursues a dual task: It sends knowledge to others (source unit) and it receives knowledge from others (target unit). The attractiveness of a source unit's knowledge stock strongly determines a unit's propensity to engage in knowledge transfer. If a unit's knowledge is not attractive, it will not be asked to share its knowledge. Furthermore, the available knowledge has to be non-duplicative and useful for other units' purposes (Gupta & Govindarajan, 2000). Thus, a model depicting transfer of marketing knowledge within MNCs needs to take account of a unit's value of knowledge stock relative to headquarters' and to peer subsidiaries'.

Looking at an organizational unit as a recipient of knowledge, its absorptive capacity (Gupta & Govindarajan, 2000) is likely to affect a unit's ability to handle the incoming knowledge. Cohen and Levinthal (1990) define absorptive capacity as the ability to use prior knowledge to recognize the value of new information, assimilate it, and apply it to create new knowledge and capabilities. Prior knowledge (Cohen & Levinthal, 1990) and homogeneity of the receiving and sending unit is expected to facilitate the assimilation and exploitation of new knowledge (Gupta & Govindarajan, 2000). Thus, our second proposition:

**Proposition 2a.** A high attractiveness of a unit's knowledge stock affects the development of marketing knowledge transfer capabilities positively.

**Proposition 2b.** A unit's high absorptive capacity affects the development of marketing knowledge transfer capabilities positively.

### *3.3. Knowledge transfer capabilities*

Marquardt (1996) views transfer as a key process in managing corporate knowledge, in addition to acquisition, creation, utilization and storage. Free knowledge flow has also been identified by Riesenberger (1998) as one of the key elements of successful knowledge management. In order to support a free flow of knowledge, the company has to develop a certain organizational architecture; i.e. cross-functional, flexible structures (Nevis, DiBella, & Gould, 1995), open communication (Argyris, 1994) and a learning culture (Slater & Narver, 1995). The actual knowledge transfer process is extremely complex and difficult to capture, since it has both, interpersonal and inter-organizational dimensions. Moreover, we also have to distinguish between channels, infrastructure and processes.

*Transmission channels* have been identified as key to intra-MNC knowledge transfer (Bartlett & Ghoshal, 1989; Gupta & Govindarajan, 2000). Gupta and Govindara-

[1] Szulanski (1996) finds that the major barriers to internal knowledge transfer are not motivational factors but knowledge-related factors, such as the recipient's lack of absorptive capacity. Based on these findings and the subsequent discussion of Foss and Pedersen (2002), we exclude motivational factors from our model of knowledge transfer in order to limit complexity.

jan (2000) further differentiate into formal (formal integrative mechanisms) and informal channels (socialization mechanisms). In their empirical study, formal channels show a positive significant influence on the knowledge flow between (i) the subsidiary and the parent corporation and (ii) peer subsidiaries. When it comes to the influence of informal channels, the results are only significant in the knowledge flow between peer subsidiaries.

*The knowledge management infrastructure* of MNCs has to be highly developed in order to maximize the exploitation of resources that are embedded within, available through, and derived from a network of units. An important aspect is the technological dimension, which addresses the technology-enabled ties that exist in a firm. Technical infrastructure within the field of a company's knowledge management includes business intelligence (knowledge regarding competition and broader economic environment), collaboration of individuals within the company and distributed learning, knowledge discovery (discover internal and/or external knowledge), knowledge mapping (track sources of knowledge), opportunity generation (identify knowledge about customers) and security (prevent inappropriate use) (Gold et al., 2001).

*Knowledge processes capabilities* capture the knowledge transfer practices of knowledge-sending and knowledge-receiving organizations. Following Nonaka and Takeuchi's (1995) knowledge spiral, four modes can be identified: socialization (from individual tacit knowledge to group tacit knowledge), externalization (from tacit knowledge to explicit knowledge), internalization (from explicit knowledge to tacit knowledge), and combination (from separate explicit to systemic explicit knowledge). As these modes cover the possibilities of knowledge conversion between individual and organizational knowledge, we propose that they can equally be applied to knowledge transfer between organizational units. This view has previously been taken by Sveiby (2001), Inkpen (1998), and Doz and Santos (1997), who argue that from an organizational viewpoint, knowledge shared is actually knowledge doubled, i.e. new knowledge is created with every transfer within the organization.

If the modes of knowledge conversion are applied to intra-organizational marketing knowledge transfer, externalization occurs before a unit is sending marketing knowledge to another. Socialization generally occurs in both organizational units, sender and recipient, as they have to interact with each other. To start socialization, however, a field of interaction has to be established (Nonaka, Umemoto, & Senoo, 1996), which is mostly initiated by the source unit. From a recipient point of view, internalization is used to integrate marketing knowledge into the target unit. Finally, by combination, knowledge is converted into more complex sets of explicit knowledge (Nonaka & Takeuchi, 1995). This mode is more often used by a target unit that has recently received new knowledge and starts to "break it down" (Nonaka & Takeuchi, 1995) into systemic explicit knowledge.

Because of the predominantly tacit nature of marketing knowledge, transfers between marketing departments usually involve coordination at both sides. For example, salespeople's knowledge largely tends to be tacit as it is personal, anecdotal, and often situation specific. Similarly, customer-relationship knowledge is often tacit. Bennett and Gabriel (1999) suggest to transfer this knowledge through conversation and on-the-job training.

From a systemic point of view, the development of these knowledge transfer capabilities—channels, infrastructure, and processes—follows a unit's specific strategic mandate and its ability to transfer knowledge. Knowledge transfer capabilities are mutually reinforcing and have to be coordinated in order to be employed efficiently.

Based on these insights we propose the following:

**Proposition 3.** Appropriately developed knowledge transfer capabilities (in terms of channels, infrastructure and processes) have a positive impact on the effectiveness of marketing knowledge transfer.

### *3.4. Organizational distance*

Organizational distance refers to differences between organizational units (headquarters and subsidiary, subsidiary and subsidiary) in terms of structures, processes and values. It attempts to capture, for example, issues like differences in approaches towards decision-making. Simonin (1999a, p. 473) defines organizational distance as follows: It "captures the degree of dissimilarity between the partners' business practices, institutional heritage, and organizational culture". Asakawa (1995) suggests that institutional isomorphism has a strong impact on the way local units approach and structure knowledge. With regard to knowledge transfer, it is assumed that organizational distance amplifies ambiguity. Thus, a large organizational distance may lead to a "lack of understanding of the logical linkages between marketing actions and outcomes, inputs and outputs, and causes and effects that characterize a broadly defined marketing-based competency and its transferability" (Simonin, 1999a, p. 467). Consequently, we advance the following proposition:

**Proposition 4.** The lower the organizational distance between units the higher the effectiveness of knowledge transfer.

### *3.5. Cultural distance*

As human behavior, knowledge and cognition are guided by the contextual rules and resources resident in social structures and conventions, transferred marketing knowledge has to fit these contextual requirements of the recipient unit. The transfer of knowledge from one cultural context to another is likely to fail, unless the system of underlying conventions fits the system of meaning of those expected to implement these procedures or, alternatively, unless organizational routines are transformed so that they conform to existing cultural expectations" (Macharzina, Oesterle, & Brodel, 2001). Or as Doz and Santos (1997, p. 23) put it: "...effective transfer of knowledge is a dialogue between the sender and the receiver about their own contexts and about the object of knowledge". Moreover, cultural distance may prohibit the identification of market opportunities and understanding of market mechanism Simonin (1999b).

**Proposition 5.** The lower the cultural distance between organizational units the higher the effectiveness of knowledge transfer.

### *3.6. Knowledge transfer effectiveness*

The aim of knowledge transfer at the recipient unit is to integrate the new knowledge in the unit's context and to make use of it. Effective utilization refers to the potential to turn knowledge into a competitive advantage-yielding capability (Grant, 1996). Buckley and Carter (1999) note that an important requirement for effective knowledge transfer is for the source unit to recognize the knowledge requirements of the recipient unit in order to provide what is appropriate, in a form that is appropriate. To this end, in addition to the development of knowledge transfer capabilities, organizational distance and cultural distance are expected to impact on knowledge transfer (Asakawa, 1995; Buckley & Carter, 1999; Inkpen & Dinur, 1998; Simonin, 1999b).

Although overall, there is little research that addresses the effectiveness of knowledge transfer, some exceptions do exists. Noteworthy are, for example, the empirical contributions by Gold et al. (2001) and Becerra-Fernandez and Sabherwal (2001). Some researchers already integrate the condition of effectiveness or success into the very definition of knowledge transfer (Doz & Santos, 1997), i.e. knowledge transfer as such is only effective transfer (Jensen & Meckling, 1995). Contrary to this position, we argue that the effectiveness of knowledge transfer processes depends on the perceived benefit (Foss & Pedersen, 2001, p. 60) and the overall satisfaction with knowledge management (Becerra-Fernandez & Sabherwal, 2001).

## 4. Discussion and limitations

The above model attempts to illustrate the critical relevance of intra-MNC knowledge transfers for marketing functions. As outlined above, it is high time to include marketing into the research agenda of knowledge management and to overcome the paradox that marketing functions are neglected in the discussion on knowledge transfer which has been dominated by research on R&D units, e.g. (Asakawa, 2001a; Birkinshaw, Nobel, & Ridderstrale, 1998; Teece, 1981). Being among the first to internationalize, marketing functions are key to the development of knowledge transfer processes in a dispersed MNC context. Constituting an internal node between various functions of the MNC, different forms of marketing knowledge have to be processed and further disseminated. Moreover, marketing functions serve as interface between external sources of knowledge, such as markets, customers, and distributors. The process of adopting local knowledge is referred to as appropriation by Asakawa (1995) and is not included in our model, as we view it as antecedent to intra-organizational knowledge dissemination. Of course, this issue equally calls for further research. Research gaps have also been identified in inter-company transfers (a topic predominantly addressed by joint venture research) and other external sources of knowledge, e.g. knowledge clusters (see also Foss & Pedersen, 2002).

In order to develop a comprehensive model of intra-organizational knowledge transfer for marketing functions, it is necessary to identify the different transfer patterns marketing managers are facing and to distinguish between various areas of marketing knowledge, such as customers, competitors and distribution. A comparison of different marketing knowledge flows is needed in order to draw conclusions on the knowledge process practices between marketing functions. There is empirical evidence, for example, that knowledge on customer characteristics is more frequently transferred through knowledge management systems than segmentation/targeting know-how (Bennett & Gabriel, 1999). So far, literature on knowledge management in marketing functions has concentrated on either transfer patterns or knowledge domains, but has not integrated both.

To position our work among other contributions, we outline some properties of the above model which have been approached differently by prior researchers. In contrast to Gupta and Govindarajan (2000), we do not depict a directional communication process. Although we equally build on communication theory, we assume that most units fulfill a dual function. Consequently, we integrate both sender and recipient characteristics into antecedents to the knowledge transfer process, even though this augments the model's complexity.

Moreover, some conceptual and empirical studies include the form and nature of knowledge transferred into their explanations of transfer processes (c.f. Doz & Santos, 1997; Hansen, 1999; Inkpen & Dinur, 1998; Kogut & Zander, 1995). Our model, however, does not address this issue but suggests that the development of knowledge transfer capabilities (for both tacit and explicit knowledge) is contingent on the strategic position of the unit and its ability to transfer knowledge.

Findings to date are useful, but need to be strengthened by additional empirical testing. The model and propositions presented in this paper require considerable testing and refining before providing managerial guidance. At this stage, we want to briefly introduce some ideas on the operationalization and the empirical measurement of the proposed model.

First, future empirical work needs to focus very carefully on survey design. The complex requirements of empirical multi-unit MNC research also account for the scarcity of empirical work in the field of knowledge transfer. To survey knowledge flows between MNC units, it is necessary to include multiple nodes. In this respect, power relations, cultural distance, and organizational structure play a critical role which can hardly be analyzed in isolation. Moreover, objective measures are hard to find when the nature, quantity, or quality of knowledge is concerned. In the R&D research stream, Hakanson and Nobel (2001) see patent quotations as the only direct evidence for headquarters' use of localized resources in foreign subsidiaries. However, when marketing knowledge is concerned, no such objective measure seems to be available. Thus, researchers will have to rely on subjective measures. Scholars have long since pointed out that headquarters and subsidiary perceptions might differ. Reviewing the literature on embeddedness of units (Andersson & Forsgren, 1996; Granovetter, 1985), there is reason to believe that this is also the case for knowledge transfer. Researchers (c.f. Asakawa, 2001b; Birkinshaw et al., 2000) address the problem of capturing perception gaps between headquarters and subsidiaries. By investigating corresponding relations in a multi-unit perspective, perception gaps can be analyzed. These are the main reasons which lead us to suggest a perceptional approach. Moreover, literature suggests (c.f. Asakawa, 2001b; Birkinshaw et al., 2000) to distinguish dyad headquarters–subsidiary relationships from subsidiary–subsidiary relationships. Thus, studies building on our model should focus on dyadic perceptions and distinguish between knowledge flows that occur laterally among subsidiaries and hierarchical flows between headquarters and subsidiaries. It is evident that research designs of this form imply notable problems, such as low response rate, country bias, and problems of cross-cultural equivalence etc. Some guidance on these issues may be found in Harzing (1997), 2000) and Schlegelmilch, Salzberger and Sinkovic (1999).

Second, to test our model of knowledge transfer empirically, we need to find a way to quantify the constructs proposed. As for absorptive capacity, measures proposed by Gupta and Govindarajan (2000) might be appropriate. In the case of the value of knowledge stock, however, we suggest to develop new scales.

We want to stress that our model aims at a comprehensive view of knowledge transfer capabilities. We believe that such a complex issue as knowledge transfer cannot be captured in one item. Gold et al.'s (2001) model of knowledge management capabilities supports this approach. The authors include knowledge infrastructure capabilities and knowledge process capabilities. We refer to three central interconnected issues: First, how do units coordinate to exchange knowledge; second, what infrastructure do they use; third, which knowledge transfer processes are applied at the sending and at the receiving unit. Thus, we suggest to combine three measures that have already proved successful in major empirical studies. The operationalization of transmission channels could be adopted from Gupta and Govindarajan (2000), the scale of knowledge management infrastructure could rest on Gold et al.'s (2001) work, and the empirical measures developed by Becerra-Fernandez and Sabherwal (2001) could capture the four knowledge process capabilities identified by Nonaka and Takeuchi (1995).

In particular, the measure of knowledge transfer effectiveness seems to be an unsolved issue. From a performance perspective, it is hardly possible to isolate benefits from knowledge transfer from other effects on overall performance. Moreover, subjective perceptions inhibit a useful comparison of distinct knowledge transfers and the identification of more efficient processes. Hoopes and Postrel (1999) suggest a tool for practical measurement of the marginal benefits of shared knowledge. The authors refer to "glitches", i.e. costly errors originating from gaps in shared knowledge. Taking an ex-post view, they conducted interviews on product development performance. Lost-work months or additional work to correct flaws are important indicators for the high relevance of such glitches. Following this approach, we have to think about opportunity cost arising in marketing functions from knowledge not shared. Cost-intensive examples might be the decision not to enter a market or the delay of a product launch. On a smaller scale, insufficient knowledge about customer preferences and subsequent errors in packaging decisions or advertising campaigns could be indicators for marketing managers. Still, there is much pioneer work necessary to develop measures of knowledge transfer effectiveness in marketing functions.

## 5. Conclusion

The premise of this paper is that the effectiveness of knowledge transfer between marketing functions in MNCs is contingent on the appropriate development of specific organizational capabilities. The latter are developed in response to the unit's strategic position in the network and its ability to transfer knowledge. Moreover, the effectiveness of knowledge transfer is likely to be affected by organizational and cultural distance. Given the need for theory development, we propose a comprehensive model designed for marketing managers and academics. Our model highlights the strategic relevance of knowledge transfer between marketing functions and identifies the key constructs in the international knowledge transfer process within MNCs. As such, the model offers a solid base for future empirical work on the knowledge transfer process between marketing functions of MNCs.

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