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Knowledge and Innovation: Opportunities and Challenges to Knowledge Transfer between Multinationals and their Subsidiaries (Running head: Knowledge Transfer in MNCs)

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Abstract

In this article, based on a sample of multinational corporations and their subsidiaries operating in Germany, Japan and the USA, we examine the specific impact of culture on knowledge flows within multinational organisations. Specifically, we will (1) look at the values and attitudes towards innovation and knowledge transfer and discuss the benefits of and barriers to knowledge transfer mechanisms, (2) investigate whether the organisations within our sample have a 'knowledge culture', and (3) examine organisations' beliefs about instruments that can facilitate the building up of a knowledge culture within the company,

Introduction: Globalisation and multinational corporations

With organisations increasingly globalising, it is becoming increasingly necessary for organisations to identify an advantage so as to remain competitive. Organisational knowledge is increasingly seen as a fundamental factor for organisations' seeking global competitiveness. With vastly improved communication technologies and consequently, changing work behaviours, the traditional ways of how global organisations transfer knowledge across geographic boundaries and politically imposed borders are undergoing rapid changes (Bhagat et al, 2002). However, according to Leung et al (2005), although the globalisation of business has increased (Hitt et al, 2006), this has not resulted in universal cultures. Therefore, a need arises to investigate and understand the impact of cultural differences on knowledge transfer in global organizations.

Culture has been defined broadly as 'systems of shared meaning or understanding', with various researchers writing about various dimensions of culture (c.f. Schein 1985, Trompenaars 1993, Hofstede 1980, Schwartz, 1992, 1994). Within this framework, Schneider and Barsoux (2003) recognise that there are interacting spheres of culture (regional cultures, national cultures, industry cultures, professional cultures and corporate cultures) and write that it is necessary to understand the underlying cultural assumptions and that culture can be defined as "shared solutions to problems of external adaptation and internal integration" (p.34).

Within this paper, we would like to focus on the notion of a trustful culture, the idea where a culture of trust exists, the higher the willingness and ability of employees to share knowledge with each other, both within and across subsidiaries. It was found by Kotter and Heskett (1992) that organisations with strong cultures based on foundations of shared values tended to significantly outperform other similar firms. However, the paradox that surrounds this argument is that for firms wanting to build up a culture of trust will need a long-term commitment and time to foster longer-term relationships of trust, which unfortunately does not happen in reality. Fairholm and Fairholm (2000) write that "trust building is a legitimate cost of doing business in this (USA) and any other culture" and although many have written about the importance of trust building (cf. Ring and Van de Ven, 1994, Luke, 1998 and Bardwick 1996), many more fail to see the importance of trust in improving performance and increasing competitive advantage of firms.

In this article, based on a sample of multinational corporations and their subsidiaries operating in Germany, Japan and the USA, we examine the specific impact of trustful culture on knowledge flows within multinational organisations. Specifically, we will (1) look at the values and attitudes

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towards innovation and knowledge transfer and discuss the benefits of and barriers to knowledge transfer mechanisms, (2) investigate whether the organisations within our sample have a 'knowledge culture', and (3) examine organisations' beliefs about instruments that can facilitate the building up of a knowledge culture within the company, Although we recognise that knowledge transference between subsidiaries of the same global organisation is interesting and important, our focus is on the levels between headquarters and subsidiaries.

Factors that encourage knowledge transfer and innovation within multinational organisations

1. Knowledge transfer in Multinational organisations– the significance

Gupta and Govindarajan (2000) write that in recent years, a lot of attention has been placed in investigating the nature and sources of organisational knowledge and its transfer in multinational organisations as research has demonstrated that knowledge can play a significant role in organisations' competitive advantage. Researchers such as Nonaka (1991, 1994) and his colleagues (Takeuchi, 1995; Toyama, 2003; and Teece, 2001) even argue that knowledge is the only source of competitive advantage over competitors.

In the case of multinational organisations, there is the added issue of knowledge transfer across subsidiaries, thereby contributing further to knowledge development. So, for example, knowledge may be developed in one location (headquarters or subsidiary), and then exploited in another location, demonstrating the international transfer of knowledge by multinationals. Therefore, the multinationals' ability to facilitate and manage inter-subsidiary transfers of knowledge can determine and/or improve that organisation's competitive advantage. However, knowledge creation in itself is not a sufficient reason to attribute an organisation's success. The knowledge needs to be efficiently and effectively shared and utilised across the organisation, especially in the case of multinational companies where different units and subsidiaries are spread over a vast geographical area (Porter, 1986, Gupta and Govindaraja, 2000, in Tayeb, 2005:134).

Thus, an effective and coherent organisation will utilise the human capital through relevant company-wide dissemination processes and mechanisms to transfer the created knowledge throughout the organisation, to leverage its competitive advantage.

The dynamics of relationships between subsidiaries that involve exchange, sharing and co-development of knowledge become even more fundamentally important in cross-cultural settings

in which international co-operative ventures encounter more opportunities (knowledge transfer) as well as greater challenges (such as cultural barriers) (Luo, 2001). Hence it is necessary to look at the relationship between organisational culture, national culture and knowledge transfer. How much influence does culture cast onto knowledge transfer and innovation?

2. Organisational culture and knowledge transfer mechanisms

Although creating knowledge is an important activity, that knowledge has to be harnessed and leveraged to be useful. One important factor often mentioned as an enabler of knowledge transfer is the organisational culture of the organisation. Goh (2002) argues that one cultural dimension critical to knowledge transfer is co-operation and collaboration. Researchers (c.f. Ghoshal and Bartlett, 1990; Birkinshaw and Hood, 1998; Rugman and Verbeke, 2001) are in agreement that "globally distributed networks of subsidiaries constitute a potentially important source of competitive advantage for multinational corporations (MNCs)" (Björkman *et al,* 2004:443). Zander and Kogut (1995), Szulanski (1996), Simonin (1999), and Gupta and Govindarajan (2000) have conducted research on factors influencing inter-unit knowledge transfer patterns within the differentiated MNC, and have found that positive corporate socialisation measures and the existence of close relationships among MNC units play a significant role in encouraging knowledge transfer practices. Leadership can play a role in shaping a culture of knowledge exchange, problem solving and collaboration. When leaders treat employees fairly and not assign blame to projects that fail or where problems arise, an organisational culture of knowledge sharing can be developed within a culture of trustfulness. As we will see in the interview data, negative organisational culture can have a negative impact on exchange and dialogue between subsidiaries and headquarters, creating a barrier in transferring knowledge and ideas.

In conceptualising multinational organisations as networks of transactions that are engaged in knowledge flows (Gupta and Govindarajan, 1991), it is appropriate to expect that these organisations have sufficient absorptive capacity within the organisations (c.f. Cohen and Levinthal, 1990; Gupta and Govindarajan, 2000) to facilitate the transfer of knowledge, absorptive capacity being defined as the ability of an organisation to recognise the value of new external information, to assimilate it within the company and to apply it to commercial ends (Cohen and Levinthal, 1990). Harris (2001) writes that there has been an overall trend taken by organisations towards the knowledge-based economy, with corporate competition focused on knowledge since the 1980s (c.f. Lane and Lubatkin, 1998; Amesse and Cohendet, 2001). Nonaka and Takeuchi (1995) and Nonaka and Teece (2001) have developed concepts and frameworks to

support organisations in knowledge creation, knowledge transfer and knowledge management and have since revisited these theories to "explain the dynamic process of knowledge creation and utilization" (Nonaka and Toyama, 2003, 2).

2a. Issue of trust

Related to organisational culture is the fundamental variable of level of trust. A high level of trust is necessary for a willingness to cooperate. Management practices such as decisions being made openly, information being widely available and accessible by employees, perception of fair treatment and rewards that emphasise shared success are practices that can increase the level of trust in an organisation, and more so within a multinational organisation with multiple headquarter and subsidiary locations. Bijlsma-Frankema (2001) argues that cultural integration within mergers and acquisitions can be furthered along through mutual trust which can be built by shared goals, dialogue and having shared norms. International joint ventures or strategic alliances must often deal with culturally induced misunderstandings and conflicts, reducing the expected positive effects of cooperation between two or more organisations.

Because the relations that really matter appear to exist in the social fabric, the behavioural element of importance is the role of trust (Child *et al*, 2003). Griffith (2002) found that trust enabled strategic managerial action to overcome the influence of business and institutional environments in cross-border ventures. Another study by Larsson and Lutbatkin (2001) found that when social activities were encouraged during mergers and acquisitions of organisations, national and cultural differences could have the higher chance of being overcome and values of affected employees harmoniously integrated. This is because through social activities such as training, retreats, orientation programmes the building up of trust is encouraged, which can encourage employees to cooperate and exchange knowledge amongst themselves.

Bstieler (2006) writes that partnerships need to establish a trusted relationship through communication and fair behaviour in order to foster mutual learning and knowledge acquisition. When a trusted relationship is established, each partner can concentrate on its actual tasks instead of worrying about the partner's intentions or actions, resulting in higher knowledge acquisition and overall better outcomes as in less trusted relationships.

2b. Social and attitudinal aspects

Research related to international joint venture learning found that knowledge transfer depends on the level of absorptive capacity and the complexity of the knowledge being transferred (c.f. Cohen and Levinthal, 1990; Simonin, 1999; Lane et al, 2001). Martin and Salomon (2003) pointed out that in turbulent environments, social aspects may play a more significant role in knowledge transfer. This implies therefore, that social aspects of organisational mechanisms can both hinder and facilitate learning and knowledge transfer. Simonin (2004) found that learning intent and knowledge ambiguity emerge as the most significant determinants of knowledge transfer. Also, it was found that the organisation's own culture towards learning can moderate the effects of learning capacity. In a sample of 169 subsidiaries of multinational corporations operating in the USA, Russia and Finland, Minbaeva *et al* (2003) confirmed that both ability and motivation are needed to facilitate the transfer of knowledge from other parts of the MNC.

Research has found several barriers to the transfer of knowledge within the multinational corporation; some associated with the competence itself, others with the idiosyncratic nature of the senders and the recipients, and others with the actual relationship between them. One reason that may explain why organisations are reluctant or unaware of the need to transfer knowledge across subsidiaries and units may be motivational (Szulanski, 1996). Forsgren et al (2000) found that subsidiaries may be reluctant to transfer knowledge to other units for fear of losing a position of superiority or because it is insufficiently compensated for the efforts and costs involved in the process of knowledge transfer. Szulanski (1996, 2000) amongst others, found that tacit, specific, and idiosyncratic knowledge that is separated from the unit that carries the knowledge can be difficult to transfer given that the context at the recipient point may be different. For example, if human resource practices were to be transferred from the head quarters based in the UK to its subsidiary in China, that will be difficult given that political, economic, and educational policies are different in both countries. Other barriers are related to the recipient's ability or willingness to accept the new knowledge (Cohen and Levinthal, 1990, Szulanski, 1996). Hence, even if the knowledge or the competence is transferred to the subsidiary or back to the headquarters, the recipients might perceive such transference as interference from the top (or the subsidiary) and reject the good intentions. Yet more research (c.f. Szulanski, 1996, Fosgren, 1997) has found that the relationship between the sender and the recipient, and the willingness of a group to share the information with others can play a major barrier to whether competences and knowledge are effectively transferred. An example would be if the two units were not in competition, or if one unit was not above the other within the hierarchy of the organisation, then knowledge and information might be shared more willingly.

We propose that a lack of trust can be a significant barrier to effective knowledge transfer as Clegg et al (2002) found that trust can increase innovation amongst employees, as well as other outcomes associated with organisational success such as openness in communication and information sharing (Dirks, 1999) and less conflict (Porter & Lilly, 1996) even between partners in inter-organisational relationships (Zaheer et al, 1997).

Using Agency Theory (Jensen and Meckling, 1976; Eisenhardt, 1989), Björkman *et al* (2004) argue that headquarters can use several kinds of mechanism as safeguards against opportunism on the part of the subsidiary. Lutbatkin *et al* (2001) however argue that self-serving behaviour on the part of managers can be mitigated by corporate socialisation. This brings us back to the important and crucial role of culture and how organisations need to have a corporate culture that employees accept and embrace. It is proposed that although transferring knowledge can and will enhance corporate performance, conflicts of interest are likely to emerge between subsidiaries and headquarters that lead both parties to perceive it to be against their own interest to actively engage in knowledge transfers.

3. Supportive structures

Appropriate infrastructure need to be in place to reinforce and support effective knowledge transfer and development of new innovations. Bartlett and Ghoshal (1998) and Nonaka (1994) advocate that by breaking down hierarchies within organisations, knowledge can flow easier. One way that organisations can create supportive structures is to have cross-functional teams and encourage teamworking behaviour. This encourages individuals and groups to start learning to communicate in a horizontal manner, rather than in a hierarchical fashion.

Again, with reference to rewards systems, by focusing rewards on things more than just financial success, organisations can begin to foster sharing behaviour rather than encourage competition.

4. External environment

In considering knowledge transfers and innovation development within organisations, it is necessary to also look at the external environment in which these organisations are located in. Carlisle and McMillan (2006) write that in turbulent environments, innovation is a necessary strategic imperative, suggesting that "the only sustainable competitive advantage comes from out-innovating the competition" (Peters, 1999:29) They argue that there is a need for a balanced strategic approach to innovation, with equal emphases on both short term incremental innovation

and longer term radical innovation and learning. They propose the adoption of a complex adaptive systems perspective and suggest that organisations "will need to 'dance' between 'the edge of chaos' and 'the edge of stability' if they are to create a sustainable innovation advantage" (2006:7).

Related to this notion of external environment is the need to acknowledge that knowledge that knowledge is not just internally generated but externally acquired and accumulated through long-term interaction with specific external parties (e.g. customers, suppliers) and the use of that knowledge in the company's activities. Knowledge can also be acquired through inputs via schemes such as Knowledge Transfer Programmes where organisations interact with universities with relevant know-how and expertise.

The role of culture in fostering knowledge sharing

As we can see from the above, many of these factors are related and interlinked with the notion of organisational culture, in that it is the culture of the organisation that can help foster the attitudinal factors that promote knowledge creation and transfer. Many authors have emphasised the importance of organisational culture (Schein, 1985) in promoting creativity and innovation within organisations (Ahmed, 1998; Judge *et al*, 1997; Martins and Terblanche, 2003; Tesluk *et al,* 1997; Tushman and O'Reilly, 1997). If organisational culture is a critical factor in the success of any organisation, and in particular the transfer of knowledge and innovation, then successful organisations have the capacity to absorb innovation into the organisational culture and management processes (Tushman and O'Reilly, 1997). According to them, organisational culture lies at the heart of organisation innovation. The way they see it, culture influences creativity and innovation through socialisation processes whereby individuals learn acceptable behaviour and how things function, and through basic values, assumptions and beliefs being established in behaviours and activities widely accepted within the organisation and reflected in their structures, policy, practices and procedures.

Similarly, with management actively cultivating relationships that encourage and reward exchange of ideas, knowledge and creativity, a strong culture can develop such as that of *ba* (c.f. Nonaka and Toyama, 2003) which can be understood as a "multiple interacting mechanism explaining tendencies for *interactions* that occur at a specific time and place. *Ba* can emerge in individuals, working groups, project teams, informal circles, temporary meetings, virtual space

such as e-mail groups, and at the front-line contact with the customer"(p. 6-7). In short, *ba* is seen as a place where new knowledge is created.

Researchers in the area of knowledge-transfer and innovation are in agreement that although research shows that effective knowledge transfer is necessary for organisations to gain a competitive advantage, and many managers acknowledge that effective knowledge management is the key to organisational success, many organisations and in particular multinational corporations do not appear to have long-term strategies to ensure that the competence of subsidiaries is transferred across different departments and units.

Methodology

In this paper we will only discuss the variables of knowledge transfer and organisational/national culture effects.

Qualitative interviews

Between September 2003 and July 2004, 199 semi-structured interviews (39 in Japan, 87 in Germany/Switzerland and 74 in the USA) were conducted at the top management level of both headquarters and subsidiaries. These interviews were conducted by members of an international research team and consisted of at least 2 members of the research team at any one time, plus an interpreter where necessary, for consistency purposes. These interviews usually lasted between 90-120 minutes. The interviews were recorded and transcribed and gathered descriptions of the real-world in order to examine the interpretation of the meaning behind the act (Kvale, 1983). Through this in-depth method, the contextual richness of the organisation can be identified (Yin, 1981) and provides both depth and validity to data gathered largely from accounts and individuals' perceptions of the situation. Interviews that were conducted in other languages (German, Japanese) have been translated into English for the benefit of this paper. We have indicated that where relevant.

Quantitative data

Quantitative data was collected by means of an on-line questionnaire. In this paper we will focus on the knowledge management and innovation dimension. Respondents consisted of middle management employees of all the organisations. Response rate was 65%.

Knowledge management and innovation

This dimension consisted of 26 items examining the state of knowledge exchange within their organisation (e.g. formality, speed, employee involvement); how knowledge management occurs (e.g. informal contacts, information systems, team work), motivation of knowledge exchange (financial, collegial), the role of culture (diversity enhancing innovation potential), barriers to knowledge transfer (language, cultures, communication styles, geographical location) and speed of implementing innovations. Respondents were required to use a Likert 5 point scale (strongly disagree, disagree, neither, agree, strongly agree) to register their opinion.

Findings and discussion

From literature, it can be demonstrated that organisational culture is gaining more prominence and relevance for multinational corporations and the people who manage them. Research is adamant that success in managing global organisations comes from better management of culture, values and mindset of the employees. In this section, we will look at some of the factors that emerged out of the empirical data. We will first look at organisations that appear to have a working knowledge culture, followed by organisations that appear to have barriers preventing them from creating such cultures, and the reasons why. From there, we will address what the role of culture is in achieving successful knowledge transfer and innovation, and what the organisational mechanisms are that can affect the success or failure of knowledge transfer and innovation.

[Insert Table 1 about here]

Table 1 gives the general characteristics of the organisations that participated in the research project. In general, the findings appear mixed and inconsistent. Based on the questionnaires, although all respondents felt that knowledge was a local competitive advantage which needed to be protected and harnessed and were aware that knowledge transfer and innovation were important issues, organisations differed in how they viewed the different factors that affect knowledge transfer and innovation potential. As a result, some organisations had in place systems and practices that reduced potential barriers to the transfer of knowledge and information between headquarters and subsidiaries. Other companies however felt that knowledge transfer although identified as a major aim and value of their organisation, was not implemented in a manner akin to what is believed to be knowledge transfer.

Table 2 gives the breakdown of the means of the organisations that participated in the survey.

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[Insert Table 2 about here]

The good

1. Effective systems that encourage knowledge transfer

Company 02 felt that their knowledge transfer and innovation readiness was "still very good" and unproblematic. This was due to the traditional technology and research orientation of the organisation, with their emphasis on the systematic use and international availability of common knowledge, especially so in product development and production engineering sections which forms the core of their business. They are renowned world-wide as the authority in their field.

In contrast to some of the other multinational organisations interviewed, this company could quickly transfer and convert innovations from other parts of the corporation, with culture-related issues with the implementation classified as minute. Reasons given as to why this was the case include excellent team work, informal personal contact between individuals across the organisation and a lack of cultural obstacles in general. Cultural differences did not appear to have a negative influence in transferring knowledge, although those in the Japanese subsidiary mentioned that language did serve as a problem for the effective exchange of knowledge (from their point of view). The attitudes of those interviewed were also refreshingly positive. When asked about whether any improvements could be made to knowledge management systems within their organisation, some small suggestions were made together with some examples cited where knowledge transfers were not so successful from headquarters to subsidiaries. However, overwhelmingly, participants suggested that there were still many things that employees could learn from each other and that in no way was knowledge transfer uni-directional from the headquarters to subsidiaries. Participants were keen to point out that knowledge transfer was bi-directional and everyone could learn something.

One explanation as to why this organisation was particularly positive about exchanging knowledge and innovative ideas could be because their business is inherently research-oriented. Being in the research field, sharing of knowledge is more of a natural course of action and may explain why systems are in place, employees generally have a positive attitude towards sharing and why knowledge transfer is bi-directional.

Within the questionnaire, in answer to the question whether "knowledge exchange in this organisation is too formalised", this company's mean (2.20) was significantly lower than the others indicating that they felt that knowledge exchange was not too formalised within their

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organisation. It was also found that in answer to the question whether "really good workable innovations for this organisation are only developed locally", all the organisations disagreed with this, acknowledging the fact that new ideas and knowledge was created all over, and not just within a particular subsidiary or section.

2. The role of culture in promoting knowledge transfer

From literature, culture (national and organisational) is a crucial factor that can encourage knowledge transfer within organisations. Interestingly enough, the role of national culture appears to be embedded within the company's organisational culture (c.f. Basadur, 1992; Brannen and Salk, 2000). Within the Japanese subsidiary of company 03, the culture is such that knowledge actually enjoys a special value, the organisation's knowledge and innovation orientation was classified as only 'moderate'. As predicted by Oliver (1996) and Hitt et al (2006), one interviewee suggested that within the Japanese culture (and therefore, within the organisational culture of the Japanese subsidiary), continuous improvement of existing technologies is deeply embedded. There are culturally shaped practices such as 'kaizen' and the traditional affiliation of enterprise and suppliers. As a result, there is a real and accepted belief that knowledge is a competitive advantage. A manager is quoted as saying

> "[Translated into English]: "For me it is a competitive advantage here [in Japan] to know that knowledge really has a value in itself. I think, in other countries that resource would be energy or something else. But here, it takes very long to build up knowledge, and that's how humans develop their knowledge. They do not have to remember continuously what I do next, what is my next position. Therefore they can concentrate on knowledge acquisition and how this new knowledge can be applied."

The manager argues that within the Japanese culture, knowledge has a value in itself, implying that Japanese people will take the trouble to develop and transfer knowledge as it is within their nature and social culture to do so. He goes on to say that that is how the Japanese culture has Kaizen, with the constant improvement to detail, which he believes is lacking in the German headquarters. He speaks of bureaucracy as a possible reason to explain a lack of the innovation spark (for example, the size and complexity of the organisation, employment contracts) and how change on a large scale is a difficult and long-term process for them. He further elaborates that with the decentralised management style, global innovations require the input and acceptance of many different local stakeholder groups which can be a long drawn process. However, on a positive note, he suggests that with further investment and encouragement to develop personal

networks, knowledge and innovation processes can be improved throughout the organisation, across national borders.

In company 05, one interviewee mentioned the success story of an individual who within a short period of time (4.5 months) got to know the people in the American subsidiary and managed to understand the different issues they had from the headquarters in Düsseldorf. As a result, he managed to win the trust of those in the subsidiary and implemented a dialogue where both sides of the continent could exchange ideas and knowledge in a fruitful manner. The organisation quickly saw the success that this individual was achieving and have since placed him in a liaison role working with their global alignment teams. Management has since been more open to other such 'transfers of knowledge', however as we shall see in the next section, it appears to be on an ad hoc basis, rather than a formalised procedure carried out by all subsidiaries and departments.

In company 03, continuous learning and innovation readiness are important elements of organisation's core values. In particular, this company prides itself in having a successful international rotation of technical and high-level personnel as part of its knowledge transfer scheme. This company believes that it is the flexibility and adaptability of their employees that allows them to achieve a high level of knowledge management.

Perhaps due to this company's stance of transferring and rotating high-achieving personnel, both interviewees and questionnaire participants agreed that there were no significant intercultural barriers or obstacles against knowledge transfer and innovation. According to the quantitative data, participants felt that cultural diversity increased innovation potential (Q23), with all the companies unanimously agreeing with the statement. It was suggested during interviews that implicit knowledge is made explicit through the rotation, as this created personal relations between the knowledge carriers, enabling the existing rich interpersonal networks to act as platforms for the effective transmission of tacit knowledge. However, a system based on personal relationships is also prone to fail if these relationships are missing, e.g. due to a generational change, as in this case.

Thus, although this organisation utilises flexible workforces and is open to transferring employees where necessary, a more systematic and explicit manner in storing the knowledge would be immensely useful. Nevertheless, having an adaptive and flexible workforce is one of the first steps towards creating a knowledge sharing culture.

The bad

1. Bureaucracy as a barrier to knowledge transfer

Within company 01, management in the subsidia ry companies tended to view the process of knowledge transfer to be more formalised and bureaucratic compared to those at headquarters. During the interviews, some participants alluded to conflicts which have arisen as a result of different interpretations of what critical success factors mean within 'knowledge transfer and innovation" to employees in Europe and those in the USA. As an example, it was suggested that the Americans viewed cost reduction and reducing over-capacities as a success factor, whereas their European counterparts viewed improvement on quality as a goal to aim for.

Although this organisation officially views innovation as part of their culture, one of the interviewees proclaimed that *"[Translated into English] At our company, knowledge transfer is practically zero!"*. This is particularly a concern as research informs that effective knowledge transfer is key to long-term competitive advantage. From the data collected, it appears that a challenge at least for all participating organisations is that management will need to seriously consider strengthening strategic incentive systems to implement and promote knowledge transfer and innovation achievements.

In company 05, when asked about staff initiative, an interviewee said that *"our German counterparts are more interested in pleasing the next level than they are in challenging the next level"*, adding that he had not succeeded in working there 26 years by challenging the establishment. This again brings our attention to the fact that these organisations' cultures are not supportive of the knowledge transfer process, be it between departments, subsidiaries or individuals.

2. Lack of trust and respect barriers to knowledge transfer

Many barriers exist to reduce the effectiveness of knowledge transfer (as explained earlier). In the qualitative data, the lack of trust was found to be a barrier to knowledge transfer. One manager from company 01's American subsidiary is quoted as saying

> *„Our values are very finely constructed. They demand entrepr eneurial spirit in presenting our individual ideas, open dialogue, the confrontation of divergent ideas and opinion etc. […] But inside the US subsidiary there is this strong feeling, that this is only on paper. There is this big concern that, when I this, when I really state my opinion, if that opinion collides with the management's opinion, then they don't want to hear it.*

There could be negative repercussions if you communicate openly and state your opinion openly. There is a bunch of examples where somebody did exactly this and then they pointed a finger at him, he said this and that and that is not what top management wants to hear and then there were negative repercussions. So, for my part, I will just keep quiet."

Another manager adds,

"One thing b etween cultures is, there is a lack of respect, a lack of recognition of competences. Our perception it that the European management, without ever really saying it, looks down on us and thinks:' Your performance, your competences do not meet our expectatio ns / do not comply with our standards. And therefore we don't trust you, that you take the right decisions."

Looking at the quantitative data it was found that the respondents from the US were significantly different from those from Germany or Japan.

[Insert Table 3 about here]

In organisation 07, one high ranking personnel interviewee suggested that within their organisation, there is still the culture and feeling that " [Translation in English], *"Knowledge is power and if I do not transfer my knowledge, I can secure my position at work and can continue working as before."* This highlights what Szulanski (1996) found, that if the business units did not feel that they were in competition for positioning within the multinational conglomerate, then knowledge and information might be shared more willingly.

3. Language and cultural differences

Although a significant majority of questionnaire participants and interviewees did not mention language as a barrier in transferring knowledge, those who were either located in Japan or whose mother tongue was Japanese cited language and cultural barriers as reasons as to why knowledge transfer and innovation did not happen. This was true regardless of organisation or subsidiary. Within the questionnaire, the most significant difference within the means of the companies occurred in questions 24 and 25, which enquired about whether within their organisation, language barriers inhibit the efficient exchange of knowledge between expatriates and locals, and between the parent company and its subsidiaries (F=2.38, 3.38; p=.01, .00). This implies that there was an inconsistency amongst the organisations as to whether language barriers affected knowledge exchange. It was found that the companies that promote knowledge transfer and innovation predictably reported that language was not a barrier, and vice-versa.

In both companies 01 and 02, participants whose native language or strong language was English felt that there were no substantial problems in successful knowledge management. Those however who had to communicate with co-workers who had difficulties in communicating in English suggested that language was a barrier in effective transfer of knowledge. Although this might be a rather obvious point to make, it is clear that multinationals that want to succeed in effective knowledge creation and transfer will need to include language training or have multi-lingual employees who will be able to effectively communicate across subsidiaries and between headquarters and subsidiaries. Alternatively, there needs to be an agreed official language within the headquarters and their subsidiaries so that all information is communicated in that agreed language. This reduces miscommunications and misunderstandings. Many organisations have agreed business languages to speak when doing business with foreign companies, however it is rare to have everyone speak it to an adequate level.

In company 07, it was suggested that one difference working with subsidiaries located in different countries (hence different cultures) is the different expectations. The Japanese subsidiary viewed the basis of their economic success (and hence the reason for innovation) as achieving "zero defects". In contrast, in America, the basis of having a creative or innovation process was dependent on the position of their competitors. If this company was ahead of its competitors, then there might not be a push to be creative or innovative. It can be summed up then, that the Japanese view economic success by achieving the goal of 'zero defects' whereas in the USA, the emphasis of innovation appears to be still open in view of the fields occupied by the main competitors. In the American context, the improvement of knowledge transfer and innovation presupposes the clarification of the strategic positioning of this company amongst the competitors.

4. Lack of continuity

Company 05 was grappling with one very stark issue; a lack of continuity. One manager said *"R&D is in a huge cutting mode. We lost a lot of top people: all of our top people in research and development are gone. A whole lot of them, completely wiped out. And they had so much success behind them. Over half of the R&D department have been there for less than five years."*

Although the interviewee does not go into details as to why this is so, some possible reasons could be due to the restructuring of the organisation and departments and, redundancy as a cost-cutting measure. Whatever the reasons might be, such managerial decisions do not seem to

consider the long-term effects of losing employees with years of tacit knowledge and their informal networks within and between departments and subsidiaries. Given that research literature confirms that innovation and creativity stems from these two important factors, organisations would do well to halt the flow of such "competitive advantage" out of their organisations.

5. Myopia and short-term behaviour

In interviews with company 09, it was found that knowledge management and innovation was limited to individual business fields, and as yet, there was no effort in mobilising synergies between business fields. A typical response to the question of whether there was potential in seeking knowledge potentials in the overall system was *"[Translated into English] "There is nothing here at our company that would enable us to draw any advantages from the other units".*

Due to the decentralised structure of this multinational corporation, it was seen by some of those interviewed that if knowledge transfer was improved between business groups, this might hamper the competitive advantage of the other business groups. Although this organisation has 'international' meetings whereby senior management of each business group and/or subsidiary meet to discuss goals and achievements, such meetings were such a 'rarity' that they could not be classified as 'knowledge exchange meetings' as explained by one interviewee, *"[Translated into English] there is too little dialogue. Two section meetings in the year are too few. Because there is too little dialogue, there is too little common understanding, because there is too little common understanding, it does not create common values. If there are no common values, there are also no common visions and if there are no common visions, no real/useful exchange of information can take place."*

To be a knowledge organisation, it would be necessary to be less myopic and short-term about plans and to have in place meetings between sections and departments. Some reasons given as to why such meetings were not successful in terms of knowledge transfer include an absence of rotation programmes (international, inter-business group), and the comparatively small number of expatriates.

Conclusions

The aims of this paper are to first, identify whether culture has a significant role in achieving successful knowledge transfer and innovation, and secondly, to identify the organisational mechanisms that can affect the success or failure of knowledge transfer and innovation.

From the empirical data, it was found that companies which have experienced successful knowledge transfer had effective systems that encouraged the knowledge transfer process, had cultures that positively promoted knowledge transfer, and made flexible use of their existing employees and their talents to the best advantage. The three organisations which appear to have a culture of knowledge transfer practices seem to have been successful due to the nature of their work (research-focused being the main business of the organisation) and have the appropriate supportive structures in place to encourage knowledge transfer within their organisations. However, it was unclear as to whether this can be attributed to national or organisational culture, or an interaction of both.

 In contrast, there were organisations also, that had a non-existent culture of knowledge transfer, cited language and cultural differences as reasons for not having been successful in knowledge transfer, had a lack of continuity within business teams, and took an individualistic viewpoint when it came to information exchange. When asked about whether their organisation had really developed into a global learning organisation, the companies were undecided, with the means clustered around 'neither' or tending towards the negative.

Organisations and their management therefore need to be aware that it is crucial to foster a supportive organisational culture where communication is based on trust and openness. These findings concur with Martins and Terblanche's (2003) work which found that in order to create an organisational culture supportive of creativity and innovation, one of the best approaches is based on the open systems approach, where patterns of interaction between people (e.g. values, norms and beliefs), roles, technology and the external environment can investigated, with the understanding that creativity and innovation can be influenced by several of these variables. Within any organisation, the structure, support mechanisms, behaviour that encourages innovation and communication will either support or inhibit creativity and innovation. Yeow and Jackson (2006) write that in modern organisations, amidst the new competitive environment, adopting a complex systems approach will allow organisations to take into account the many variables that such organisations inevitably have to consider.

Indeed, culture has a significant role in helping organisations achieve effective knowledge transfer. Further, organisations have to sustain the knowledge-creating culture through reducing language and cultural barriers between subsidiaries if located in different geographical sites, create a sense of continuity within business teams and promote cooperation within businesses and encourage competition outside the business group. Searle and Ball (2004) suggested that in order to develop trust in organisations, management need to be more active in developing relationships amongst their employees. It was found that there is an important inter-relationship between what is done and how it is done, which was mediated by the strength of the employee-employer relationship.

Trivellato (1997) argues that some nation states (e.g. Japan) by virtue of elements of their societal organisation, labour-market structures and cultural and historical inheritances constitute a learning society within which it is easier for individual organisations to improve and sustain organisational learning and knowledge transfer. Such an observation was confirmed by the participants of this study citing contrasting notions of the meaning of knowledge transfer to Japanese employees and to American employees.

Keep and Rainbird (2000) write about corporations moving towards the model of the learning organization and argue that "the model of the learning organization is at odds with the product market strategies of many organizations and weak in its conceptualization of power relations in the workplace" (p. 174). They write that it is necessary for managers to embrace learning at a fundamental and deep level, perhaps making a change in mind-set as to what learning actually means, without which they deem it highly unlikely that organizational learning will take root within such organisations. Hence, it appears that organisations that take knowledge creation, transfer and management seriously, inculcating it within its organisational culture will be better poised to take advantage of the competitive edge.

In this paper, we showed that organisational culture in its various forms is crucially important in creating a knowledge-creating, innovative, knowledge-sharing organisation. Various organisational mechanisms have been identified through empirical work, demonstrating what works and what does not in transferring knowledge. In line with the overall dimensions and findings of this project, it can be seen that there is a need to pay greater attention to the cultural and social factors within the organisation, and in turn, a high demand for a culture and socialised norms that have been in place and accepted by both employees and management. With these in

place, organisations will have rich networks of employees who possess both tacit and explicit knowledge of how things work around here, who communicate effectively with the right information and who co-operated with fellow employees to create an active *ba*.

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le 1: Summary of organisational characteristics

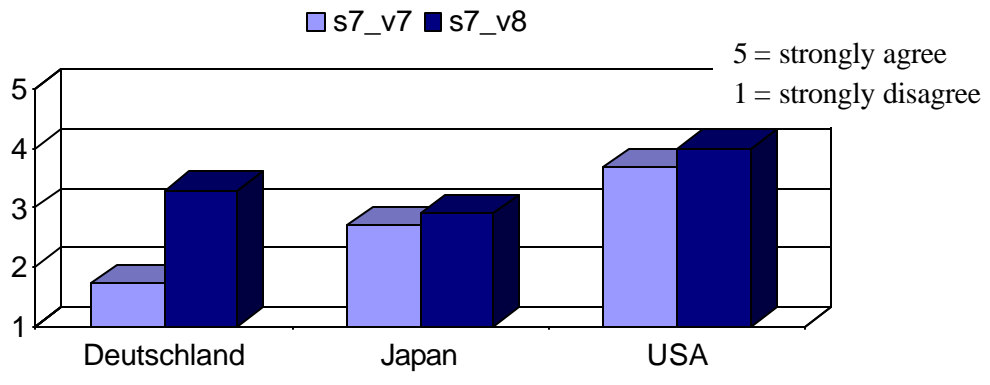|	Co 1	Co 2	Co 3	Co 4	Co 5	Co 6	Co 7	Co 8	Co 9	Co 10
HQ base	DE	DE	DE	DE	DE	DE	DE	DE	CH	UK
Subsidiaries in	Operations in 170 countries, production sites in 100 countries	operations in 63 countries	Operations in 220 countries	Operations in 75 countries	Operations in 100 countries	Operations in 79 countries	Operations in 49 countries	Operations in 50 countries, 27 subsidiaries worldwide	Subsidiaries in more than 110 countries	Subsidiaries in 42 countries
No of employees (total)	ca. 80,000	ca. 90,000	ca. 500,000	ca. 50,000	ca. 4,000	Ca. 37,000	Ca. 28,000	Ca. 17,000	ca. 250,000	ca. 100,000
Industry	chemicals	media	logistics	Cosmetics, home care, chemicals	logistics	Transportation	catering	Aircraft maintenance	Food and beverages	Pharmaceutics
Management style										
Official language	English	?	?	English	English	English	English	English	English	English
					Comment: a 100% subsidiary of mother company	Comment: a 100% subsidiary of mother company	Comment: a 100% subsidiary of mother company	Comment: a 100% subsidiary of mother company		

DE: Germany, CH: Switzerland, UK: Great Britain, JP: Japan,
? unsure

Table 2: Means of organisations												
Items	Co 1	Co 2	Co 3	Co 4	Co 5	Co 6	Co 7	Co 8	Co 9	Co 10	F	Sig.
Q4 Knowledge exchange in this organisation is formal	2.75	2.20	2.74	2.88	2.50	2.18	2.33	2.44	2.74	3.08	2.15	.023
Q6 Knowledge exchange in this organisation is controlled by top management	2.28	2.83	3.10	2.56	2.47	2.36	2.80	2.56	2.57	3.75	2.94	.002
Q7 Knowledge exchange in this organisation is slow	3.17	3.20	3.37	3.52	3.25	2.73	3.80	3.67	2.87	3.92	2.20	.020
Q8 Knowledge exchange in this organisation involves too few employees	2.63	3.26	2.84	3.00	2.90	2.91	3.70	3.44	2.52	3.91	3.21	.001
Q19 The continual exchange of knowledge is an important element of our corporate culture in this organisation	3.9	3.26	3.45	3.40	3.45	3.36	3.20	3.67	3.91	2.67	2.26	.016
Q23 In this organisation, cultural diversity increases the innovation potential	3.88	3.24	3.45	3.48	3.45	3.91	3.50	4.11	3.55	3.33	1.75	0.72
Q24 In this organisation, language barriers inhibit the efficient exchange of knowledge between expats and locals	3.04	2.72	3.20	2.42	2.20	2.00	2.70	2.89	3.09	2.75	2.38	.011
Q25 Language barriers inhibit the efficient exchange of knowledge between the parent company and its subsidiaries	3.00	2.89	3.00	2.36	2.00	2.00	2.20	2.78	3.17	2.67	3.38	.000

Table 3

Q7: In this organisation, it is easier to trust colleagues from your own cultural grouping than from other/foreign cultural groupings.

Q8: Cultural distance has a negative impact on the development of trust between the parent company and its subsidiaries.

5 = strongly agree
1 = strongly disagree