

# Knowledge transfer between globally dispersed units at BMW

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## Abstract

**Purpose** – Building on the social network view and new product development perspective, the purpose of this paper is to examine how knowledge is transferred between identical, yet geographically distant units within a multinational corporation.

**Design/methodology/approach** – An embedded case study of Bayerische Motoren Werke (BMW) examining core drivers that impact on inter-unit knowledge transfers between six events and exhibitions (E&E) units located in Europe, Asia, and Australasia.

**Findings** – The data highlight that effective knowledge transfer between E&E units depends on a combination of key drivers, such as social network ties, absorptive capacity, learning adaptiveness, and communication channels. The findings suggest that the search for and transfer of knowledge depends foremost on the applicability of context-specific knowledge rather than its complexity.

**Research limitations/implications** – The focus is on one specific manufacturing sector and specific drivers to knowledge transfer in this sector, limiting the generalisation of the findings. Also, the findings were drawn from a limited sample of in-depth practitioner interviews and did not integrate any outcome measures to successful knowledge transfer in their approach.

**Practical implications** – The paper offers guidelines for firms and specifically E&E managers to observe the specificity of knowledge and how this affects its limited applicability for other identical units.

**Originality/value** – Managers foremost need is to examine the unique context under which knowledge is acquired; only then are they in a position to decide how much knowledge transfer via different network and communication channels is needed between geographically dispersed E&E units.

**Keywords** Knowledge transfer, Manufacturing systems, Multinational companies, Automotive industry

**Paper type** Case study

## Introduction

How much knowledge should business units of a firm share with one another? Previous research has examined knowledge transfer between subunits (e.g. between headquarters-subsidiary) and between different business units (e.g. R&D-marketing) of an organisation from different literature backgrounds (Gupta and Govindarajan, 2000; Gupta *et al.*, 1985; Hansen, 2002, 1999; Szulanski, 1996; Tsai, 2001). In this paper, the authors examine, in line with Hansen (1999), two lines of research that have addressed this issue with opposing views, the social network view and the product innovation perspective on knowledge transfer. The concept of social network research has long outlined the strength irregular and distant relationships have for knowledge access (Burt, 1992; Granovetter, 1973, 1983). In particular, Granovetter (1973) argued that weak ties bridge otherwise disconnected groups and individuals and avoid knowledge redundancy. The notion of product innovation, however, focused its attention on the knowledge transfer process itself. Researchers herewith argued that close inter-unit integration and frequent and direct interaction between subunits are directly linked to increased innovation- and product outcomes (Alavi and Leidner, 2001; Gupta and Govindarajan, 2000; Kim *et al.*, 2003).

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Previous studies have examined knowledge transfers between headquarters and subsidiaries (Bolino, 2001; Foss and Pedersen, 2004; Minbaeva *et al.*, 2003) and between subsidiaries (Barlett and Ghoshal, 1989; Barner-Rasmussen and Bjoerkman, 2002; Gupta and Govindarajan, 2000). Whilst there has been in-depth emphasis on the search for knowledge in the network literature (Burt, 1992; Granovetter, 1973, 1983; Li, 2005; Tsai, 2001), and the transfer of knowledge in the product development literature (Ghoshal *et al.*, 1994; Griffin and Hauser, 1996; Gupta and Govindarajan, 2000; Souder, 1988), little empirical research has been conducted on the complexity of inter-unit knowledge search and transfers between identical units, such as marketing units, with some notable exceptions (Bennett and Gabriel, 1999; Schlegelmilch and Chini, 2002). Indeed, while a large number of existing studies provide insight into knowledge transfer between individuals and units with different knowledge stock (Frishammar and Hoerte, 2005; Gupta and Govindarajan, 2000; Gupta *et al.*, 1985; Kahn, 1996; Moenaert *et al.*, 1994), there seems comparably scarce research on how individuals and units search for and exchange knowledge that have a similar knowledge stock.

Furthermore, in their background research the authors have found no empirical evidence on the knowledge search and transfer process between specific marketing-related subunits, in particular event and exhibition (E&E) units. At BMW, E&E units are located as sub-divisions of marketing units, and play a significant role in implementing marketing strategies and communication concerning event sponsoring, tradeshows and firm-owned events, thus representing an important part in integrating successfully marketing strategy and mix. E&E units have to balance standardisation versus adaptation of marketing strategies and often form the essential corporate link between customers and the organisation, and between existing internal knowledge and newly generated external knowledge.

This paper examines this neglected yet important relationship by drawing particular attention to the knowledge search and transfer process between several regional E&E units of BMW. The authors build their argument on Hansen's (1999) work and put it into the context of knowledge transfer between identical units within one organisation. Thereby they draw on the larger knowledge transfer process among units as a problem of searching for and transferring knowledge among themselves. The discussion is limited to one task undertaken by these units, the planning and execution of events and exhibitions for automobiles introduced to a number of different customer markets in recent years. For simplicity, the authors confine the discussion to relationships between identical, yet globally dispersed business functions and simply refer to them as "units". Knowledge transfer between units has been understood as the process through which one unit (e.g. group, department, or division) is affected by the experience of another (Argote and Ingram, 2000). Similarly, Darr and Kurtzberg's (2000) thought knowledge transfer to occur only when a contributor shares knowledge that is used by an adopter (Darr and Kurtzberg, 2000, p. 29). In this case study, the authors examine knowledge transfer between identical, yet globally dispersed units and therefore refer to inter-unit knowledge transfer when knowledge sent from one E&E unit is used by another E&E unit, independently of whether the units are located at headquarters or in one of BMW's subsidiaries.

Building on the social network perspective, and considering the movement of knowledge from the product development view, key elements that impact on knowledge transfer between identical units are highlighted. The researched E&E units are not so much part of the actual development stage of any automobile. Nevertheless, they play an integral part of the implementation stage of the product development process, as they introduce the final product to customer markets. By discussing knowledge transfer from the two different perspectives, the authors hope to gain more clarity into the uniqueness of specific units and their knowledge transfer behaviour within a MNC. The aim is to explore what impacts on E&E units' search for and transfer of knowledge. Building on the complexity of knowledge as Hansen (1999) did, the authors seek to find out, if there are other elements that also determine the knowledge transfer process between E&E units.

The following discussion is structured as follows: First, inter-unit knowledge transfer is defined from both a network-based view and product development perspective, taking into accounts its complexity and relevance for organisations. Second, the existing literature is explored in regard to knowledge transfer practices between headquarters and subsidiaries as well as between subsidiaries, and a number of knowledge transfer-related issues are highlighted. Third, the authors briefly justify and describe their case study approach, followed by a discussion of core findings. Finally, some implications are offered for managers and several study limitations are pointed out.

### *Strength of network ties in knowledge search and transfer*

Knowledge transfer is often referred to as the most important, yet most challenging knowledge activity due to the high complexity it possesses (Belzowsky *et al.*, 2003; Bolino, 2001; Davenport and Prusak, 1998). Yet, this complexity stems from the fact that knowledge is not only created by and rests within individuals, but is also embedded in particular ways of thinking and acting (Chini and Ambos, 2005; Kostova, 1999; McDermott, 1999). Therefore, units often find themselves in the dilemma of how they can transfer and obtain relevant knowledge to and from other units in the organisation most efficiently and effectively (Argote and Ingram, 2000). Hansen (1999) referred to this dilemma among different subunits as a dual problem of searching for and transferring differently complex knowledge.

The social network literature stated that weak inter-unit ties (Granovetter, 1973) and those rich in structural holes (Burt, 1992) are less likely to provide a unit with redundant knowledge than strong ties and may be a more efficient way in searching for new knowledge in other units of the organisation. This argument rests on the premise that the costs to build and maintain direct relations between different units outweigh the benefits of using those relationships (Hansen, 1999). Weick (1976) also argued that units that are not tightly linked to other units are more adaptive. They are less bound to and constraint by the commitment to help (Hansen, 1999). Moreover, Burt (1997, 1992) argued that networks that are characterised by separate clusters that are rich in structural holes, result in a diversity of knowledge that allows for more opportunities to acquire and learn from one another than cohesive network relationships do. According to Burt (1992), cohesive and strong network ties between people and subunits may not help, but rather hinder coordination and knowledge flow.

However, there are just as many arguments raised by researchers which are critical to the notion and perceived benefits of weak ties between a firm's units. Weak ties connecting different units are thought to motivate acquiring external knowledge rather than generating unique, non-imitable resources from inside the organisation (Argote and Ingram, 2000; Menon and Pfeffer, 2003). For many years, researchers of the product development literature highlighted the benefits of close integration and collaboration between different organisational units (Cooper and Kleinschmidt, 1986; Frishammar and Hoerte, 2005; Jassawalla and Sashittal, 1998; Kahn, 2005; Moenaert and Souder, 1990). Herewith, the exchange of tacit knowledge (Nonaka, 1994; Nonaka and Takeuchi, 1995), meaning knowledge that is encoded and difficult to interpret has received great attention. Extensive interactions between knowledge sender and receiver are believed to increase the amount of tacit knowledge transferred, which in turn is thought to increase innovative capabilities (Cavusgil *et al.*, 2003; Nonaka, 1994).

Numerous studies, however, stressed that in order to be able to share knowledge most effectively between units, certain collaborative attributes have to be present (Bond *et al.*, 2004; Gupta and Wilemon, 1988; Riege, 2005; Schermerhorn *et al.*, 2003; Souder, 1981; Thompson, 2003): Different units such as Marketing and R&D often need to perceived each others knowledge as credible in order to be willing to collaborate with one another (Cooper, 1979; Cooper and Kleinschmidt, 1986; Gupta and Wilemon, 1988; Ottum and Moore, 1997). Trust is closely linked to credibility, and regarded as one of the most important factors of knowledge transfer between units (Davenport and Prusak, 1998; Granovetter, 1985; Jassawalla and Sashittal, 1998; Kahn, 1996). Indeed, developing a network based on trust

seems even more important for a strong relationship link between units than a shared organisational vision (Li, 2005).

Identifying which network ties are most appropriate to transfer bundles of knowledge is problematic, as organisations may not always determine who should communicate and co-operate with whom and in which way (Argote and Ingram, 2000; Blair, 2002; Bolino, 2001). Hansen (1999) found that the strength of inter-unit ties depend on the complexity of the knowledge transferred. He defined knowledge as complex, where it was dependent and not codified. This definition seems similar to Nonaka and Takeuchi's terminology of tacit knowledge. While strong ties were found to provide most net benefits when transferring knowledge that is complex, weak relationships between units were found timely more efficient for independent and codified knowledge.

### Headquarters-subsidary transfer

For many years researchers suggested that resources ought to be created and disseminated from headquarters to subsidiary level and that knowledge transfer was simply a task of adoption (Egelhoff, 1988; Ghoshal and Barlett, 1988). With this, it was assumed that most resources were readily available at headquarters' level but rather scarce at subsidiary level. Recently, this view has not only been challenged, but rather argued against. Researchers concluded that many value-creating knowledge generation actually occur at subsidiary level (Dyer and Singh, 1998; Schulz, 2001). This new realisation was due to a shift in both tangible and intangible assets and also due to the fact that subsidiaries had increasingly high levels of local resources, which often play a significant role in firms' value chain (Li, 2005). Researchers have started observing subsidiaries and headquarters as geographically dispersed and goal disparate inter-organisational groupings (Ghoshal and Bartlett, 1990; Tsai, 2001, 2002). Units embedded in emerging organisations are often forced to both collaborate and at the same time compete with one another for external market share and internal resources (Tsai, 2002). Most studies, however, do not agree on how much decision-making authority should lie within subsidiaries. It has been argued that centralisation and lower level autonomy of subsidiaries have a positive effect on the knowledge transfer between headquarters and subsidiary, and that units, which are inter-dependent on each other are more likely to transfer relevant knowledge than they would otherwise (Egelhoff, 1988). In contrast, other studies suggested that autonomous subsidiaries communicated more voluntarily with headquarters, as they perceived themselves as strategic partners within a weak tie of organisational networks (Ghoshal and Barlett, 1988; Hansen, 2002).

There is another argument to the headquarter-subsidary knowledge transfer challenge. Researchers in the past have stressed that managers within an organisation often cohere to the "not-invented-here" syndrome (Katz and Allan, 1982). Herewith, it was argued that individuals see knowledge from other individuals within the organisation as superior to knowledge that lies outside. Menon and Pfeffer (2003), however, found that managers often prefer knowledge gained and obtained from outsiders. This was due to two reasons:

1. Managers were thought to gain higher status and were given more credit for their efforts when learning from outsiders rather than insiders.
2. The very fact that internal knowledge was more readily available and more transparent than external knowledge makes it appeared less special and unique.

Hence, instead of acquiring knowledge from within the organisation, subsidiaries tended to emphasise on the acquisition of knowledge from local markets, in the hope that this knowledge would create a distinct competitive advantage that was valued and accredited by headquarters.

### Knowledge transfer from subsidiaries

Certain aspects of knowledge transfer tend to be more extensive between a subsidiary and local firms than between the parent and its subsidiary due to their geographic proximity and cultural similarity (Schulz, 2001). The extent of this transfer also depends largely on the

subsidiary's absorptive capacity, a firm's ability "to recognise the value of new, external knowledge, assimilate it and apply it to commercial ends" (Cohen and Levinthal, 1990, p. 128). The notion of absorptive capacity has been extended by Zahra and George (2002) to four dimensions: acquisition, assimilation, transformation, and exploitation. While the first two dimensions form potential absorptive capacity, the latter two builds realised absorptive capacity (Zahra and George, 2002). Absorptive capacity can refer to knowledge gained from within the firm or from outside sources in respective markets. The knowledge and competences a subsidiary acquires are often context- and relation-specific, as they are created in a unique process (Lane and Lubatkin, 1998). While a subsidiary may be highly absorbed into its local market, this can cause low levels of absorptive capacity between the subsidiary and the rest of the firm (Argote and Ingram, 2000; Menon and Pfeffer, 2003). The more context-specific the knowledge of the subsidiary, the more time-consuming and costly it is for the subsidiary to transform and transfer this knowledge into an organisation-wide understandable context. A number of studies have identified the role of absorptive capacity as the most significant determinant of knowledge transfer within an organisation (Gupta and Govindarajan, 2000; Lane and Lubatkin, 1998).

A subsidiary's capability to transfer knowledge throughout an organisation also depends upon its ability to form favourable internal network linkages with other subsidiaries and headquarters as well as its own external network linkages within the local environment (Barner-Rasmussen and Bjoerkman, 2002; Birkenshaw, 2001). A subsidiary with knowledge stock that is unique and greater than that of other subsidiaries is likely to be an attractive collaboration partner for other units within the same firm (Davenport and Prusak, 1998; Gupta and Govindarajan, 2000). Moreover, studies found that the amount of knowledge stock of a focal subsidiary is positively related to the knowledge flows from the subsidiary to all other parts of the organisation (Bjoerkman *et al.*, 2004; Gupta and Govindarajan, 2000).

In terms of receiving knowledge, subsidiaries that succeed in building external linkages are more likely to build "competence-creating mandates" and are expected to rely more on local knowledge sources, as opposed to the knowledge of other units throughout their organisation (Cantwell and Mudambi, 2003). In contrast, "competence-exploiting subsidiaries" tend to accumulate their knowledge from their parent and other parts of the organisation. Consider BMW, for example, the subsidiary located in the United Kingdom (UK) is a competence-creating mandate, where its marketing mix stems solely from its knowledge created within the local market and not from knowledge created at a marketing unit of any other subsidiary. The Australian subsidiary, however, is a more competence-exploiting mandate, as its marketing mix stems not from headquarters, but rather from the knowledge created by and used at the marketing units located in US and UK subsidiaries.

Additionally, the length and nature of relationships between subsidiaries can largely influence the intensity of knowledge transferred between subunits (Barner-Rasmussen and Björkman, 2002; Gupta and Govindarajan, 2000; Kostova, 1999). Knowledge transfer is believed to be dependent on behavioural factors at both a sending and receiving subsidiary (Bolino, 2001). Indeed, the nature of local customer patterns and other market characteristics seem to influence possible knowledge exchanges between subsidiaries. As such, the relationship between some subsidiaries may be very different to that of other subsidiaries. For example, as the Australian E&E unit of BMW perceives its customer market to be fairly similar to the UK market, it receives large amounts of knowledge from the UK unit. In contrast, the French E&E unit has no apparent close relationship with either of the two subsidiaries. It rather relies on knowledge it receives from the E&E unit located in Germany than exchanging knowledge with its neighbouring UK E&E unit. That is also because customers in the French automotive market are thought to be much more alike to the ones of the German market than any other European market.

In sum, while opinions differ concerning the nature of network ties, direction, and intensity of knowledge transferred between headquarters and subsidiaries as well as between subsidiaries, the extant literature agrees that managing knowledge and its organisation-wide transfer are important to create and sustain competitive advantage.

There also is agreement that different subsidiaries have different relationships with each other and that any knowledge transfer between units, irrespective of their geographic and strategic position, depends on a number of context-, social- and relational-specific factors.

## Methodology

We explored knowledge transfer practices within BMW as it is renowned as a highly innovative and technologically advanced MNC. It relies heavily on its E&E units to introduce and represent its brand to various stakeholders and consumer markets throughout the globe. The successes of numerous new product campaigns and launches over the last three decades confirm the competence of their relatively small E&E workforce and external agencies. Although BMW's products are standardised to a large degree in all markets, E&E units in different countries and regions seem to apply different approaches to marketing those products. Keeping market diversities in mind, the authors were interested in the particulars of knowledge transfers between a number of key E&E units located in different markets and regions. The authors gained full access to six E&E units located in Australia, China, France, Germany, Singapore, and the United Kingdom. Reasons for choosing these particular units as the units of analysis were solely related to the availability and willingness of managers to participate within the four-week data collection period.

The main objective in carrying out a single case study with six embedded cases was to obtain a deeper understanding about the nature and depth of knowledge transfers between E&E units within BMW. Single-case studies are believed to be ideal for revealing cases where researchers wish to gain new insights into a contemporary phenomena such as knowledge transfer practices and effectiveness (Tellis, 1997; Yin, 1994). Also, whilst contents of single cases can be examined in-depth, multiple case studies tend to be thinner, covering only the surface of many issues (Dyer and Wilkins, 1991). The authors adopted a four-stage research approach: First, a comprehensive literature review was conducted to identify potential key issues within the theoretical context of this research. Second, six convergent interviews with E&E experts in the automobile industry helped to refine the research problem and clarify core practical research issues. The outcome of stage one and two assisted in the design of a semi-structured interview guide. Third, BMW's Global Head of Marketing provided us with direct access to senior and middle managers in the six E&E units, including the one at headquarters.

All 24 respondents had extensive firm-specific and industry experience as well as expertise in events and exhibitions management. The authors selected an interview sample of between 15 and 40 people, which is acceptable to offer a solid basis for analytical generalisation (Eisenhardt, 1989). Each executive interview was conducted separately to minimise bias and interaction effects, and comprised of a number of open-ended and probing questions to enhance the quality and depth of answers, and to increase the scope of research issues. Each in-depth interview lasted between 1.5 to 2 hours. The chosen format and length of interviews enabled us to better understand how much knowledge is transferred within the E&E units and why. Upon completion of the data collection, the authors performed a rigorous within-case analysis between individuals in each unit and cross-analysis between the six different units. Qualitative techniques such as triangulation, member checks, and self-monitoring were also used to increase internal validity of the findings. The authors applied numerous other techniques to address external validity and reliability issues following procedures for each research phase. Finally, once the authors completed their data analyses and interpretation, the authors evaluated and verified

**“The nature of local customer patterns and other market characteristics seem to influence possible knowledge exchanges between subsidiaries.”**

their results with selected middle and senior managers from the main sample to enhance reliability and analytical generalisation.

### Findings

Our results indicated that managers perceived five specific elements as being most influential to effective intra-organisational knowledge transfers between individual members of E&E units and E&E units as a unit. They are:

1. strength of network ties;
2. formality of network ties;
3. absorptive capacity;
4. learning adaptiveness; and
5. communication channels.

Whilst some managers perceived some elements as more substantial than others, all respondents reported that each element had a significant influence on the knowledge transfer between E&E units. Often discussed fundamentals such as intrinsic motivation (Griffin and Hauser, 1996, 1992; Gupta and Wilemon, 1990b), cross-cultural issues (Husted and Michailova, 2002; Michailova and Husted, 2003; Schlegelmilch and Chini, 2002), and causal ambiguity impacted only in a minor way but can be explained. Intrinsic motivation has been thought to have a major impact on the intensity of knowledge transfer between units of an organisation (Jarvenpaa and Leidner, 1999; Jassawalla and Sashittal, 1998). At BMW, intrinsic motivation does not influence knowledge transfer between E&E units to a large extent, as all managers interviewed shared a high association with the company and shared motivation, trust, and credibility for one another. The amount of knowledge transferred had little to do with the motivation to do so.

Secondly, cross-cultural differences such as language, general practices and other culture-bound issues are commonly known to influence intra-organisational knowledge transfers in MNCs (Kim *et al.*, 2003; Michailova and Husted, 2003). E&E units at BMW did not consider cultural elements as relevant for knowledge transfer amongst them due to a number of reasons: The relatively large autonomy of all interviewed E&E units provides them with freedom to implement local events according to local cultures without the interference of other E&E units within the organisation. Cross-unit campaigns and international E&E conferences are held in English, BMW's corporate language, in which all interviewed managers are fluent. This is in common with findings by Bjoerkman *et al.* (2004), who also concluded that cultural differences had little impact on the knowledge transfer patterns of 134 Chinese and Finnish subsidiaries. Thirdly, causal ambiguity was not believed to have a large influence on knowledge transfer. Although operational implementations differ, underlying strategic approaches generally follow a firm-wide guideline that all interviewed managers pursue in their individual implementation process of campaigns.

### Strength of network ties

All managers agreed that the strengths of network ties have the largest influence on the knowledge transfer process between E&E units. Surprisingly, while relationships within each E&E unit are highly intense, social relationship ties between E&E units are purposely kept weak. Managers argued that knowledge transfer is not always required between E&E units. Large differences in local market requirements demand highly localised planning and implementations of home events and exhibitions. Managers agreed that there are a large number of local events and exhibitions. The time spent transforming and transferring localised knowledge into E&E-wide understandable knowledge was thought to outweigh any potential benefits for other E&E units. Close inter-unit network ties would potentially stimulate redundant and highly context-specific knowledge transfer, which simply would not be applicable to most other E&E units.

Respondents agreed that BMW has a firm culture dominated by success. Although managers confirmed that there is a high degree of trustworthiness and E&E units do not

compete for the same resources, their relationship can be described as one of “healthy rivalry” to outperform each other. Several respondents noted that in the past, their unit had established a trusting relationship with maybe one or two other E&E units only and little or no contact with most other E&E units. Trust was mainly established because of personal efforts made by employees. The recently introduced annual E&E conference fosters the building of more trusting and stronger personal relationships between employees and units across the globe that encourage purposeful knowledge sharing. Furthermore, most managers stated that increasingly, international E&E campaigns are created and executed by cross-E&E unit teams. Those cross-unit teams require but also foster strong relationships amongst individuals from involved E&E units.

The majority of managers reported that strong network ties are not of high significance in the knowledge transfer between E&E units because most E&E units are rarely in a situation where they need to rely on trusting and obtaining complex knowledge from other E&E units. However, what seemed more important was perceived trust that BMW gives E&E units, in order to make their own informed decisions on the individual planning and implementation of events and exhibitions targeted towards their local or regional market.

### *Formality of network ties*

Most managers agreed that both formal and informal network ties between E&E units are important drivers of knowledge transfers between E&E units. By and large, informal relationships were perceived as less important compared to formally structured ties between E&E units. Commonly informally formed communities of practice did not exist amongst BMW's E&E units for three reasons: First, the time to build and maintain them was thought to outweigh their net benefits for E&E units. Second, E&E units at BMW have a high employee turnover, where many managers are on short-term contracts (one or two years) that would not allow building longer-term informal relationships between them. Third, BMW does not provide an organisational structure that strongly supports informal networking among managers. In spite of that, all managers noted that there are relevant informal network ties between managers of diverse E&E units. Those are mostly based on personal friendships between work acquaintances and arise throughout the annual E&E conference and other international events and exhibitions that are organised by cross-unit teams.

In contrast to informal network ties, knowledge exchanges via formal networks were believed to be very frequent. Respondents considered existing formal network ties as very effective for knowledge transfer among E&E units due to three reasons: First, formally structured ties ensure that only relevant and applicable knowledge for other units gets transferred among all E&E units. Second, during the formally planned and carried out annual conferences, managers from all E&E units exchange knowledge and experience through a formal, for all other E&E units understandable, manner. Third, formal social networks support informal networking, for instance, E&E conferences and cross-unit campaigns were thought to greatly foster informal networking between E&E managers.

### *Absorptive capacity*

All managers believed that their respective E&E units were deeply embedded in their local markets. The capacity to understand and apply knowledge developed within each unit's respective markets was thought to be acquired in unique processes between local markets, its stakeholders and their individual E&E unit. Although managers argued that the competences gained from absorbing knowledge from their local markets was important, it was thought to be so context- and relation-specific that it was usually only important to share with other employees within the same E&E unit. Hence, the absorptive capacity of each E&E unit within its own defined market was extremely high, yet the capacity to realise absorptive capacity between E&E units was relatively small. Despite the fact that complex knowledge gained in each market was thought to be too time-costly to transform and adapt into a format that would be explicable for other E&E units, managers agreed that even if knowledge sharing were to be a common practice, that knowledge would in most cases not be usable by other E&E units. Thus, it was essential for BMW to embed E&E units in their respective local or regional market and obtain a high level of absorptive capacity between local markets and key



stakeholders. In contrast, the potential benefits obtained through intensive knowledge transfer between E&E units and high levels of absorptive capacity do not warrant the costs.

### *Learning adaptiveness*

The majority of managers stressed that there are undoubtedly benefits in learning from other regional E&E units' success stories and failures. However, at the same time, they agreed that learning is dependent on the complexity, usability and adaptation of the acquired knowledge. Most managers had little awareness of any formally generated, disseminated, stored, or distributed knowledge about success and failure reports on local campaigns of any other E&E unit. That is, units rarely learnt from other E&E units' experiences via BMW's diverse knowledge repositories or other frequently used communication channels. Instead, outcomes of particular campaigns are shared via personal networks between individuals in cross-unit campaigns and at the annual global E&E conference. Cross-unit teams and annual E&E conferences advance learning in a number of ways: They cultivate knowledge exchanges about the implementation of local and global campaigns, operations management and campaign tracking, and expertise related to market-specific facets of event management. Generally, managers noted that even if they received knowledge about particular campaign outcomes from another E&E unit, only a limited number of actions have significant learning effects on their unit due to the context-specificity of knowledge. That is, learning opportunities from E&E units located in regions and/or markets that share similar market- and customer characteristics were pursued regularly, such as between the Australian and UK markets or French and German markets.

### *Communication channels*

Despite the existence of a digital portal for marketing-related knowledge, most managers perceived BMW's marketing portal on their intranet the least effective communication channel compared to face-to-face communication, telecommunication, and e-mail systems connecting E&E units. Little E&E specific knowledge was transferred via the marketing portal for four reasons. First, E&E knowledge is often highly complex and not easily articulated. Second, placing locally generated knowledge onto a database or technology-enabled platform and format that is comprehensible to other E&E units is too time-consuming. Third, context-specific local or regional knowledge is rarely applicable to other E&E units. Fourth, the intranet is generally a one-way knowledge dispenser used solely by central management and leading markets, such as the German and UK markets to inform E&E units located in smaller markets. Nonetheless, managers supported the notion of an infrastructure that would encourage and facilitate more frequent knowledge transfers between the E&E units within their region. Suggestions to improve the current system included dividing the intranet into different regional, market and activity levels.

### **Discussion**

The main objective of this research was to investigate the nature of knowledge search and transfers between identical, yet dispersed units in a MNC network. Although previous research has examined and discussed various aspects of knowledge transfer between headquarters and subsidiaries, between subsidiaries and their different units (Gupta and Govindarajan, 2000; Gupta *et al.*, 1985; Gupta and Wilemon, 1988; Maltz *et al.*, 2001), the extant literature provides little indication about organisational value created through intra-unit knowledge transfer within an organisation. This is surprising, considering the large number of geographically dispersed, identical units of MNCs today. The results of this research contribute to both, the social network perspective of the firm and the product development view of knowledge transfer in a number of ways.

The findings show that knowledge transfer effectiveness requires different strengths and formalities of social network ties in an intra-unit setting. Although strong network ties between individuals of and between units can augment knowledge exchanges, this is not always desired or required. In fact, the authors substantiate Granovetter (1973, 1983) and Burt's (1992) suggestions on the notion that weak ties allow for a wider diversity in knowledge creation and a more effective, knowledge-rich, non-redundant knowledge transfer

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between E&E units. E&E units seem to enjoy a fair degree of autonomy, which also is in agreement with Burt (1997), who argued that subunit autonomy has favourable effects on organisational coordination and individual motivation because managers can transfer knowledge voluntarily or naturally rather than being forced to do so by bureaucratic rules.

In addition, the findings partly support the position taken in the product development literature (Cooper and Kleinschmidt, 1986; Gupta and Wilemon, 1990a). For instance, within their respective units and within cross-unit teams purposeful knowledge transfer is characterised through close interactions and extensive communication.

Previous studies suggested a positive relationship between the strength of relationship ties between individuals and learning adaptiveness (Levinthal and March, 1993; Nonaka, 1994). Similarly, researchers in the product development literature often argued that close ties and extensive interactions between different functional units result in innovative capabilities and innovative performance (Griffin and Hauser, 1996; Gupta *et al.*, 1985; Gupta and Wilemon, 1990b). The findings, however, are largely in agreement with Hansen (1999). He suggested that tightly linked units possibly perform poorly in finding and transferring useful knowledge because the strength of their ties limit searches for useful knowledge beyond a few subunits. The results indicate that close network relationships between managers from different E&E units may promote enhanced knowledge transfers. However, unless individuals are part of a cross-unit campaign, increased knowledge exchanges may not result in enhanced E&E-wide learning, due to the limited applicability of market-specific knowledge to other markets.

Hansen (1999) argued further in his findings that units could benefit more, if they consider larger search processes for knowledge in addition to direct relationships between a few subunits. The findings also suggest that weak network ties enhance more effective search for- and more non-redundant knowledge transfer between various E&E units throughout BMW. E&E units at BMW seem to benefit from a firm environment that fosters both formal and informal network ties. While people engage frequently in informal networking activities, formal network ties create an informal networking environment that fosters the opportunities to search for useful knowledge. Moreover, although formal network ties allow informalities, they also provide a distant relationship that gives E&E units room for healthy “cooperation” (Tsai, 2002). Units do not have to compete for resources, thus increasing individuals’ intrinsic motivation to socially interact and trust one another (Tsai, 2002).

Communication channels such as formally organised conferences and cross-unit campaigns are beneficial for the formation and ongoing support of formal and informal network ties. Face-to-face communication seems more beneficial for E&E units than technologically enabled communication tools because it reduce knowledge redundancy and saves time when complex knowledge needs to be exchanged (Polzer *et al.*, 2004; Spender, 1996). E&E conferences give room for face-to-face knowledge transfer. They foster both general as well as specific knowledge exchange in a formal setting that also allows informal knowledge exchange between E&E managers.

### **Conclusions and implications**

Effective knowledge transfer between E&E units in MNCs depends foremost on the context specificity of knowledge. The influence knowledge transfer drivers such as the strength and

formality of network ties, absorptive capacity, learning adaptiveness, and communication channels have on the knowledge transfer process stem directly from the applicability of valuable knowledge created within each unit. While Hansen (1999) stressed that the complexity, that is the extent to which knowledge is codified and dependent, decides the network strength of inter-unit ties, the findings revealed that it is not the degree of knowledge codification (Hansen, 1999), but rather its applicability that ultimately influences the search for and transfer of knowledge between identical units. Further, whilst E&E units may show high levels of trust amongst one another and thus indicate a willingness to share knowledge with each other, enhanced knowledge transfer does not necessarily occur. In case the knowledge is not perceived as relevant for other E&E units, it is not shared. Effective knowledge transfer in E&E units incorporates knowing, where to search for and which knowledge to transfer, as the time and cost spent in building communication channels and mechanisms to transform knowledge in an explicable format may exceed the benefits other units gain from it.

We can confirm that it is the combination of both, strong and weak social network relationships that influence the effectiveness of knowledge transfer between cross-border inter-units, as their view also finds support in an intra-unit network (Hansen, 1999; Podolny and Baron, 1997). Strong relationship ties are highly beneficial for managers within one E&E unit and between team members of the same local, regional, and/or international E&E campaigns. They foster complex knowledge transfer and increase expertise and enhance credibility for one another. Weak social network ties between all other E&E units, on the other hand, limit knowledge redundancy and foster timely knowledge exchange and healthy “coopetition” (Tsai, 2002) between E&E units. They allow for formal knowledge exchange between markets that share similar strategic goals.

Managers of E&E units should cultivate an environment that allows strong and weak, formal and informal network ties to co-exist next to one another. Hence, firms must understand the different nature and key drivers that influence intra-unit-specific knowledge and its internal and external transfer. Only after identifying which combination of network ties should be established, can valuable knowledge be transferred most effectively between globally dispersed intra-units. Although technology-enabled communication channels are essential for knowledge transfer between globally dispersed units, organisations need to provide substantial possibilities to exchange knowledge in person.

There are several limitations to this study, which imply some avenues for further research. First, the authors investigated the knowledge transfer between six E&E units of only one MNC in the automotive industry, thereby limiting the application of the results to other manufacturing sectors. The authors accept that there is a generalisation issue to other firms in this and other industries. Accordingly, the findings the authors discussed can only be tentative, are open to interpretation and thus should present a basis for further investigation and discussions. Second, based on a preliminary literature review and pilot study within BMW, among the many more drivers that have the potential to influence and drive intra-unit knowledge transfers the authors only focused on those that seemed to impact the most on cross-border transfers within marketing units, particularly E&E units. Third, the focus, while empirical, remained exploratory, with key findings drawn from a convenience sample of practitioner interviews from Australia, China, France, Germany, Singapore, and the UK. This approach poses constraints on the external validity of the results. Fourth, the authors did not integrate any outcome measures such as product quality, product success, degree of innovation and market performance into this approach. A deeper understanding needs to be obtained as to why managers choose in-flowing and out-flowing knowledge to generate either little or substantial value to their business unit.

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