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# Knowledge Transfer from Portugal Telecom to Oi: The Role of Expatriates

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# ABSTRACT

The present study intends to explore the types of knowledge transferred from the headquarters to the subsidiary. As well as to clarify the role that expatriates play in the process of knowledge transfer. For this study, we used the case study of Portugal Telecom (parent) with the Brazilian Oi (subsidiary).

Quantitative and qualitative methods were applied. In order to strengthen the results obtained with the quantitative methods (questionnaires), the expatriates who were involved in the project of knowledge transfer from Portugal Telecom to Oi were also interviewed.

The study indicates that expatriates are actively involved in the areas of knowledge transfer. Finally, this study concludes with the limitations and suggestions for future research.

Keywords: Knowledge Transfer, Expatriate, Corporation

JEL classification: F2, M1

# RESUMO

O presente estudo pretende explorar os tipos de conhecimento transferido da casa mãe para a subsidiária. Bem como clarificar o papel que os expatriados desempenham no processo de transferência de conhecimento. Para este estudo é utilizado o caso de estudo da Portugal Telecom (casa mãe) com a brasileira Oi (subsidiária).

Foram aplicados métodos quantitativos e qualitativos. Com o objectivo de fortalecer os resultados obtidos via questionário (quantitativos), foram também entrevistados expatriados que estiveram envolvidos no projecto de transferência de conhecimento da Portugal Telecom para a Oi.

O estudo indica que os expatriados participam activamente nas áreas de transferência de conhecimento. Por fim, este estudo é concluído com as limitações e as sugestões para pesquisas futuras.

Palavras chave: Transferência de Conhecimento, Expatriados, Corporação

Classificação JEL: F2, M1

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# CHAPTER I – CONTEXTUALIZATION

## 1.1 Theme / Topic and its relevance

The present study preconizes its relevance not only in cementing symbiotic bridges between the academic and business approach, by maximizing the synergistic potential of increasing the possibility of sustainability of business management models, as also to the understanding of the implied tangible and intangible variables of the equation of successful knowledge management.
The globalization of markets and production has caused a primary change of corporate strategy in many companies. The ability to create and transfer knowledge internally is one of the main competitive advantages of multinational corporations.

The multinational corporations are considered to be a differentiated network, where knowledge is created in several parts of the multinational corporations and transferred to various inter-related units (Hedlund, 1986; Bartlett and Ghoshal, 1989). Against this backdrop, knowledge, knowledge transfer, competence development in multinational corporations, and related issues have been studied both separately and in relation to each other from different perspectives within different disciplines for a long time (Boekema *et al*., 2000). Several recent theoretical perspectives such as the resource-based and the knowledge-based views of the firm share the focus on knowledge. Both of the theories see knowledge as the most important resource and the one with the greatest potential for providing sustainable competitive advantage for the firm (Grant, 1996; Davenport and Prusak, 1998). It suggests that firm specific knowledge development is dependent upon its competitive capabilities and its ability to access and transfer such capabilities. Hence, the ability of how multinational corporations manage knowledge transfer has become one of the central issues of research in the international management literature.

Due to the critical role of international knowledge transfer within multinational corporations, there has been increasing interest in understanding the difficulties related to such transfers. This is also related to the fact that for a long time it has been recognized that such internal transfer is not very successful (e.g., Kedia and Bhagat,

1988; Zander and Kogut, 1995). Such difficulties have been attributed to the existence of "stickiness factors" (Szulanski, 1996; Teece 1977; Von Hippel, 1994). The term "stickiness" has been applied in various ways to capture such notions as immobility, inertness and inimitability (Szulanski, 2003, p.12). When applied more specifically to the transfer of information and knowledge, stickiness has come to represent an aggregate measure of multiple factors that block transfers, relating to the characteristics of knowledge as well as to the characteristics of the source, the recipient, and the context (Minbaeve, 2007). Accordingly, stickiness has been defined as the degree of perceived difficulty in transferring knowledge in organizations, which in turn refers to the extent of problems (e.g., communication difficulties, unmet expectations) and the extent of eventfulness (the escalation of disruptive, transfer-related problems) (Jensen and Szulanski, 2004).

## 1.2 Research Context

Back in 2012. Portugal Telecom was the largest telecommunications service provider in Portugal. Portugal Telecom and Brazil's Oi agreed to merge and form a new Portuguese based-operator to leader in all Portuguese language markets and clearly compete against Telefonica. This new operator was evaluated in 17$ Billion and would be positioned to take advantage of the growth in Latin America as Europe's phone market shrinks.

Brazil's economic and social progress between 2003 and 2014 lifted 29 million people out of poverty and inequality dropped significantly (the Gini coefficient fell by 6.6 percentage points in the same period, from 58.1 down to 51.5). The income level of the poorest 40% of the population rose, on average, 7.1% (in real terms) between 2003 and 2014, compared to a 4.4% income growth for the population as a whole. Portugal Telecom's administrators believed that Brazil was an excellent opportunity with its huge market to invest and to become the biggest operator in the Portuguese language market.

## 1.3 Research Objectives

The goal of this study is to answer the following research question: What types of knowledge were being transferred from Portugal Telecom headquarters to Brazil's Oi?

To address this research question, we will develop a model to examine what contextual dimensions may have significant impacts. The model is based on the argument that knowledge is embedded within a set of contextual dimensions that are critical to the company's ability to hold, utilize and extract value from the knowledge. We argue that the contextual variables at the recipient country may have different levels of impact on the difficulty of knowledge transfer to achieve the following research objectives:

- Identify the types of knowledge transferred.
- Clarify the participation of expatriates in these transfers.

## 1.4 Research Structure

This thesis is composed by six chapters. The current introduction chapter presents the study background and the objectives of the thesis. The following chapter will review research on knowledge and knowledge transfer. Based on the literature review, the third chapter develops a framework concerning the factors that influence international knowledge transfers through expatriates. In the fourth chapter, we will discuss the methodology, research design and data analysis. In the following chapter, fifth, the results and the main findings. In the final chapter, we will address the conclusions of the research study and also the limitations and the suggestions for future research.

# CHAPTER II – LITERATURE REVIEW

## 2.1 Knowledge Definition

According to Awad and Ghaziri (2004), knowledge is a higher abstraction that resides in the minds of people, encompassing skills, perception, common sense, training, and experience. Gallup et al (2002) define knowledge as information whose validity is established through proof tests. Dixon (2000) points out that knowledge is the meaningful link for people who make their minds between application and information into action in a particular setting. Wiig (2004) defines knowledge as perspectives and concepts, facts, mental reference truths, models and beliefs, expectations and judgments, know-how and methodologies. Liebowitz and Wilcox (1997) describe knowledge as a whole set of experiences, insights and producers that are considered true and correct and thus guide the communication, behaviour, and people's thoughts. Thus, knowledge is referred to as concepts, perspectives, facts and higher abstraction level that are present in people's minds. Rennie (1999) defines knowledge as a series of knowledge know-how, what and know-who.

According to Nonaka and Takeuchi (1995), knowledge is a dynamic human justifying personal belief process towards the truth. Sveiby (1997) refers that knowledge is the capacity of an individual to act. Applehans et al (1999) point out that knowledge is the ability to turn the data and information into effective actions. Knowledge is a fluid mix of framed values, experience, expertise and contextual information insight that provide a framework for incorporating and evaluating new information and experiences. Knowledge can be created by adding value to the data through categorizing, contextualizing, calculating, condensing and correcting it (Davenport and Prusak, 2000). Thus, knowledge is the ability to act, also providing a framework for including and evaluating new information.

Desouza et al (2005) define knowledge as information in context. Knowledge is information that is combined with context, experience, reflection, interpretation, creativity and intuition. Information is referred to as knowledge when it processes in the individual's mind. This knowledge again becomes information once it is

communicated or articulated to others in the form of computer output, text, writing, and spoken words or by some other means. Knowledge's six characteristics can differentiate it from information; knowledge is the thinking residue, it is a human act, it belongs to communities, it is created in the present moment, it circulates through communities in various ways, and new knowledge will be created at the old boundaries (Groven and Davenport, 2001).

Danskin et al (2005) point out that knowledge originates at the group, individual and organizational levels. Knowledge is interpreted and used by these individual, organizational and group levels. Bennet and Bennet (2004) state that knowledge is created through various human processes involving situational, social, institutional and cultural factors. According to Bender and Fish (2000), knowledge is making use of social and intellectual contingencies that guide the communication, thought and people's behaviours. Wah (1999) writes that knowledge is a human's personal asset and represents the network's efforts, pooled expertise and alliances. Stewart (1997) describes knowledge as an asset like equipment or money, which exist and are worth cultivating only in the context of the strategy used to apply them. Argot and Ingram (2000) refer to knowledge as the condition or fact of knowing something with a familiarity that is gained through experience. It is the range of an individual's understanding or information.

Knowledge consists of the cumulative experiences, attitudes and developed skills that enable personnel to systematically, consistently and effectively perform a function. It concentrates more on subtleties like understanding meaning, forming attitudes, interpreting new circumstances and making realistic application to various situations (Doz and Santos, 1997). Our understanding about knowledge is that knowledge is a awareness and understanding of something, sush as facts, information, descriptions, or skills, which are acquired through experience or education.

## 2.2 Tacit and Explicit Knowledge

According to Wang Ed *et al*. (2001), knowledge is categorized into two types: tacit knowledge, also referred to as personal informal knowledge, and explicit knowledge, also known as formal knowledge. Explicit knowledge is the knowledge that may be expressed in language and transferred among individuals. Tacit knowledge is the knowledge rooted in the individuals' experience and involves people's perspectives, beliefs and values. Nonaka (1994) states that tacit knowledge is profoundly rooted in commitment, action and involvement in a particular context. Liebowitz and Beckman (1998) point out that tacit knowledge is automatic and needs little or no time, thought and support to determine how organizations make decisions and influence collective members' behaviour. Explicit knowledge is systematic and formal; hence it can be easily shared and communicated. Calo (2008) affirms that tacit knowledge is cognitive or technical and made up of mental values, models, beliefs, insights, perceptions, and assumptions. Technical tacit knowledge occurs when individuals master a particular body of knowledge or utilize skills that are developed gradually by the master craftsman. Cognitive tacit knowledge includes implicit mental perceptions and models that are so ingrained that are taken for granted.

Tacit knowledge is combined or grouped according to context, content and orientation. Depending on the situation and person, one or more tacit knowledge types may be used in different orientations and contexts. The knowledge of content is used to manage one's tasks, or the tasks of others. Context is described and related to local and global situations. Local means doing the task at hand, (Noe, 2008) whereas global is how a present situation fits into the bigger picture. Liebowitz (2000) states that explicit knowledge is the tangible idea that involves words or numbers that are shared in the data form.

Ellis and Barkhuizen (2005) point out that explicit knowledge is the knowledge that is captured and written or noted down in databases or documents. Examples of explicit knowledge include written procedures, best practices, instruction manuals, lessons learned and research findings. Explicit knowledge is categorized as unstructured and structured knowledge. Examples of structured knowledge include documents, spread sheets and databases, because the information or data in them is organized in a specific way for future data retrieval. Examples of unstructured knowledge include images,

emails, audio and video selections and training courses, because the information is included and not referenced for future retrieval.

According to Nonaka and Takeuchi (1995), tacit knowledge is seen as being practical, subjective and analogue. It is hard and highly personal to formalize; thus, it is complex to communicate to others. It is profoundly rooted in the action and in an individual's commitment to a particular context like a profession or a craft, a specific technology or product market or work activities of a team or group. Explicit knowledge is perceived to be theoretical, objective and digital. Explicit knowledge is systematic and formal and thus can be easily shared and communicated, such as products' specifications, a computer programme or a scientific formula.

Hansen *et al* (1999) point out that explicit knowledge is technical and needs a high level of understanding or academic knowledge, which is gained through structured study or formal education. Explicit knowledge is codified, stored in a database hierarchy and can be accessed with reliable, high quality, fast information retrieval systems. Once carefully codified, the assets of explicit knowledge can be reused to solve many types or problems or connect people with reusable, valuable knowledge. Sharing processes often need major investments of money in infrastructure that is needed to fund and support information technology.

Chait (1998) refers that explicit knowledge is academic or technical data or information that is described in formal language such as mathematical expressions, manuals, copyright and patents. This systematic knowledge or know-what is readily communicated and shared through electronic methods, print and other formal means. Kogut and Zander (1992) state that knowledge transfer is divided into organization-external and internal transfer. External transfer of knowledge is of primary interest and is initiated unintentionally and intentionally by the source, occurring by chance or started by the recipient.

According to Cohendet *et al* (1999), tacit knowledge can be transmitted through both observation and language. Practice and imitation contribute to its transmittal. It is geographically and individually limited. People transmit tacit knowledge to others and create networks for transferring the knowledge. Ambrosini and Bowman (2001) refer that tacit knowledge is particular or specific to a context. It is rooted in craft actions or

professions. It utilizes specific technologies. Tacit knowledge may grow out of a team or group, and is difficult to write down. People with tacit knowledge have stickiness explaining the decision rules that support the performance. It is both technical and cognitive. The cognitive features encompass mental models of how the world works.

These mental models comprise beliefs, schemata, viewpoints and paradigms. The tacit knowledge's technical characteristic includes crafts, know-how and skills pertaining to specific contexts. Castillo (2002) writes that tacit knowledge is the kind of skills that are not codified in explicitly stated rules. Tacit knowledge is what individual people carry in their minds and find it very complex to access. Tacit knowledge transfer will happen through trust and personal contact, and this very valuable. Explicit knowledge is what is codified or documented and can be transferred easily to others. Procedures, processes, journals, drawings, manuals and similar artefacts come under explicit knowledge.

Pavlicek (2009) and Dampney *et al* (2002) state that the properties of tacit knowledge are highly individual and personal, residing in human minds, know-how, experts-knowledge, and experience. It is knowledge in action, learned through skills, experiences, intuitive feeling, observation, mental models, beliefs, and values. It is unstructured, difficult to see, estimate, codify, investigate, write down, formalize, capture and communicate accurately, job specific, and context-specific. It is unconscious knowledge (both unknown and known to the holder) transferred through narrative in the form of storytelling, discussions and conversation.

Explicit knowledge properties are articulated, documented and structured, learned through instruction, repetition or recitation. They can be found in journals, books, databases and other forms, and are easy to codify, recognize, store, formalize, share, communicate and use, consciously accessible, academic knowledge and know-that, know what. Kikoski *et al* (2004) point out that explicit knowledge is what may be embodied in a language or code. Consequently, it can be communicated and verbalized, transmitted, processed and stored relatively easily. It is public and the conventional knowledge form that can be found in journals, book and mass media like television, newspapers, and the Internet, among others. It is the sort of knowledge we are aware of using, and which may be shared in the form of scientific formulae, data, and manuals. The explicit knowledge's ideal example is patents. On the other hand, tacit knowledge

is personal and very difficult to formalize as it is rooted in procedures, action, values, commitment, and emotions. Tacit knowledge is the unconventional knowledge form and is not codified.

## 2.3 Knowledge Management

According to Servin (2005), knowledge management is the conscious discipline. Evolved from the thinking of pioneers and academics like Peter Drucker in the 1970s, Karl-Erik Sveiby in the late 1980s, and Nonaka and Takeuchi in the 1990s. During that time, technological, social and economic changes were transforming the way firms worked. Globalization had emerged, bringing new chances or opportunities and increased competition. Companies responded by merging, downsizing, acquiring, outsourcing and re-engineering. Many streamlined their workforce and boosted their profits and productivity by using advanced network and computer technology.

Although the word knowledge management evolved in the late 1980s, it had been used for many decades earlier. Philosophers, librarians, writers and teachers had been using knowledge management for some time, with a number of notable management theorists such as Paul Strassmann, Peter Drucker and Peter Senge in the U.S. significantly contributing to the its evolution. Strassmann and Drucker stressed the growing significance of explicit knowledge and information as organizational resources and Senge focused on the learning organization that is managing the cultural dimension of knowledge. (Barton, 1995).

Classical economics theory does not fully understand the value of knowledge as an asset of an organization. However, in the mid-1980s, knowledge started to be considered an asset in terms of competitiveness, specifically with regard to the competences of professionals. Still, most organizations did not have the methods and strategies for managing knowledge. At the time, Drucker named the term knowledge worker. In the late 1980s, the ideas of knowledge were developed together with artificial intelligence, giving rise to concepts such as knowledge engineering, knowledge-based systems, knowledge acquisition, and other computer-based ontologies. In the 1990s, many consultants and academics were starting to speak about the concept of knowledge

management (KM), with KM becoming the new business practice. In 1995, only KM received the significant attention of organizations and corporations. KM became a rage and an alternative to the failed TQM (Total Quality Management) and re-engineering business process initiatives (Kinetika, 2008).

Ouinters *et al* (1997) write that knowledge management is to develop, discover, deliver, utilize and absorb knowledge outside and inside the organization through a process of appropriate management in order to meet present and future needs. According to Allee (1997), Davenport and Prusak (2000) and Alavi and Leidner (2001), knowledge management is managing the knowledge of the corporation through an organized and systematically specific process for organizing, acquiring, sustaining, sharing, applying and renewing both the explicit and tacit knowledge of employees to improve the performance of the organization and create value. Gupta *et al* (2000) point out that knowledge management is the process that supports organizations to select, find, organize, transfer, and disseminate the essential information and expertise necessary for their activities.

Bhatt (2001) describes knowledge management as the process of knowledge validation, creation, presentation, application and distribution. Holm (2001) refers that knowledge management is all about doing things at the right time, obtaining the right information for the right people, helping people share the knowledge and act on information. According to Horwitch and Armacost (2002), knowledge management is the extraction, creation, storage and transformation of the correct information and knowledge to design better policy, modify the action and deliver outcomes. Abell and Oxbrow (2001) state that it is the creation and management of an environment that encourages knowledge to be shared, created, learned, organized, enhanced and utilized for the organization's benefit and that of its customers.

Skyrme and Amidon (1997) point out that knowledge management is the systematic and explicit management of vital knowledge and associated processes of creating, organizing, disseminating, gathering, using and exploiting it. It needs turning staff knowledge into corporate knowledge, which should be widely shared throughout the organization and applied appropriately. According to the Office of the e-Envoy (2002) (currently known as British e-Government Unit), knowledge management is a corporate

discipline and a new approach to harnessing, identifying and exploring collective organizational talents, information, know-how and expertise. Nonaka and Takeuchi (1995) refer that knowledge management is the organization's capability to create new knowledge and disseminate it to the entire organization, embedding it in goods, services and systems.

O'Leary (1998) write that knowledge management is managing the knowledge of the organization by structuring, disseminating, creating and applying it to enhance the performance of organizations. Alavi and Leidner (1999) refer that knowledge management is the process of organizing, acquiring and communicating the employee's knowledge so that others can be more effective in their work. Andriessen (2004) points out that knowledge management is the process of obtaining, organizing and communicating knowledge. Newman (1992) argues that knowledge management is the processes that govern the creation, dissemination and knowledge utilization. Kinetika (2008), defines knowledge management as the integral and systematic approximation that permits monitoring, managing and sharing knowledge within the organization.

According to Afrazeh (2009), knowledge management is the process of confirming, creating, presenting and applying knowledge. Sturgeon *et al* (2008) state that knowledge management is the process through which an organization produces the knowledge and intellectual value-based property. Foss *et al* (2002) describe knowledge management as the activity or process of creating, possessing, obtaining, sharing and applying any knowledge. It is the learning result that provides the only sustainable-pooled expertise, particular relationships and alliances, and the value-added activities and behaviour. Levinson (2008) refers that knowledge management is the process through which organizations generate value from their intellectual and knowledge-based assets. Generating value from such knowledge-based and intellectual assets involves codifying among departments, partners, employees, customers know and sharing the information.

Sveiby (1997) refers that knowledge management is the leveraging of the company's intellectual assets to meet defined business objectives. Wang and Xiao (2009) state that knowledge management is the process of gaining intelligence and experience in an organization and using knowledge management for nurturing innovation through

continuous learning. It supports organizations to become more flexible and act as learning environments. For knowledge management, we intended that is the process of creating, sharing, using and managing the knowledge and information of an organization.

## 2.4 Knowledge Transfer

Szulanski (2000) writes that knowledge transfer is a process in which an organization creates and maintains complex, ambiguous routines in a new setting. Argot and Ingram (2000) point out that knowledge transfer is a process in which one unit, such as a division, group or department, is affected by another's experience. Knowledge transfer is the process through which knowledge, expertise, capabilities and skills are transferred from the knowledge base. The purpose of knowledge transfer is to facilitate and catalyse innovation (Robert Ed *et al*, 2012). Watson and Hewett (2006) describe the storage and codification of existing knowledge into knowledge databases or repositories that will help access and use knowledge in future. Gooderham (2006) refers that new knowledge is the process of assimilation or accumulation of knowledge in the receiving unit. Thus, knowledge transfer is the process through which capabilities, skills and knowledge are transferred.

According to Christensen (2007), knowledge transfer is identifying previous and accessible knowledge and apply it in order to solve particular tasks faster, cheaper and better. For Riege (2007), knowledge transfer is the priority application of knowledge to new learning. Lucas (2006) refers that knowledge transfers are an attempt made by an entity to copy particular knowledge type from another entity. Wong *et al* (2003) point out that knowledge transfer is a systematically organized process that exchanges skills and information between entities. Inkpen and Tsang (2005) describe knowledge transfer as a process through which one relationship partner will be affected by another's experience.

Schwartz (2006) argues that knowledge transfer is the unidirectional, focused knowledge communication between groups, individuals or organizations and that the knowledge recipient has a cognitive understanding and the capacity to apply the knowledge. According to Ko *et al*. (2005), knowledge transfer is a dyadic

organizational knowledge exchange between a source and a unit of a recipient where the recipient identity matters. OECD (2000) points out that knowledge transfer is the professional dissemination of knowledge from one person to another. Gold *et al* (2001) state that knowledge transfer is the act of transferring knowledge from one individual to another by means of training, mentoring, documentation and other forms of collaboration.

Gopalakrishnan and Santoro (2000) describe knowledge transfer as a more inclusive construct directed at perceiving the antecedents for action in an environment. Foss *et al* (2002) point out that knowledge transfer is the transfer of either external market or expert global relevant information. Doz and Santos (1997) refer that knowledge transfer is the process of transferring operationalization knowledge. This will happen in the form of information, data, parts, blueprints, machines, subassemblies or other form of information to represent knowledge. Knowledge transfer is generally based on five elements: the perceived knowledge value of the source unit, the motivational source disposition, the transmission channel's existence and richness. The motivational receiving disposition unit and the absorptive capacity of the receiving unit have the ability to access and use the knowledge (Gupta and Govindarajan, 2000). Davenport and Prusak (2000) state that knowledge transfer is the communication that involves both information transmissions to a recipient and transformation and absorption by that group or person.

Watson and Hewett (2006) write that knowledge transfer is the learning aspect through which one can obtain knowledge from an external entity. According to Ngoc (2006), knowledge transfer is influenced by a set of three factors, namely context-related, knowledge nature-related and source and recipient-related factors. Concerning the source and recipient-related factor, the absorptive and retentive capacity and the motivation either hinder or facilitate the process of knowledge transfer. Regarding the knowledge nature, the higher level of tacit knowledge is more difficult in the process of knowledge transfer, for tacit knowledge will not be codified and transferred. For tacit knowledge transfer to be effective, it requires more involvement and interaction between the source and recipient. Thus, the context-related factor encompassing leadership, organizational culture, and the infrastructure of information technology, the richness and availability of communication system inside a firm are very critical in

creating a condition for knowledge transfer. Thubbas (2001) states that knowledge transfer is the objective-oriented knowledge transmission from a group, an individual or organizational entity to another group, and individual or organizational entity. Probst *et al* (2003) point out that knowledge transfer is the knowledge transmission from a sender to a receiver.

According to Goh (2002), knowledge transfer needs the willingness of the individual or group to work with others and transfer knowledge to their mutual benefit. Without a sharing process, knowledge cannot be transferred to another person. This indicates that the transfer of knowledge will not occur in an organization unless its work groups and employees denote a high co-operative behaviour. Bender and Fish (2000) state that knowledge cannot be transferred from individual to individual nor from individual to group or team, the same applying to group or team to individual or team or group to group or team. Carlile and Rebentisch (2003) point out that knowledge transfer is the area of KM that is concerned with knowledge movement across boundaries and that is created by domains of specialized knowledge.

Hooff and Ridder (2004) refer that knowledge transfer involves either actively consulting others to learn what they know or actively communicating to others what they know. When employees or firms within an organization identify knowledge that is critical to them, then they can use the mechanisms of knowledge transfer to acquire that knowledge. In an organization, knowledge transfer at higher levels includes product line, group, division or department. The process of knowledge transfer has two components: the sender or source that shares the knowledge and the receiver who acquires the knowledge.

According to Liebowitz and Wilcox (1997) and Nonaka and Takeuchi (1995), knowledge transfer is the knowledge management aspect. Tirana (2001) writes that knowledge management encompasses knowledge innovation, creation, access, database development, retrieval, and transfer. Knowledge transfer occurs when actionable information and knowledge are exchanged or imported within the system and adds value. For us, knowledge transfer is the process of transferring knowledge from one part to another.

### 2.4.1 Approaches to Knowledge Transfer

According to Seidman and McCauley (2005), the common formal approaches to knowledge transfer are: knowledge management systems, instructor-led training, operational and management process binders, and e-learning systems. KM (knowledge management) systems are those that transfer knowledge using search engines, database, and communities of practice, portals and other technologies. E-learning systems use Internet technology in order to transfer slide driven, self-paced, and self-tested content. The process of operational and management binders are lengthy compilations of expert content. By following the procedures, clients will be able to learn and apply it to the content. Instructor-led training is classic training, very common in most organizations.

Table 1 - Standard Approaches To Knowledge Transfer

| **Standard Approaches** | **Quality of knowledge** | **Ability to move knowledge** | **Users willingness and ability to use knowledge** |
|---|---|---|---|
| **KM systems** | **Poor:** Difficult to tell if knowledge is good or not. | **Poor:** Difficult for consumer to locate knowledge. | **Poor:** Difficult to establish context and application. |
| **E-Learning** | **Poor:** Based on marginally relevant "official" story. | **Good:** Anyone with internet access can get it. | **Poor:** Very cold, ineffective medium with little feedback. |
| **Operational and Management Process Binders** | **Poor to Mediocre:** Sometimes good procedural knowledge but usually an "official" story lacking nuance integration and decision making. | **Excellent:** Easy to distribute to the masses. | **Poor:** Very difficult to use due to size, complexity, and usually non-engaging format. |
| **Instructor-led Training** | **Poor to Excellent:** Very dependent on personal knowledge of the course designer and instructor. Designers and instructors with real, hands-on experience can be great, but most have minimal actual experience. Courses become an "official" story. | **Poor:** Limited to the number of people who can attend a class, the number of instructors, and availability of facilities. | **Poor to Excellent:** Some emphasis on motivation and application depending on the instructor. Usually lack of practical application and, therefore difficulty sustaining the impact. Too much information, too fast. |

Source: Seidman and McCauley (2005)

Table 1 illustrates the standard approaches to, and conditions for transferring knowledge. Knowledge management systems are very ineffective at transferring knowledge for many reasons. They have only minimal capability for distinguishing between poor and good knowledge, make it complex for the user to find and isolate the appropriate information needed, and give little useful information in order to facilitate application. KM systems are very expensive to implement. Even though knowledge management systems have received the essential amount of publicity in recent years, overall KM systems are the least cost-effective approach for knowledge transfer (Seidman and McCauley, 2005).

According to Seidman and McCauley (2003), e-learning systems are very effective at training functions that are highly proceduralized, and efficient in enabling many users to review the content. However, e-learning systems are sometimes problematic. They are usually developed by consultants and training groups with some direct functional experience. Most e-learning systems are boring, although they can be enhanced with programmed learning, sharp graphics and streaming video. E-learning is passive learning for the users. It does little to guide immediate knowledge application, motivate learning or sustain use of knowledge, and, like knowledge management systems, it may be expensive. Purchasing or developing the underlying system of learning management is expensive and changing the classroom training into e-materials may be expensive.

Seidman (2004) points out that the process binder describes a different picture. Content quality in process binders differs tremendously depending on how the content matters. Sometimes true subject matter experts participate in content creation. This tends to transfer knowledge in a more realistic and valuable manner, which is better than the knowledge held by the population. When the subject experts join or participate in content development, binders are usually very official and procedural, containing operational checklists and specific lists that quickly become out-dated. Process binders lack in trade-offs, nuances guidelines and integration for real decision-making, and these are essential for better knowledge. Even though the binder's process is inexpensive to distribute and develop, it often fails regarding the customer's ability, willingness and better knowledge to use the knowledge criteria. Instructor-led training is a more difficult picture. Training is the common form of formal knowledge transfer in any organization, but like other knowledge transfer approaches, it has only mixed

success. The training quality is dependent on the development process, especially the subject matter expert's role and on the skills and knowledge of the instructor. When experts who are highly experienced on the subject are profoundly involved in the development of course materials and actively participate in the learning experience, instruction can be truly extraordinary. Courses that are well designed and delivered may not always provide superior content, but can motivate learners who attend them in order to learn and use content. Still, few instructor-led courses are extraordinary. But most of the time, the content of courses is developed by professional instructional designers with minimum functional knowledge. Thus, in order to achieve effective knowledge transfer, these approaches have to be altered and developed. (Seidman and McCauley, 2003).

According to Augier and Vendelo (1999), tacit knowledge is highly individual and attainable only through personal experience and practice, and diffusion is impossible with this type of knowledge. Nonaka and Konno (1998) refer that language and perception are the main stickiness in transferring tacit knowledge. Unconsciousness is the problem for people (recipient), who are unaware of the knowledge's full range. Whereas formalized explicit knowledge can be identified easily in oneself, the feeling of a missed connection or intuition fundamentals (perception) are very difficult to be viewed and identified. Another difficulty with the language is intangible tacit knowledge, which will be in a non-verbal form. For most people, expressing something natural will be challenging and hard. Deeper knowledge and more experience direct to higher knowledge tacitness and this leads to greater stickiness in expressing the knowledge.

Augier and Vendelo *et al* (1999) stress that time is another important factor of stickiness. Time also increase the challenges for transferring tacit knowledge. Internalizing this tacit knowledge needs a long time for both organizational and individual forms of knowledge. Zack (1999) points out that value is another stickiness posing a challenge in transferring tacit knowledge and explicit knowledge. Many tacit knowledge forms, like rule-of-thumb and intuition have not been considered much valuable. Value is associated with certain forms of measurement. Tacit knowledge is extraordinary and unusual. Knowledge is a valuable asset, so, when transferring tacit knowledge, the source has to be carefully valued through his/her knowledge.

Holtshouse (1998) and Leonard and Sensiper (1998) point out that distance also raises stickiness when transferring tacit knowledge. To transfer tacit knowledge face-to-face interaction is necessary, but organizations tend to disperse into more distant, global or virtual forms. Thus, face-to-face interaction is not possible in some cases, and this will definitely increase stickiness, particularly when transferring tacit knowledge.

Likewise, Haldin-Herrgard (2000) states that language, perception, value, distance and time are the stickiness associated with transferring tacit knowledge. The inherent tacit knowledge qualities, like hard to articulate (Spender, 1995), non-codification (Nonaka and Kanno, 1998), complication in warehousing (Hansen, Nohira and Tierney, 1999), and difficulties in communication (Ambrosini and Bowman, 2001) work as a catalyst to the barriers of knowledge transfer. Stenmark (2000) wrote that tacit knowledge is very elusive when compared to explicit knowledge. The stickiness and causes of failure in the process of externalization are due to unawareness of our own tacit knowledge. On a personal level, we are not interested in making it explicit that is in codified format and we do not want to give up our most valuable competitive advantage.

Davenport and Prusak (2000) point out that several frictions (cultural factors), like different cultures, lack of trust, giving reward and status to the knowledge owners, vocabularies, narrow idea of productive work, frames of references, treating knowledge as a prerogative of specific groups, and lack of time and meeting places, slow or prevent knowledge transfer and erode certain knowledge, and attempts to move through the organization. They also suggested that people who share general and common work culture will communicate better, thus making the transfer of knowledge more effective. Easterby-Smith, Lyles and Tsang (2008) refer that the meaning of strategically significant knowledge can be destroyed or distorted when the knowledge is transferred to a different culture.

### 2.4.2 Characteristics Influencing Knowledge Transfer

The characteristics that influence knowledge transfer are those of the source and recipient, knowledge and context. The source and recipient characteristics encompass the source's reliability, the source's abiliy to explicate knowledge, the receiver's absorptive capacity, which is assimilation, acquisition, exploitation and transformation

of knowledge and also the motivation of both partners. These high value characteristics positively influence both the unintended and intended knowledge transfer (Szulanski, 1996). According to Matusik and Hill (1998) and Simonin (1999), the characteristics of knowledge include specificity, ambiguity, dependency, complexity of other tacitness and knowledge. The characteristics of the context in which knowledge transfer occurs are subdivided into categories, namely compatibility, relationship, protection, and infrastructure measures.

Van Wijk *et al* (2008) and Williams (2007) point out that governance means the set of policies and processes affecting the way the knowledge transfer is administrated, directed or controlled. To choose the governance mechanisms, two knowledge characteristics are proposed: context ambiguity and content ambiguity. Content ambiguity is the content of knowledge transfer that is being partial and ill structured because of non-codification, non-verbalization and complexity. Context ambiguity is the adaptability of knowledge transfer, which is contingent on the context, and the knowledge is transferred due to its specificity.

Szulansky (1996) noted that the presence of internal stickiness (barriers) impedes knowledge transfer within an organization. The origin of the stickiness depends on the characteristics of the knowledge source, on the characteristics of the knowledge transferred, on the characteristics of knowledge recipient, and on the characteristics of the context. Regarding the characteristics of the transferred knowledge, casual ambiguity refers to the stickiness to detect a cause for a fact. When a correct reason for the failure or success of a practice cannot be identified, then the knowledge involved will identify the critics of its transfer, and potential invalidity, that is, knowledge without the proven record of past success is more difficult to transfer. The characteristics of knowledge source include lack of motivation on the part of the source of knowledge, who feels he/she will not have the incentives for transferring the knowledge to others, and not being perceived as reliable, as the more trustworthy and experienced the source is, the more he/she will influence the recipient. One of the characteristics of the knowledge recipient is lack of motivation, which will affect the knowledge transfer. Accordingly, both the recipient and the source should have incentives to accept the source's role. Another characteristic is lack of absorptive capacity, meaning that the recipient is unable to exploit the external knowledge source,

and lack of retentive capacity, which means that the knowledge transfer will only be effective when the recipient is able to retain and use what is transferred. The new knowledge institutionalization indicates the retentive capacity. The characteristics of the context are: barren context of organization, that is, a context that hinders the process of knowledge communication; arduous relationship, since when tacit knowledge is involved, mutual trust and a good relationship among employees is necessary. Communication has to be quick and easy, otherwise people will prefer not to communicate.

According to Araujo and Novello (2004), Jensen and Szulanski (2004), Iliev (2004), Rerup and Szulanski (2004), and Majumdar (2000), knowledge stickiness is the propensity of a specific form of knowledge to remain within the organization boundaries or other specific contexts. Szulanski *et al* (2004), Szulanski and Jensen (2006), von Hippel (1998), Voelpel (2006), and Mahoney and Williams (2003) point out that stickiness illustrates how difficult it is for knowledge to transfer outside a particular context. Szulanski (1996) refers that knowledge stickiness occurs due to the existence of professional and organizational antecedents. Szulanski noted that importing new organizational practices from an international context into a national organization mostly failed to fulfil the management's expectations

## 2.5 Mechanisms for Knowledge Transfer

Carpenter *et al* (2005) point out that the key elements of knowledge transfer are audience, messenger, message, activities and evaluation or effects. It is essential to define the target audience for knowledge transfer. The potential users of knowledge may vary widely in terms of their needs and background. This may encompass media representatives, academics, volunteers and nonprofit organizations. According to Abernathy *et al* (2001), the message should be clear and easy to understand, concise ,that is, must be easy to read, consistent, that is, must be related to information and to the concept. It should depend on a body of knowledge. The source of the transfer of knowledge should be given credit so that the message is passed in a more effective manner.

Lovers *et al* (2003) write that some activities of knowledge transfer, for example face-to-face interaction or meetings, are more interactive than others, such as producing resources for information. For the effective transfer of knowledge, audience is more important. Examples of activities of knowledge transfer include delivering workshops and presentations, developing a new website or using an existing one, producing information resources like fact sheets, reports and tip sheets, creating video or audio tapes, producing training materials like tool kits, manuals and similar, participating in conferences, seminars and fora related to the knowledge, holding discussion and roundtable meetings, using local media for announcements, announcements, interviews, publishing articles, and arranging on-site visits or field trips. Evaluation explains the effects that are expected as an outcome of transferring the knowledge. These effects may take place in the organization or in the recipients of that knowledge.

According to Truch *et al* (2002), the key steps in the process of knowledge transfer are: identifying critical knowledge to manage, implementing a successful transfer methodology, engaging key personnel, providing support and recognition, and the process of measuring, assessing and refining if necessary. Knowledge transfer begins with an assessment of knowledge risk. Beginning the knowledge transfer requires analysing certain questions for all levels of employees, such as: what knowledge is required in order to perform a function successfully? What is the most efficient way to articulate, capture and transfer this knowledge? It is significant that not all knowledge transfer is worth retaining. For example, some knowledge may be alternatively outsourced to experts or grow obsolete due to technology advancement. It is crucial to engage personnel in knowledge transfer throughout their careers in order to capture both micro and macro knowledge and tacit and explicit knowledge. Knowledge sharing is a circular process that starts with the new employee's orientation through the employee's continuing development, concluding with the sharing of the experience of the employee who is nearing retirement. At this phase, we have focused on who holds the knowledge to perform the function successfully and who needs to receive the information in order to function properly.

Tsai (2001) points out that when implementing the successful methodology for knowledge transfer, the methods of knowledge transfer range from face-to-face storytelling to difficult computer systems. Anyhow, costly and large systems and

programmes alone will not transfer the knowledge. The most significant method is informal exchange among people, built on trust and interpersonal relationships. Successful methods for knowledge transfer need leadership commitment, clear measures and goals, recognition and rewards for achievement, and adequate resources and support. In this phase it is critical to recognize diversity as a key component of knowledge transfer. In providing support and recognition, supervisors, managers and leaders of knowledge transfer need to recognize the successful transfer of knowledge by rewarding and encouraging employees who actively engage in the activities of knowledge transfer. Leaders have to actively communicate the knowledge transfer value programmes and also participate in those programmes. Knowledge transfer programmes include measures and assessments that are reflected in performance compensation and reviews. Short-term incentives like award programmes improve these larger efforts of organizations.

Trott (1995) writes that measuring, reassessing and refining this phase as needed is the follow-up to the process and is needed to ensure the organization continues the transfer meaningful knowledge. Knowledge holders and knowledge recipients have to be accountable for successes and failures. In this phase, they need to analyse whether the knowledge that is assessed is still relevant and they have to measure the effectiveness of the transfer methodology. Flexibility in changing the methodologies of knowledge transfer is necessary to facilitate diversity and accommodate differences in learning styles, barriers caused by gender, age or cultural differences. Gibran, cited in Cortada and Woods (1999), states that the most effective or appropriate transfer mechanism and/or knowledge communication depends on the knowledge type that is to be transferred. From an explicit point of view, knowledge is captured in words, documents and images and also communicated and distributed through technology. Tacit knowledge requires human contact to be distributed. Tacit knowledge occurs between two people or within a community or team. The transfer mechanisms have both explicit and tacit knowledge dimensions.

The mechanisms for knowledge transfer are documentation, use of experts technology, face-to-face, physical transfer and communities and networks. Dixon (2000) developed a model in order to link the transfer mechanisms types. Serial transfer refers to a team that will acquire knowledge by doing tasks that can be transferred to the next time when

they do them in a different setting. Near transfer using the explicit knowledge of the team, gained by doing a repeated and frequent task. The organization prefers to replicate this kind of knowledge transfer to the other teams who are doing the similar task. Far transfer uses the tacit knowledge from that team, which gains knowledge by doing a non-routine task, and the organization may prefer to make it available to other teams doing a similar task in the other part of the organization. When a transfer is far, then the knowledge of the donor or source team must be translated and changed, so that it is applicable to the receiving team.

Hackett (2000) points out that knowledge that can be described with the help of language, that is, explicit knowledge, can be documented. This is a common way of obtaining and communicating knowledge. The explicit knowledge is codified, directly understood, and can also be transferred easily through either written or verbal instructions. Documentation is an essential part in the process of knowledge transfer, especially if the organization is geographically dispersed and has many employees. Dixon (2000) claims that timing is the essential factor in documenting the explicit knowledge. It is possible to construct and collect knowledge in real time, rather than relying on team members' memory reasoning and past events. Explicit knowledge can be codified, collected and documented, so that it can be used again. Nonaka and Takeuchi (1995) state that tacit knowledge is tough to transfer while writing it down. The tacit knowledge that can be transferred includes using analogies, metaphors and models.

According to O'Dell and Grayson (1999), most organizations recognize that technology like email, Lotus notes, and databases are effective ways to distribute explicit knowledge. Lei *et al* (1999) point out that the availability of computer-based technology models, components and inter-intra network connectivity may essentially improve the rapid, multi-location, and multi-level sharing of innovation, knowledge and progress status on all fronts. On the other hand, Davenport and Prusak (1998) defend that technology may not be the most effective form for knowledge transfer. Successful knowledge transfer involves neither documents nor computers, rather interactions among people. They also believe that approaches to knowledge management that overemphasize technology are less effective than creating human knowledge sharing processes, organizational change and changing behaviours. Person-to person

communication includes all the elements that facilitate the most effective communication, encompassing control over the format, words, voice tone, non-verbal actions, immediate feedback, physical, environmental exchange, and informal exchange. On the other hand, email contains only words.

Face-to-face mechanisms are considered to be the most effective for tacit knowledge communication (Dixon, 2000; Hackett, 2000; Davenport and Prusak, 1998; Nonaka and Takeuchi, 1995; and Wenger et al, 2002). According to Davenport and Prusak (1998), knowledge transfer can work only if people are interacting face-to-face. Transferring tacit knowledge to explicit knowledge is too complex and subtle to express in words.

According to Stanley (2001), some organizations use experts to transfer knowledge in particular topic areas, as experts can transfer their experiences and ideas to recipients All employees must be experts in some field, and people will accept the user's knowledge more easily when organizations accept their own knowledge. Appointing some people as experts over others may result in a change in the knowledge sharing dynamic between the two sides that has a negative impact on the knowledge transfer process.

O'Dell and Grayson (1998) point out that the actual knowledge transfer of people from one place to another is the effective way for knowledge transfer and practices in organizations. With a physical transfer of people we can transfer implicit, tacit and explicit knowledge.

According to Gamble and Blackwell (2001), the existence of communities of practice and informal networks is an effective way for knowledge transfer within organizations. Probust *et al* (2000) point out that self-managing teams act as an effective vehicle for transferring knowledge, motivating individuals and getting organizational work done.

## 2.6 Knowledge Transfer in Multinational corporations

Due to the increasing global integration of business activities, firms are facing enormous pressure to adopt global strategies. As a result, an increasing number of multinational corporations have been set up. To achieve global strategies, the issue of international knowledge transfer has received wide attention. Doz, Santo, and Williamson (2001) pointed out that "globalization meant 'teaching the world' from headquarters, or from subsidiaries in advantaged locations or dominant clusters" (p.10). So, the ability to create and transfer knowledge internally is one of the main competitive advantages of multinational corporations.

As globalization has increased, the knowledge needed to compete in the global economy no longer resides in one location; rather, it is globally dispersed. The importance of interdependencies and knowledge transfer across multinational corporation organizational units has been recognized and extensively discussed (Doz & Prahalad, 1991; Ghoshal and Bartlett, 1988; Gupta and Govindarajan, 1995; Hedlund and Nonaka, 1993). Bartlett and Ghoshal (1989) considered that the multinational corporation is a differentiated network where knowledge is created in several parts of the multinational corporation and is transferred to various inter-related units. They defined international learning as the development and sharing of knowledge across national boundaries.

Kogut and Zander (1993) described the superior ability to transfer knowledge at the international level as a primary source for multinational corporation's competitive advantage and growth. Barney, Wright and Ketchen (2001) argued that the multinational corporations sustained competitive advantage has become increasingly tied to its ability to share knowledge among its globally dispersed operations. The primary reason why multinational corporations exist is that their ability to transfer and exploit knowledge is more efficient and effective in the intra-corporate context than through external market mechanism (Gupta and Govindarajan, 2000).

Since Hymer introduced the view of "internalization of intangible assets" in 1960, the nature of firm-specific advantages and their transfer across borders have been the central issue in the theory of the multinational corporations. A principle belief is that the primary advantage that a firm brings to foreign markets is its possession of superior

knowledge. Overall, foreign direct investment is the transfer of the knowledge underlying technology, production, marketing, or other activities, which embodies a firm's advantage. Although the external markets continue to become more open, efficient, and global on an ongoing basis, they remain relatively ineffective in terms of knowledge transfer, which could be attributed to two facts. First, much of the specialized knowledge of firms exists in tacit and thereby non-tradable form.

Likewise, Kogut and Zander (1992) claimed that much of the knowledge that can lead to a competitive advantage is tacit and not easily shared. Second, market-based transfers of knowledge are often related to negative externalities such as involuntary expropriation and the risk of creating a new competitor. Therefore, multinational corporations can only transfer the knowledge effectively through internal mechanism. The idea of multinational corporations as knowledge networks has been elaborated by Gupta and Govindarajan (1991). The main idea of their concept is that multinational corporations can be thought of as a network of multidirectional knowledge transactions among units located in different countries. Network approaches to multinational corporations emphasize the importance of internal transfers of knowledge between headquarters and subsidiaries (Bartlett and Ghoshal, 1989).

The basic premise of these approaches is that competitive advantages can be achieved from the capacity of transferring knowledge to those multinational corporation's sub-units where it will add value. A precondition for this is that the geographically dispersed units are able to transfer knowledge to other multinational corporation's units as well as adopt knowledge generated there. This capacity of world-wide knowledge transfer becomes essential to support transnational organizational learning and to enhance the holistic perspective of multinational corporations.

Similarly, Chung (2001) suggested firms typically invest abroad for either one of two purposes. The first purpose is to exploit their existing capabilities. From the traditional perspective, Kogut and Zander (1993) defined a multinational corporation as 'an economic organization that evolves from its origins to spanning across borders'. Multinational corporations are attracted to invest in developing markets where they can exploit their unique capabilities (Chung, 2001). The headquarters serves as the source of innovation and knowledge for the rest of the organization (Gupta and Govindarajan, 1991).

According to Zander and Solvell (2000), multinational corporations increasingly used the projectionist strategy to invest in foreign subsidiaries and transfer or replicate their technological capabilities to those subsidiaries. Despite the prevalence of the projection strategy, firms find that it is difficult to exploit superior knowledge through the use of foreign direct investment unless they are able to overcome the difficulties inherent in transferring the tacit knowledge (Martin and Salomon, 2003). The second purpose is to acquire new capabilities. Firms choose foreign direct investment as a means to acquire new knowledge and capabilities (Chung, 2001).

Kogut and Zander (1993) suggested that multinational corporations may acquire new knowledge from foreign markets through subsidiaries and combine it with the global knowledge of firm. Multinationals who have pursued diversification of technological capabilities often establish "centers of excellence within the multinational network" (Zander and Solvell, 2000, p.53), allowing them to benefit from integrating and recombining these diverse capabilities. Thus, the sustained competitive advantage of multinational corporations could be realized through sharing their knowledge effectively across the global organization (Buckley and Carter, 1999). In the area of knowledge management, one of the major challenges is to maintain global collaborative networks that support knowledge transfer.

Cantwell and Santangelo (2000) suggested that the opportunity for innovative profits by multinational corporations comes from the combing of technological knowledge that occurs as a result of cross-border interaction within the multinational corporation's network. If multinational corporations are not successful in creating an environment for knowledge sharing, transferring tacit knowledge by codification strategies may not be effective. Consequently, the ability to transfer and deploy tacit knowledge has become a strategic concern for multinational corporations (Subramaniam and Venkatraman, 2001).

Tacit knowledge, according to Marquardt and Reynolds (1994), must be "disseminated quickly and seamlessly across functional levels, borders and cultures" (p.32) to support the creation of new knowledge that is essential to organizational growth and survival. In the context of multinational corporations, the two types of knowledge require different mechanisms of transfer. Explicit knowledge is more likely to be transferred by a wide range of mechanisms. The widespread use of mail and telephone, company

reports, and visits is now increasingly supplemented by real-time information technology (Bonache and Cervino, 1997). Written and electronic modes are able to transfer large amounts of data, which are not possible to be transferred through face-to-face interactions. In fact, it may result in high costs with personal transfer mechanism, such as travel expenses related to international assignments. Because information can be in a digitalized or in a written format, explicit knowledge transfer could be done more precisely and quickly. Moreover, the storage of information in an electronic form allows permanent access regardless of space, time and context.

However, a significant amount of knowledge transferred between units of multinational corporations is not explicit but tacit. Given that tacit knowledge cannot be codified or inserted into manuals and can only be observed through its application, when a company decides to transfer tacit knowledge between different units, it must assign employees to the foreign operations. In other words, expatriates are a basic mechanism to transfer tacit knowledge. The use of international assignments allows the transfer of knowledge that the sender may be unaware of to require trust-creation between the sender and the receiver, and the need for adaptation among different cultures, laws, and business practices. Global teams may also act as interfaces and boundary-spanners between different multinational corporation's units (Cohen and Levinthal, 1990).

Ghoshal *et al*. (1994) argued that global teams are efficient mechanisms for exchanging tacit knowledge between geographically dispersed subsidiaries and for translating it into a form that is appropriate to specific local conditions. Harzing (2001) suggested that expatriates are not only seen as an instrument for controlling foreign subsidiaries but also as a mechanism for transferring technical and management know-how as well as organizational culture. Although it is widely accepted that the multinational corporation owes its existence to its superior ability (relative to market) to transfer knowledge and that this superior ability may at the same time be a source of competitive advantage (relative to domestic firms), it is also widely recognized that the resource costs of knowledge transfer are likely to be substantial. In possible one of the only studies to date on actual cost of cross-border knowledge transfers, Teece (1981) estimated that transfer costs ranged from 2.25 percent to 59 percent of total project costs with a mean of 19.16 percent.

In the view of Kogut and Zander (1993) "… these costs are derived from the efforts to codify and teach complex knowledge to the recipient". Besides the cost problem, scholars continue to find substantial evidence that these transfers are not always smooth and successful. Researchers have shown that there are various barriers to transfer success—some relating to the characteristics of the knowledge to be transferred and others of a cultural and organizational nature (Ghoshal and Bartlett, 1988; Kedia and Bhagat, 1988; Szulanski, 1996; Zander and Kogut, 1995). In conducting interviews with foreign subsidiary managers, Kostova (1999) found that the managers had various problems in transferring the organizational practices from their headquarters to the foreign subsidiaries. Therefore, to fill in the gap of the research in transferring knowledge from parent country to the subsidiaries in foreign countries effectively, this study is aimed at identifying the factors that influence the knowledge transfer in the context of multinational corporations.

## 2.7 Expatriate

According to Mendenhall *et al* (2002) cited in Gannon and Newman (2002), an expatriate is anyone who is working or living in a country where he or she is not a citizen. Expatriates have skills that are crucial to the foreign subsidiary's performance success. Bolino and Feldman (2000) point out that an expatriate is an employee who works on a long-term assignment outside his/her native country. Shaffer *et al*., (1999) write that expatriates' assignments includes the relocation of their personal lives and family to a different environment. Noe *et al* (2008) state that the expatriate is an employee who is sent by her or his company from one country to another to perform operations there. Expatriates are individuals or employees who go overseas to manage job-related goals. (Aycan and Kanungo, 1997).

According to Storti (2001), an expatriate is an individual of one country who is working in another country. Swagler and Jome (2005) state that a person who is living outside her or his country is termed an expatriate. Tahir and Ismail (2007) describe that the expatriate is a person of a country who is sent overseas for the assignment or work given by the organization of the native country, and who lives and works with host countries to perform the global job. Rusting and Larsen (1998) point out that the expatriate is an

individual who is either hired or transferred to engage in work assignments living in a different country so that he or she is a coordinator, controller and a knowledge transferrer. There are numerous expatriate types, such as development workers, businesspersons, technicians, missionaries, government personnel, military personnel, educators, and students. Thus, the expatriate is an individual who is selected according to some criteria by a company or business to send her or him to a related unit in another country to help achieve the company's objectives through coordination, management, knowledge transfer, control and so on.

Harris (2002) points out that expatriates have four different temporal roles in subsidiaries. The long-term expatriate is considered to be the traditional expatriate: the employee at headquarters gets the international management job and then moves to the host country with her or his family, generally for a certain period or over a year. The short-term assignment is an international managerial task requiring the expatriate to live out for less than a year. The international commuter is an expatriate who lives in the multinational corporation's headquarters but commutes to a subsidiary in a neighbouring country on a regular basis. The frequent flyer constantly visits subsidiaries within the network, but never reallocates to any of them.

According to Romero (2003), an expatriate is a highly skilled employee with unique expertise. The expatriate is sent to work in another unit of the same company that is located in a foreign country, usually on a temporary basis. Lasseree (2003) states that there are two expatriate categories: The Parent Country National (PCN), whose national origin is akin to that of the corporate headquarter, and the Third Country National (TCN), who are nationals of countries other than the multinational corporations' home country and the subsidiary's country. Expatriate capabilities are assessed when selecting expatriates to send on foreign assignments. They are selected based on three attributes, namely adaptability, willingness and competencies (Torrington, 1994). We define expatriate as a person who is temporarily or permanently working in a country, other than that of their citizenship.

### 2.7.1 Expatriate and Knowledge Transfer Process

According to Harzing (2001), multinational companies use competent expatriates as a means to develop the organization and expatriates' aims to increase knowledge transfer within the subsidiary through contagion from more advanced management and technology practices used by the foreign companies. Downes and Thomas (2000) state that the capabilities of expatriates are a legitimate transferring way of embedded knowledge. The expatriation acts as a tool in that organizations collect and maintain a resident knowledge base about the international operation complexities.

Selmer and de Leon (2002) point out that expatriates not only transfer the technical skills and knowledge but also cultivate the corporate culture in the subsidiary. Bonache *et al*., (2011) state that the major responsibility of expatriates is to bring and transfer the knowledge and skills from the parent companies to the host country's affiliates. The success of the knowledge transfer depends critically on the expatriates' who are being appointed. Thus, the expatriation acts a tool in the organization and the knowledge transfer's success depends on the expatriates.

Leach (1994) refers that expatriates function effectively as a transfer and they have to transfer the latest or up-to-date skills and knowledge to the present posts and have to teach local employees to take over their duties and responsibilities when they leave. The local managers may effectively and consistently apply existing and learned practical skills and knowledge to improve planning within the organization so that the local employee will have some managerial skills and knowledge to start with. When local employees have poor managerial and organizational skills, expatriates will spend most of their time transferring the skills and knowledge to them.

Tsang (2001) notes that when tacit knowledge is transferred or the transfer objective is to change the knowledge recipient's mind-sets, essential learning will not take place without the expatriate's presence. Thus, expatriates have the ability to teach managerial and technical skills and knowledge in an efficient manner and spend more time with persons with poor skills. Chang *et al* (2012) suggest that the three important abilities that expatriates must possess for successful knowledge transfer are: ability to perform their duties well in different environments; motivation, as the expatriate must be able to continue working for the knowledge transfer even if stickiness occurs; opportunity

seeking, as social relations are very critical for the transfer of knowledge to be successful, as an expatriate who works with other expatriates with common backgrounds and also with persons outside the milieu can incorporate knowledge transfer opportunities. Thus, the three core abilities that expatriates must possess to ensure successful knowledge transfer are ability, motivation and opportunity seeking.

Hocking *et al* (2007) noted that tacit transfer of knowledge and expatriates are more efficient in applying knowledge when they have communication and knowledge access to the headquarters and other units of the organization and during experiential learning or knowledge acquisition through more frequent access to the sources of the host country. According to Makela (2007), expatriates are most valuable with regard to tacit knowledge transfer and this kind of transfer is more successful when they use their ability and willingness to transfer the knowledge and information, and when recipients also have a willingness and ability to receive the knowledge and information, as this will create a good relational bond between the source and the recipient. Thus, expatriates play a significant and valuable role in the success of tacit knowledge transfer.

According to Riusala and Suutari (2004), knowledge transfer not only depends on the time spent by the expatriate but also on the type of knowledge that is transferred. Nonaka and Takeushi (1995) and Davenport and Prusak (1998) point out that in the SECI model, socialization is most frequently used by managers of expatriates during their assignments for tacit transfer of knowledge to local employees, generally through sharing of experiences and dialogue through social and individual relationships. The externalization factor is also significant, since it changes tacit knowledge into explicit knowledge by creating or generating visual images of one's tacit knowledge, which will be easier for the employees and help them understand it.

Cantwell (1995) and Gupta and Govindarajan (2000) defend that knowledge transfer in multinational corporations is positively and implicitly related to willingness and ability of expatriates to integrate new geographic know-how and dispersed skills and capabilities in the previous knowledge base. This consequently fosters managerial and technological innovation and creates synergies that can importantly leverage the multinational corporation's competitive advantage. According to Rogers (1999), expatriates' willingness and motivation are needed for transferring the knowledge.

Hyondong (2005) refers that the rare and most valuable attribute is the expatriates' adaptability in transferring the knowledge. Most of the Multinationals corporations place huge emphasis on technical competence when selecting and recruiting expatriates. Managerial and technical expertise is a key factor for the success of expatriates. Shaffer *et al* (1999) found that job-related factors, like expatriate roles in overseas affiliates and non-work related factors like culture novelty, individual personality and support from co-worker and supervisor, exert strong influence on the adjustment of expatriates. Thus, in Multinational Corporation settings, adaptability is the key attribute for expatriates' success in transferring the knowledge.

Lane *et al* (2000) point out that expatriates who are adaptive and flexible can implement change in the activities of knowledge transfer, as they know the right knowledge types that have to be transferred to overseas operations and the parent firm's knowledge is effectively assimilated and transmitted into their foreign subsidiaries. Flexible approaches to knowledge management improve the absorptive capacity of subsidiaries by allowing managers to change the patterns of activity and ways of dealing with changing conditions and needs. In addition, that adaptability and flexibility improve the expatriate's abilities in transferring the knowledge and its effectiveness. This is due to expatriates' attributes that allow tailoring skills and knowledge to the demands and needs of overseas contexts. Expatriates possess more adaptability in transferring the knowledge and these knowledge transfers will be applicable to the subsidiary (Tsang, 2001). Thus, expatriates are adaptive and flexible to implement changes in knowledge transfer activities.

### 2.7.2 Role of Expatriate in Knowledge Transfer

According to Harzing (2001), expatriates are generally home-country assignees who hold key positions or top management posts in functional foreign subsidiaries. Expatriates are important for knowledge transfer between subsidiaries and parent firms (Bjorkman *et al*, 2004; Hebert *et al*, 2005; Delois and Bjorkman, 2000; Minbaeva and Michailova (2004), Hocking *et al* (2004). Given the managerial significance of expatriates and their access to an array of resources within the parent firm, the information networking, coordination and the socialization facilitated by expatriates are

the key factors in the process of knowledge transfer. According to Hebert *et al* (2005), Bonache and Brewster (2001) and Kostava and Roth (2003), expatriates have to be perceived not just as a carrier of knowledge but, more importantly, as boundary spanners or transfer facilitators who improve the transfer of significant parent-firm knowledge to its subsidiaries.

According to Gupta and Govindarajan (2000), two significant factors that characterize the distinct expatriate's role as a transfer facilitator are the capacity of expatriates to enhance informal and formal inter-unit channels of communication and increase the inter-unit homophile. Expatriates are well positioned to improve the richness and scope of channels of knowledge transfer through both informal and formal mechanism of communications. Bresman *et al* (1999) point out that formal mechanisms encompass parent-level and liaison positions and permanent committees. These channels of formal communication permit a subsidiary to reach out to other members of the company, thus resulting in a higher knowledge exchange between the parent firm and the subsidiary. Oddou *et al* (1995) state that expatriates are better positioned to serve on permanent committees and liaison positions because they take the key managerial positions and are responsible for implementing and formulating the firm's internationalization strategy. The richer communication channels are launched for the purposes of knowledge transfer.

Kostava and Roth (2003) and Gupta and Govindarajan (2000) write that expatriates extend their experience and help transfer knowledge within parent firms and have strong social ties outside the local subsidiary, which helps them engage in corporate socialization. Increased communication through corporate socialization participation may enrich the transmission channels between the parent firm and foreign subsidiary and thus help facilitate knowledge flow within the organization. The knowledge transfer is more substantial for the organizations when the number of expatriates with wider access to informal and formal communication channels is high (Naumann, 1992).

Cohen and Levinthal (1990) state that expatriates can improve the subsidiary's absorptive capacity by raising the inter-unit homophile between the parent and subsidiary. Absorptive capacity is the ability to identify the value of new information, apply it, and assimilate it to commercial ends. Lane *et al* (2001) state that absorptive

capacity is instrumental for expatriates and for knowledge transfers success between the subsidiary and parent company.

Rogers (1995) points out that adsorptive capacity is closely related to homophile level and is the degree to which two or more individuals interact about similar attributes, like education, beliefs, and social status, among others, because when two persons are interacting they share mutual sub culture language and common meanings and are alike in social and personal characteristics. Thus, the new ideas communicated between them will have greater effects. The presence of expatriates in a local subsidiary will increase the inter-unit homophile level between the parent and subsidiary firm. In the language systems, expatriates have a greater community and the values and meanings associated with the communication. Thus, the outcome of this higher inter-unit homophile level contributes to the success of knowledge transfer. According to Harzing (2001), expatriates influence when knowledge transfer facilitators may differ over time. Grant (1996) refers that expatriates play a significant role in allowing knowledge transfer between the organization's units.

According to Delios and Bjorkman (2000), expatriate coordination and control functions work to align the unit's operations with those of the parent firm, whereas the function of complementary knowledge needs an expatriate to transfer the parent firm's knowledge to the foreign subsidiary. With the help of expatriates, knowledge is transferred between the parent firm and the subsidiary firm.

## 2.8 The impact of national culture on knowledge transfers

Culture is regarded as one of the most important contextual variables that impact the knowledge transfer process in multinationals corporations (Bhagat *et al*, 2002). Holden (2001) asserts that knowledge transfer in the global economy is essentially a form of cross-cultural management, involving acts of cross-cultural exchange. The literature offers a diversity of approaches to defining culture (Hofstede, 1980, 2001). General consensus seems to view culture as patterns of beliefs and values that are manifested in practice, behavior, and various artifacts shared by members of an organization or a nation (Trice and Beyer, 1993). As culture has been widely recognized as a key dimension in international business (Hofstede, 2001), international knowledge transfer

is not an exception. Indeed, the management of cultural differences within an organization is especially relevant as far as knowledge transfer is concerned.

"In the global arena, the complexities increase in scope as multinational firms grapple with cross-border knowledge transfers and the challenge of renewing organizational skills in various diverse settings" (Inkpen, 1998, p.69). Doz and Santos (1997) argue that in multinationals corporations, knowledge management becomes 'eventful' because of the dispersion in space and time and differentiation of context. Generally international knowledge transfers involve two organizations located in two distinct cultures for a fairly long period of time, so the role of cultural constraints on such transfers should be examined. Differences in national culture may affect organizational performance and organizational learning. National culture is an element of the relationship among business units, and that multinational corporations will operate more efficiently when units are more culturally related (Palich and Gomez-Mejia, 1999). They argued that when units of a multinationals corporations are more culturally related, the multinationals corporation will also be more efficient in sharing knowledge. That is to say, in culturally related countries, multinationals corporations find it easier to transfer knowledge.

O'Keeffe's research further substantiated this finding. According to O' Keeffe (2003), the fit between country cultures is a key consideration for multinationals corporations attempting to employ advanced technologies in globally dispersed operations. He argued that organizational learning in multinationals corporations is increasingly dependent upon learning networks and the ability to create knowledge and transfer it across borders. Researchers usually have studied country-level effects by using the concept of national culture, which has been defined in various ways. Some scholars have emphasized the cognitive nature of culture, defining it as "the collective programming of the mind that distinguishes the members of one category of people from those of another category" (Hofstede and Bond, 1988). Others have stressed its normative component and have proposed that it reflects the shared values of a group (Kostova, 1999).

Scholars also have proposed dimensions of culture along which societies differ, and country scores on these dimensions. The cultural dimensions of Hofstede (1980, 2001) are the most frequently used in studies of cultural variations in knowledge transfer,

because they represent distinguishing characteristics of societies and the way in which people process information (Bhagat *et al*, 2002). These include the dimensions of individualism versus collectivism, uncertainty avoidance, power distance, and masculinity versus femininity, and long-term versus short-term orientation. Researchers have widely employed this work to study the impact of culture on organizational behavior.

For example, Jansens *et al.* (1995) studied the effects of Hofstede's (1980) cultural dimensions on the implementation of corporate-wide safety policies. The individualism versus collectivism dimension focuses on the degree to which a society reinforces individual or collective achievements and interpersonal relationships. Individualism pertains to societies in which the ties between individuals are loose; everyone is expected to look one's self and his or her immediate family. Collectivism, as it is opposite, pertains to societies in which people from birth onward are integrated into strong, cohesive groups. Representing a distinguishing characteristic of societies and the way in which people process information, this dimension is the most frequently used in studies of cultural variations in knowledge transfer (Bhagat *et al.*, 2002). Evidence indicates that this dimension influences the willingness of individuals to share their knowledge (Chow *et al*., 2000).

Due to strong identification with the in-group, people from collectivist cultures are less inclined to share knowledge with out-group members (Hofstede, 2001). The dimension of power distance focuses on the degree of equality or inequality between people in a society, that is, power inequality between superiors and subordinate within a social system. In high power distance cultures, people prefer hierarchical communication and the process of knowledge transfer takes place according to hierarchical arrangements within the organization. Superiors in such cultures may have the power to decide when and how knowledge is diffused (Bhagat *et al.*, 2002).

The dimension of uncertainty avoidance focuses on the level of tolerance of uncertainty and ambiguity among members of a society. Individuals with a high tolerance for ambiguity are better able to transfer and receive knowledge that is tacit and complex (Bhagat *et al*., 2002). Masculinity refers to the overall "toughness" and competitiveness of the society. The people from feminine countries tend to be less aggressive and more modest than those from masculine countries. There is little evidence regarding how the

dimension of masculinity versus femininity influences the knowledge transfer process. But, given the differences in the values associated with masculine cultures and feminine cultures, one would expect this dimension to have implications for the knowledge transfer process. Long-term orientation is the fifth dimension of Hofstede, which was added after the original four dimensions (individualism versus collectivism, uncertainty avoidance, power distance, and masculinity versus femininity) to try to distinguish the difference in thinking between the East and West. Long-term orientation stresses persistence, ordering relationships by status and observing this order, thrift, having a sense of shame, and valuing future. Short-term orientation focuses on personal steadiness and stability, respect of tradition, valuing past and present, reciprocation of greetings (favors and gifts), and fulfilling social obligations.

So far, there is no evidence of how this dimension affects the process of knowledge transfer. Drawing upon Hofstede's (1980, 2001) dimensions of differences in national culture, Kogut and Singh (1988) termed these differences as cultural distance. Several researchers have suggested that cultural distance is an obstacle to knowledge transfer in multinacional corporations (e.g., Bhagat *et al.*, 2002; Holden, 2001; O'Keeffe, 2003). Researchers have argued that cultural distance is related to knowledge transfer in multinational corporations (Cui *et al.*, 2005; Javidan *et al.*, 2005), because knowledge is created by individuals and embedded in a certain cognitive and behavioral context (Grant, 1996) and then transferred from its holders to its recipients through transmitting their cultural-specific sets of values and frames of reference (Nonaka, 1994; Polanyi, 1966). Kogut and Singh (1988) examined the effects of cultural distance on a multinacional corporation's choice of entry mode in foreign markets. They theorized that "the more culturally distant are two countries, the more distant are their organizational characteristics on average". Consequently, the costs and uncertainty of entry into foreign markets are increased. In their empirical study, their findings support the proposition that differences in national culture affect the choice of entry mode by multinacional corporations. They also suggest that cultural distance may be a factor in other types of managerial decision-making in multinacional corporations. Cultural distance is also considered one of the knowledge ambiguities.

Siminon (1999) defined cultural or psychic distance as the resulting vector of culture-based factors that impede the flow of information between the firm and its partner or

environment. He suggested that both tacitness and cultural distance impede knowledge transfer in multinational corporations. Cultural differences that exist in different countries may cause problems with communication. Olk (1997) claimed that in international strategic alliances, cultural distance creates additional difficulties and challenges for managers who must spend more time on communication, design of compatible work routines, and the development of common managerial approaches. Several other studies also found the partners' organizational and national cultures can significantly impact all aspects of collaboration, including information flows, the process of knowledge management, and knowledge transfer (Lyles and Salk, 1996; Mowery *et al,*. 1996).

At the collaborative level, Siminon (1999) argued that cultural distance matters with regard to learning for two reasons. First, cultural distance raises barriers for understanding partners and the nature of their competitive advantage. In this respect, the lack of fluency in a partner's native language may constitute the single greatest obstacle since even well codified knowledge remains inaccessible. Second, cultural distance creates difficulties for identifying market opportunities and understanding market mechanisms. For instance, the knowledge of a partner's pricing or promotional campaign may be so deeply rooted in a prevailing cultural norm (e.g., use of discounts or coupons) that its full grasp cannot be disconnected from the cultural context. Some researchers explored the relationships between national culture and multinationals corporation's business strategy, performance and social ties.

For example, Ross (1999) examined the fit between a multinationals corporation's business strategy and Hofstede's (1980) dimensions of national culture. In their empirical study, Kessapidou and Varsakelis (2002) used a measure of culture distance defined by Kogut and Singh (1988) to examine the relationship between cultural distance and multinationals corporation's subsidiaries' performances in Greece. They found that improved performance by Greek affiliates was associated with higher cultural distance between the culture of the parent company and the Greek culture. Manev and Stevenson (2001) conducted a unique study involving cultural distance and social ties. They studied the relationship between nationality, cultural distance, expatriate status, and the formation of strong ties. The findings illustrated that more

culturally distant managers were likely to have strong instrumental ties, while less culturally distant managers were more likely to have strong expressive ties.

The transfer of work related information depends upon instrumental ties rather than expressive ties, and work related information is transferred regardless of cultural distance. They suggested that managers in multinationals corporations should promote social interaction and cross-border teams to increase both instrumental and expressive tie strength. Due to the effect of cultural distance on multinationals corporations, the challenge for managers in multinationals corporations is to establish the organizational environment that encourages "mutual learning, interactive networking, and knowledge sharing" (Holden 2001).

## 2.9 The impact of institutional context on knowledge transfer

Institutional theory is widely used for studying the adoption and diffusion of organizational knowledge among organizations (Scott, 1995). A central tenet of the institutional perspective is that organizations sharing the same environment will employ similar practices and thus become "isomorphic "with each other. The adoption of these practices is explained by the organizations' conformity to institutional pressures driven by legitimacy motives (Kostova and Ruth, 2002). Given that many elements of the institutional environment, such as cultural and legal systems, are often specific to a nation, organizational knowledge can be expected to vary across countries.

Gooderham *et al* (1999) observed that cross-national dissimilarities in institutional structures are likely to create management practices that vary from country to country, regardless of the fact that management theories are often rapidly disseminated across national borders. Applying institutional theory to the case of multinational corporations highlights the unique institutional complexity that these organizations face. Multinational corporations confront a multitude of different and possibly conflicting institutional pressures (Westney, 1993). Thus, multinationals corporations will experience the pressure to adopt local practices and become isomorphic with the local institution context to achieve and maintain legitimacy in all its environments. Some studies paid more attention to understanding the complex differences among national business system in the institutions governing the way product, labor, and financial

markets work, and the way market actors relate to each other (Whitley, 1999). Such cross-national differences place various degrees of constraint upon the international dissemination of practices within multinationals corporations.

Previous studies (Ghoshal and Bartlett, 1988; Grant, 1996) illustrated that an important source of competitive advantage for the multinationals corporation is the transfer and utilization of organizational capabilities worldwide. Thus, multinationals corporations will attempt to leverage practices on a worldwide basis. Since a foreign subsidiary is not an independent entity, if knowledge is mandated by the parent, the subsidiary is obligated to comply. In other words, there is a within-organization domain that defines a set of pressure to which all units within the organization must conform. At the same time, the foreign subsidiary resides in a host country with its own institutional patterns specific to that domain. As a result, each foreign subsidiary is confronted with two distinct sets of isomorphic pressures and a need to maintain legitimacy with both the host country and the multinationals corporation, which Kostova and Roth (2002) refer to as "institutional duality". As suggested by the institutional perspective, organizational knowledge may have a social meaning shaped by the institutional context, as they are "deeply ingrained in, and reflect widespread understanding of social reality enforced by public opinion, by the views of important constituents, by knowledge legitimated through the educational system, by social prestige, by the laws" (Meyer and Rowan, 1977 and DiMaggio, 1991).

As knowledge becomes institutionalized, it is viewed in the society as legitimate and is adopted by organizations for legitimacy reasons and not necessarily for efficiency reasons. To better understand the effect of institutional context on organizations' behavior, scholars have developed "new institutionalism" emphasizing the importance of normative and cognitive frameworks (*e.g.*, Scott, 1995). According to the new institutionalism, organizations are under pressure to adapt and be consistent with their institutional environment. They are assumed to search for legitimacy and recognition, which they do by adopting structures and practices defined as and/or taken for granted as appropriate in their environment (Meyer and Rowan, 1977). Hence, isomorphism occurs between organizations in the same context (Bjorkman *et al.*, 2004). DiMaggio and Powell (1983) suggested that isomorphism is produced in three major ways: coercive isomorphism, where a powerful constituency (e.g., the government) imposes

certain patterns on the organization; mimetic isomorphism, where organizations in situations of uncertainty mimic organizations viewed as successful in their environment; and normative isomorphism, where professional organizations such as universities, consultancy firms and professional interest organizations act as disseminators of appropriate organizational patterns which are then adopted by organizations under the influence of these professional organizations.

Scott (1995) proposed that institutional environments are composed of various types of institutions and can be characterized by three pillars: regulatory, cognitive, and normative. The three components of the institutional environments form a so-called country institutional profile, which can be used to compare the institutional characteristics of different national environments. Recently, institutionalism has turned its attention to conceptualizing the interaction among different national institutional frameworks (Kostova and Roth, 2002). Kostova (1999) proposed the concept of "institutional distance" as a key variable in the strategic organizational practices transfers between national institutional domains. Institutional distance is the difference between the 'country institutional profile' (CIP) of the home country and the country of the recipient organizational unit. The CIP construct provides indices of the regulatory, normative and cognitive institutions of a country. Each of these dimensions reflects the difference between the corresponding dimensions in the institutional profiles of the two countries.

Kostova cites the example of a CIP for equal employment opportunity (EEO) in the United States. This would comprise the regulatory institutions such as the relevant legislation of the EEO Act; cognitive institutions, that is, the shared social knowledge that people hold regarding the EEO Act; normative institutions, that is, people's beliefs, values, and social norms related to the EEO Act that people maintain or value. There is a possibility that the organizational practices may not be consistent with the institutional environments into which they are transferred, and they may even be in conflict with them. For Kostova, if a practice is not consistent with the recipient country's cognitive institutions, the employees in multinationals corporation subsidiaries are very likely to have difficulty in interpreting and judging the practice correctly, and hence transfer will be affected. National institutional factors thus interact with the individual characteristics of practices: for instance, as the work systems in Japanese businesses

tend to be less codified and more tacit, it is more difficult to be transferred to the UK smoothly. Conversely, US multinationals corporations have a greater organizational capacity for coordinating globally-dispersed learning because the American business systems allow for codifying and disseminating knowledge. A transferred knowledge can be implemented in the subsidiary in a variety of ways. Tolliday *et al*. (1998) argue that 'systems cannot be transferred without being significantly reshaped… Hybridization is inevitable.' Hybridization arises from 'interaction with different national, legal, or institutional systems; different political contexts; different labor markets and skill structures, different infrastructures' as firms attempt to make practices drawn from one 'social and economic space' compatible with the constraints and opportunities of the host environment.

Although scholars see hybridization playing a critical role in organizational learning, others are concerned regarding the loss of functionality of practices transferred from their original location. Kostova (1999) draws a distinction between 'implementation' and 'internalization' within the host subsidiary. Implementation involves formal adherence to the practice; internalization refers to the way in which employees attach meaning to the practice or 'infuse it with value'. In other words, Kostova is concerned with cognitive and normative integration of the practice within the subsidiary. While the impact of institutional theory on cross-border knowledge is widely recognized, the empirical studies in this area are scarce.

## 2.10 Absorptive Capacity

Absorptive capacity is the ability to identify, assimilate, transform, and apply valuable external knowledge. Put another way, absorptive capacity is a limit to the rate or quantity of scientific or technological information that a firm can absorb. Conceptually, it is similar to information processing theory, but at the firm level rather than the individual level. Absorptive capacity was introduced by Cohen and Levinthal in 1990. Zahra and George (2002) extended the theory by specifying four distinct dimensions to absorptive capacity: acquisition, assimilation, transformation and exploitation.

However, Todorova and Durisin (2007) seriously question Zahra and George's reconceptualization of absorptive capacity. When absorption limits exist, they provide

one explanation for firms to develop internal R&D capacities. R&D departments can not only conduct development along lines they are already familiar with, but they have formal training and external professional connections that make it possible for them to evaluate and incorporate externally generated technical knowledge into the firm. In other words, a partial explanation for R&D investments by firms is to work around the absorptive capacity constraint.

It is useful to note that almost all-organizational literature, including Cohen and Levinthal's (1989; 1990) original work, treats absorptive capacity as an organizational-level construct (Lane et al. 2006). Although absorptive capacity does have antecedents and consequences, it is not composed of a statement of relations among concepts within a set of assumptions and boundaries. Thus, absorptive link building service capacity is a construct, not a theory.

Organizational units differ in their ability to assimilate and replicate new knowledge gained from external sources. Cohen and Levinthal (1990) labeled such ability as "absorptive capacity". They defined absorptive capacity as the ability to recognize the value of new external information, assimilate it, and apply it to commercial ends. Lane et al. (2001) refined the absorptive capacity definition offered by Cohen and Levinthal. They propose that the first two components, the ability to understand external knowledge and the ability to assimilate it, are interdependent yet distinct from the third component, the ability to apply the knowledge.

In the recent research, Zahra and George (2002) summarized representative empirical studies on absorptive capacity. According to Zahra and George (2002), absorptive capacity has four dimensions – acquisition, assimilation, transformation, and exploitation – where the first two dimensions from potential absorptive capacity, the latter two – realized absorptive capacity. They argue that more attention should be devoted to studying the realized absorptive capacity, which emphasizes the firm's capacity to leverage the knowledge that has been previously absorbed (Zahra and George, 2002).

The concept "absorptive capacity" has been mainly used to capture a company's ability to recognize, assimilate, and apply external knowledge to commercial ends (Cohen & Levinthal, 1990). Zahra and George (2002) criticized existing studies for applying

measures, such as R&D intensity, number of scientists working in R&D departments, which have been rudimentary and do not fully reflect the richness of the construct. They neglect the role of individuals in the organization, but their ability is crucial for knowledge utilization and exploitation at the organizational level. Moreover, current measures may be too occupied with the ability to recognize and assimilate external knowledge but neglect the role of the receiving unit's ability to put knowledge into commercial use.

To understand the sources of a firm's absorptive capacity, Cohen and Levinthal (1990) focused on the structure of communication between the external environment and the organization, as well as among the subunits of the organization, and also on the character and distribution of expertise within the organization. These factors emphasize environmental scanning and changes in R&D investments but pay little attention to other internal organizational arrangements and their role in absorptive capacity creation and development.

Minbaeva et al. (2003) suggest focusing on the subsidiary's employees' ability to use knowledge as the key aspect of a subsidiary's absorptive capacity that in turn enables a subsidiary to benefit from internal knowledge flows. Also, only when multinational corporation's employees can identify valuable knowledge by searching topics or knowledgeable partners in other multinational corporation-units, will they utilize knowledge inflows (Mahnke & Venzin, 2003; Kautz & Mahnke, 2003). By contrast, when an individual's knowledge search and access is complicated, for example because lacking adequate communication channels and knowledge search is complex, knowledge use from other units will decrease accordingly. We defined absorptive capacity as a firm's ability (employees') to assimilate new information.

### 2.10.1 Elements of Absorptive Capacity

There are four different but complementary dimensions of absorptive capacity: acquisition, assimilation, transformation, and exploitation. These four elements must progress chronologically. Acquisition is defined as the ability to recognize, value, and acquire external knowledge that is critical to a firm's operations (Lane & Lubatkin,

1998; Zahra & George, 2002). Welsch, Liao, and Stoica (2001) define it as the generator of knowledge for the organization. Acquisition depends on prior investments, prior knowledge, intensity in terms of the capability to develop new connections, speed of a firm's efforts to acquire external knowledge, and strategic direction. Assimilation refers to the firm's ability to absorb external knowledge.

Zahra and George (2002) defined it as a firm's routines and processes that allow it to understand, analyze, and interpret information from external sources. Transformation refers to the firm's ability to develop routines that facilitate combining existing knowledge with newly acquired and assimilated knowledge. Transformation can be achieved by adding or deleting knowledge, or interpreting existing knowledge in a different way. Exploitation refers to the routines that allow firms to refine, extend, and leverage existing competences or create new ones by incorporating acquired and transformed knowledge into its operations (Zahra & George, 2002). It can also refer to a firm's ability to apply new external knowledge commercially to achieve organizational objectives (Lane and Lubatkin, 1998).

### 2.10.2 Factors Affecting Absorptive Capacity

Broadly speaking, there are two factors affecting a firm's absorptive capacity. One factor is internal factors, such as organizational structure, size, strategy, prior knowledge base, and organizational responsiveness; the other one is external factors, which include external knowledge environment and a firm's position in knowledge networks.

Internal Factors, prior related knowledge has a positive effect on absorptive capacity because it presents the ability to perform its three main activities: acknowledge the value of new knowledge, assimilate it, and apply it to commercial ends (Cohen & Levinthal, 1990). To ease the assimilation of new knowledge, the firm needs previous knowledge that is closely related to the new one (Nonaka & Takeuchi, 1995). Absorptive capacity is path-dependent, resulting from the cumulative nature of knowledge (Cohen & Levinthal, 1990), and thus is influenced by the contribution of past experience to the organizational memory (Zahra & George, 2002). Individual absorptive capacity largely depends on the collective absorptive capacity of a firm's individuals, though not a simple addition of these (Cohen & Levinthal, 1990). How well a firm can aggregate the different absorptive capacities of its employees is determined by its combinative capabilities.

The level of education and academic degrees of employees affects absorptive capacity through the knowledge assimilation phase (Vinding, 2000). Employees with higher levels of education in a particular area are usually better able to absorb new knowledge in that field. Diversity of backgrounds and knowledge provides two advantages in favor of absorptive capacity. It increases the chance the new knowledge will be somewhat related to knowledge already in the firm, facilitating its assimilation. It also provides a variety of perspectives from which to process the acquired knowledge, leading to new associations, linkages, and innovation (Cohen & Levinthal, 1990). Gatekeepers are important to absorptive capacity. They are specialized roles present both within organization, where they serve as boundary spanners between the firm's subunits, as well as outside the organization where they interface with its external knowledge environment (Cohen &d Levinthal, 1990). Moreover, the absorptive capacity of a firm's main gatekeepers enhances the process of organizational learning. Organization

structure affects the dissemination of absorptive capacity. Dissemination involves transferring the acquired knowledge to all parts of the organization. Hence, the firm's structure should maximize the movement of knowledge through formal and informal networks (Welsch, Liao & Stoica, 2001). A functional organizational structure permits a high efficiency of absorption, but a limited scope and flexibility of absorption (Boer, Bosch & Volberda, 1999). Functional structure increases the effect of specialization, which creates communication barriers between the different departments.

An organizational structure allows the maximum amount of communication between various subunits improves a firm's absorptive capacity. A firm has to enhance the greatest communication between the knowledge producing and knowledge using subunits. Also, to improve absorptive capacity the organizational structure should eliminate bureaucracy, because bureaucracy slows down responsiveness to change and innovation. The structure should be flat, flexible, adaptable, dynamic, and participative. Cross-functional communication creates opportunity for the nternal transfer of knowledge within the firm. Better internal communication enhances social integration mechanisms, which lower the barriers to information sharing and increase the efficiency of assimilation and transformation capabilities (Boer, Bosch & Volberda, 1999).

Organizational culture, especially the distribution of power, also has great influence on absorptive capacity. When a knowledge-sharing culture is encouraged, this makes them willing to share different information and further create new ideas. Organizational inertia states that organizations tend to stick to their existing strategies and have a natural tendency to resist change (Welsch, Liao & Stoica, 2001). This is the main impediment to a firm's ability to respond and adapt to changes in its environment and is a common obstacle to the use of transferred knowledge (Davenport and Prusak, 1998). The relationship between R&D spending and absorptive capacity seems to be bi-directional: absorptive capacity influences the direction and intensity of R&D (Vinding, 2000), and the more R&D the more efficient it is in acquiring external knowledge. A firm's ability to exploit external knowledge is often a byproduct of its R&D (Cohen & Levinthal, 1990).

Human resource management practices are another variable that affects the degree to which a firm can acquire and assimilate new knowledge. These practices include

interdisciplinary workgroups, quality circles, systems for the collection of employee proposals, planned job rotation, delegation of responsibility, integration of functions, and performance-related pay. Recruiting is a way firms used to add to their competencies and absorptive capacity can be enhanced by hiring the right people. Moreover, reward systems are another important issue that could improve absorptive capacity by motivating continuous learning.

External Factors, the external knowledge environment is important to absorptive capacity. A knowledge-creating company operates in an open system in which it constantly interacts with its outside environment by exchanging knowledge (Nonaka & Takeuchi, 1995). Position in the knowledge networks also affects absorptive capacity. By overlapping networks, firms are better able to absorb innovative practices due to the sharing information (Arthur & Defillippi, 1994). Absorptive capacity is one of the most important determinants of the firm's ability to acquire, assimilate, and profitably utilize new knowledge-intensive practices. Knowledge alone is not enough. A firm need to have tools to exploit and appropriate this knowledge embedded in new organizational innovations.

Developing the firm's absorptive capacity by developing its primary elements, each individual's absorptive capacity, is essential. The subsidiaries of the multinational corporations can develop their absorptive capacity by the following methods. First, firms should promote a culture that is open to change. Second, firms can build physical and virtual knowledge marketplaces such as intranets so each subsidiary and every employee can get together and communicate with each other. It would allow adequate time and space for knowledge acquisition creation and sharing. Third, each subsidiary can include knowledge sharing as a criterion of performance evaluation. This will discourage knowledge-hoarding cultures that prevent the successful implementation of knowledge management initiatives.

## 2.11 Motivation to Transfer

In the model given by Holton (1996), five different categories of variables are put forth to influence motivation to transfer, namely intervention fulfilment, job attitudes,

learning outcomes, expected utility, and transfer climate. Together they form some variables of the transfer used in this thesis and are discussed in detail below.

### 2.11.1 Job Attitudes

According to Holton (1996:11), job attitudes refer to the attitude of trainees toward the job and the organization. As proposed by Noe and Schmitt (1986), individuals who are highly job-involved are likely to be more motivated to acquire new skills, as participation in training activities might increase skill levels leading to improved job performance. Numerous studies have examined the relationship between motivation to transfer and job attitudes, with mixed results (Cheng & Ho 2001; Clark 1990; Kontoghiorghes 2004; Mathieu, Tannenbaum & Salas 1992). For instance, Mathieu *et al*. (1992) did not discover any significant relationship between motivation to transfer and job involvement due to the fact that highly job-involved trainees did not deem the training programme instrumental in obtaining appreciated outcomes.

Similarly, Cheng and Ho (2001) found in their study that trainees pursuing postgraduate programmes may show desire to increase their employability instead of their job performance. In contrast, two studies established the significant effect of job involvement on motivation to transfer (Clark 1990; Kontoghiorghes 2004). Regardless the mixed outcomes on job attitudes, it still remains a probable element that has an influence on motivation to transfer. Since job attitudes are categorized in Holton's (1996) model as a secondary influence variable affecting motivation to transfer instead of being a primary influence, job attitudes were not incorporated as a variable in this thesis. It may be enough to measure a small number of secondary influence variables in the case where a lot of variance can be explained (Holton, 1996).

### 2.11.2 Intervention Fulfilment

Intervention fulfilment pertains to the extent to which training fulfils or meets the expectations and desires of trainees (Holton 1996:13). The consequence of intervention fulfilment on the motivation to transfer training has received little attention. Only one study so far has tested this notion and the outcome supports the relationship as put forth

in Holton's (1996) model (Tannenbaum, Mathieu, Salas, & Cannon-Bowers 1991). In the study conducted by Tannenbaum *et al.*'s (1991), the relationship between motivation to transfer and intervention fulfilment was found to be significant. As a result, they suggested that future research should consider intervention fulfilment in different training environments for intervention fulfilment to become a useful notion in understanding trainees' motivation to transfer. Since intervention fulfilment is categorized as a secondary instead of primary influence variable affecting motivation to transfer, it was not examined in this thesis.

### 2.11.3 Expected Utility

As per Holton (1996:13), behavioural changes are likely to occur in trainees who learn the material presented in training and desire to apply the new knowledge or skills in their work activities. This concept is consistent with Vroom's (1964) expectancy theory, which states that individuals' motivations depends on the belief that their effort invested in training programs will lead to mastery of the training content (effort-performance expectation) and that good performance in the course of the training programme will result in desirable outcomes (performance-outcome expectation). Two studies observed the relationship between motivation to transfer and expected utility (Bates & Holton 1999; Clark, Dobbins & Ladd 1993).

Bates and Holton (1999) examined the role that expectancies have in the motivation to transfer in a social service agency. In this study, motivation to transfer was first presented as a function of utility (or expectancy beliefs) regarding the degree to which learning is likely to have practical job application. Secondly, it was presented as rewards or the degree to which the learning application on the job is believed to result in some value for the individual. Outcomes of this study recommended utility as a major predictor of motivation to transfer, whereas rewards were not. This outcome has some reverberation with training in the Malaysian public sector where employees are much less motivated by extrinsic rewards (Hameed & Analoui 1999) but respond to intrinsic rewards (Poon & Idris 1985). For instance, in a study conducted by Hameed and Analoui's (1999), it was found that the lack of intrinsic rewards, like recognition by employers, subdued trainees from practicing all that they had learned in training. In an

additional study, Poon and Idris (1985) observed perceptions and attitudes of employees on how their rewards are and should be calculated. The study found that intrinsic rewards like interesting, challenging, and meaningful work and feedback on work are highly valued. Some other studies have also confirmed the value of the expectancy theory (Vroom 1964) in demonstrating training transfer and motivation to learn (Noe & Schmitt 1986; Yamnill 2001; Chen 2003).

For instance, Noe and Schmitt (1986) found that expectancy about performance-outcome and effort-performance linkages were much correlated with motivation to learn. Since expected utility is categorized as a primary variable in Holton's (1996) model, in this thesis it has been examined as a variable affecting motivation to transfer.

### 2.11.4 Climate Transfer

Climate Transfer is advanced as an important environmental element in Holton's (1996) model, influencing motivation to transfer. According to Holton (1996), trainees are more likely to transfer their learning to their job if they work in conditions supportive of training. Seyler *et al*. (1998) indicated transfer climate that refers to organizational climate, which includes supervisor support, peer support, and supervisor sanctions. This study established that supervisor sanctions and peer support were major predictors of motivation to transfer. However, supervisor support was not because unique variance was not explained by supervisor support following accounting on the impact of other organizational climate variables.

Even though supervisor support was not noteworthy in Seyler *et al*.'s (1998) study, various other studies have confirmed its positive effect (Clarke 2002; Clark *et al*. 1993; Kontoghiorghes 2001) and also that of peer support (Clark *et al*. 1993; Ruona, Leimbach, Holton & Bates 2002) on motivation to transfer. Transfer climate was also seen as consisting of consequences and situations that either restrain or help facilitate the shift from learning into a job situation (Rouiller & Goldstein 1993). These authors recommended four types of 'situational' cues. First goal cues, then social cues, then task cues and finally self-control cues, which operate in the transfer procedure. These situational cues strike a chord with trainees on what they have learned, or at the least give them a chance to use what they have learned. On the other hand, 'consequence'

cues have been described as on-the-job outcomes, which consequently affect the degree to which training is transferred. These four 'consequence' cues comprise positive feedback in addition to negative feedback, punishment, and, finally, no feedback. Regrettably, their study could not authenticate the suggested framework because of inadequate sample size. Afterwards, Holton *et al* (1997) persistently made efforts to validate the transfer climate variables as suggested by Rouiller and Goldstein (1993).

Findings of the following study recommended that trainees see the transfer climate conforming to references to the organization like supervisor, peer/task, or self, instead of conforming to psychological cues like goal cues, social cues, as put forth by Rouiller and Goldstein (1993). In addition to peer support, supervisor sanctions, and supervisor support, the study acknowledged some other transfer climate constructs like openness to change (existing group standards are perceived to reject using new skills); positive personal outcomes (appliance of training on the job results in positive outcomes); negative personal outcomes (appliance of training on the job results in negative outcomes); and opportunity to use learning (trainees are given tasks and resources enabling them to use their fresh skills on the job). An additional study by the Holton team tried to authenticate transfer climate constructs in order to develop a diagnostic tool that measures the factors that affect transfer of training (Holton *et al*. 2000). In this study, feedback, which is a formal and informal marker from an organization concerning the job performance of an individual, came out as another dimension of transfer climate.

Many studies have confirmed the effect that feedback has on training transfer (Clarke 2002; Tracey, Tannenbaum & Kavanagh 1995) and on the performance of employees (Reber & Wallin 1984). For instance, in a study conducted by Clarke (2002) about training in the Social Services Department, UK, it was found that lack of feedback on trainees' performance hinders the transfer of training. The study corroborated earlier research by Reber and Wallin (1984) where it was predicted that the performance of employees enhances when they receive feedback about their goads of being related to the entire department's performance. Two studies examined personal outcomes-positive on training outcomes (Bates & Holton 1999; Tracey *et al*. 1995). For instance, in a study conducted by Tracey *et al*. (1995), it was found that extrinsic personal outcomes like promotion and pay, and intrinsic personal outcomes like recognition and

praise, have a directly impact on post training behaviours. Extrinsic rewards in particular exhibited very feeble associations with training retention, while intrinsic rewards were demonstrated to be more important than positively impact training retention. Additionally, two other studies observed personal outcomes-negative (Kontoghiorghes 2001; Tracey *et al*. 1995).

Tracey *et al*. (1995) established that personal outcomes-negative like punishment was a significant predictor of post training behaviour, especially in inhibiting training retention. In contrast, a study by Kontoghiorghes's (2001) found that punishment for failing to utilize new skills presented only weak associations with retention of training. Despite the contradictions, this thesis sees transfer climate as a variable that affects motivation to transfer, since it is categorized as a chief variable in Holton's (1996) model, and, additionally, the same has been confirmed in other studies displaying the significant impact of transfer climate on motivation to transfer and training transfer.

### 2.11.5 Learning Outcomes

Several studies have noted the relationship between motivation to transfer and learning outcomes (Huczynski & Lewis 1980; Seyler *et al*. 1998; Tannenbaum *et al.* 1991). In the study conducted by Tannenbaum *et al*. (1991), learning was determined using test performance after training. The authors put forth the relation between test and motivation to transfer. Indeed, they found a positive relation between test performance and motivation to transfer. In a similar study conducted by Huczynski and Lewis (1980), it was found that learning gained influence. An interesting finding contrary to these two studies was reported by Seyler *et al*. (1998), who found that learning was not really a major predictor of motivation to transfer. The authors advanced that the paucity of findings connected to learning may be due to the way learning was measured. In their specific study, learning was measured by calculating the average of test scores that were recorded by a computer on the tests that the trainees had taken at the end of each lesson. The authors found that they were not given the chance to inspect the tests, and for that reason there was no guarantee that the tests were characteristic measures of the learning done during training.

## 2.12 Summary

Knowledge transfer is any form of knowledge, expertise, capabilities and skills that are transferred from the knowledge base. The main purpose of knowledge transfer is to facilitate and catalyze innovation. Knowledge transfer is a systematically organized process that enables exchange of skills and information between both the source and the recipient. Knowledge transfer is the learning aspect through which one can obtain knowledge from an external entity. Knowledge can be transferred either through tacit knowledge or explicit knowledge. The difficulties in the process of knowledge transfer will mainly occur only when tacit knowledge is transferred. Tacit knowledge transfer is based on knowledge characteristics and situation characteristics. Expatriates have the ability to transfer tacit knowledge efficiently for both managerial as well as technical people in an organization. Thus, expatriates play a significant role in the process of tacit knowledge transfer. It is also important to care about the will to learn and also to teach.

# CHAPTER III – THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

The theoretical frame applied in this study is principally based on the integration of three notable contributions to the field of knowledge transfers. First, we adopt Szulanski's (1996) in-depth empirical analysis of internal stickiness factors as the general approach. In the study, Szulanski defined internal stickiness as the difficulty of transferring knowledge within the organization. In addition, he developed an eclectic model that includes all four sets of factors, which together are likely to influence the difficulty of knowledge transfer. The results of the study illustrate that the major barriers to internal knowledge transfer are shown to be knowledge-related factors such as the recipient's lack of absorptive capacity, causal ambiguity, and an arduous relationship between the source and the recipient. Although his broad conceptualization of internal stickiness and some of its stickiness factors are widely recognized and adopted in the field of knowledge transfer, his findings did not relate to the context of cross-border knowledge transfer. For this reason, in this study we will incorporate the context perspectives to examine the determinants of intra-Multinational Corporations knowledge transfers in the theoretical model.

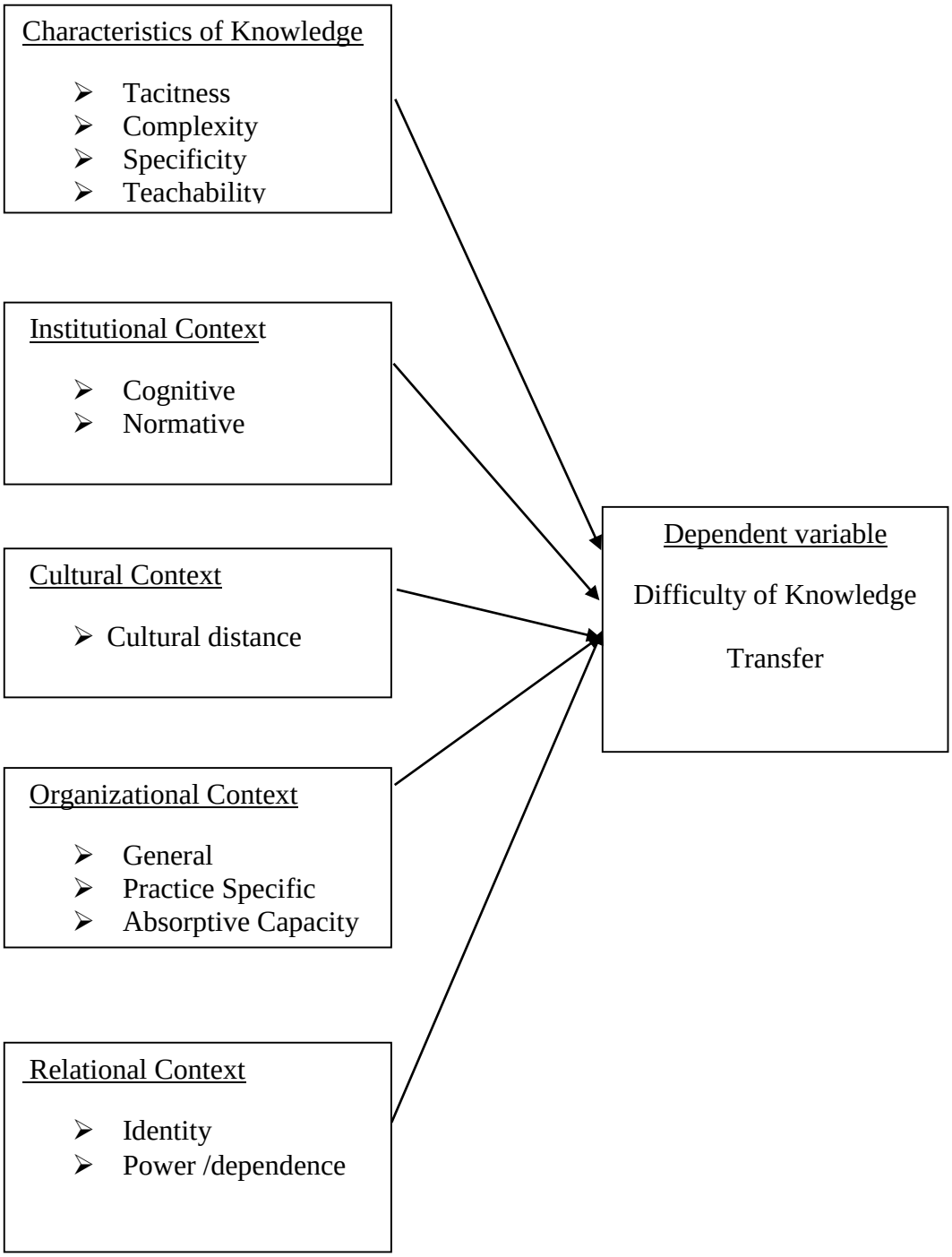
The second principal source of theoretical justification for the proposed model is Kostova's (1999) development of a cross-disciplinary approach to analyzing the transfer of strategic organizational practices. She adopted institutional theory to examine how transfer processes are contextually embedded. According to her study, three types of contexts, namely social, organizational, and relational contexts, affect the success of Multinational Corporations knowledge transfer at three different levels: country, organization, and individual. To examine the effect of stickiness factors on transnational knowledge transfer, Riusala and Suutari (2004) combined these two contributions for a more comprehensive perspective. However, their model did not involve cultural context relative to transnational knowledge transfer.

The third theoretical source is Hofstede's cultural dimensions. He defined "cultural difference" as the extent to which the shared norms and values in one country differ from those in another (2001). Cultural distance is the sum of factors creating a need for

knowledge while making barriers to knowledge transfer between the home country and the target countries. In the context of knowledge transfer within Multinational Corporations, it is a key issue when headquarters and subsidiaries are located in culturally distant environments (Bhagat *et al*., 2002). Therefore, it is theoretically justified that cultural context should be included when studying transnational knowledge transfer.

Based on a review of the literature, we developed a theoretical model specifying five broad classifications of knowledge stickiness factors that affect the difficulty of knowledge transfer through expatriates (see Figure 1).

Figure 1 - Variables proposed to affect the difficulty of cross-border knowledge transfers



## 3.1 Characteristics of knowledge

The first broad classification encompasses those stickiness factors that are directly related to the characteristics of the knowledge being transferred. In the area of strategy, Multinational Corporations may face a paradoxical challenge regarding what knowledge should be transferred, which is related to its degree of complexity and strategic significance. For example, if knowledge that cannot be perfectly imitated by competitors is successfully transferred between units, then according to the knowledge-based view (Grant, 1996) , sustainable competitive advantage should be achieved. However, it is shown that the inimitability of that knowledge also restricts its transferability within organizations (Szulanski, 1996).

One central characteristic of knowledge with respect to its transferability is the commonly accepted notion that there are two types of knowledge: tacit and explicit (Polanyi, 1962). Tacit knowledge cannot be codified and it is learned through collaborative experience. Tacit knowledge can be held individually or collectively in shared collaborative experiences and interpretations of events. Because tacit knowledge is acquired through practical experience and observation rather than through formal learning, it is difficult to articulate, formalize and communicate (Nonaka and Takeuchi, 1995). It is the knowledge that has been transformed into habit, and it is highly context-specific and has a personal quality (Nonaka, 1994). By contrast, explicit knowledge is codified and can be transferred with formal, systematic methods. Individual explicit knowledge consists of knowledge and skills that can be easily taught or recorded, whereas collective explicit knowledge resides in standard operating procedures, documentation, information systems, and rules (Brwon and Duguid, 2000). Obviously explicit knowledge appears easier to be communicated and to be shared than tacit knowledge (Nonaka, 1991).

It is rare to find absolute tacit knowledge or absolute explicit knowledge. As Inkpen and Dinur (1998) illustrated, the distinction between explicit and tacit knowledge should not be viewed as a dichotomy but as a spectrum with the two knowledge types as the poles at either end. So, the knowledge types must be classified on a continuum that ranges from explicit to tacit. The higher the degree of tacitness of firm knowledge, the harder it is to be transferred from one firm to another.

The second characteristic of knowledge is complexity. According to Winter (1987), "the complexity/simplicity dimension has to do with the amount of information required to characterize the item of knowledge in question" (p.172). The empirical findings on complexity and knowledge transfer have been limited. Simonin (1999) found that complexity is negatively related to knowledge transfer. According to his study, complexity refers to the number of "interdependent technologies, routines, individuals and resources linked to a particular knowledge" (p.600). Kogut and Zander (1995) argued that complexity refers to the manifestation of critical and interacting elements within the knowledge and is therefore difficult to separate and measure. Overall, complex knowledge is expected to be difficult to transfer since it draws upon multiple kinds of interrelated competencies.

The third characteristic of knowledge is specificity. Originally, specificity referred to the specificity of transaction costs asset. Reed and De Fillippi (1990) defined specificity as transaction-specific skills and assets that are used in production processes and in the provision of services for particular customers. Simonin (1999) considered it as durable investments in specialized equipment and facilities, and in skilled human resources. He found specificity insignificant and suggested further investigations regarding its effects on other types of competencies. Following this advice, Minbaeva (2007) redefined specificity as the degree to which knowledge relates to specific functional expertise. Per Minbaeva, organizations perform different functional activities so specific functional knowledge needs to be developed and integrated around these activities. Since Multinational Corporations units are often integrated vertically around the functions they perform, specificity should be positively related to internal knowledge transfer. Specificity has also been described by Zander and Kogut (1995) as the dimension "system dependence" that captures a similar characteristic of knowledge. It means that the production of knowledge is dependent on many different groups of experienced people. System dependence, for instance, include items related to the degree of manufacturing's dependence on other functions, and they hypothesized "system dependence" as being negatively related to the probability of transfer. In general, functional knowledge (such as production, marketing, and technological know-how) should be able to "stand alone" without being a part of the interrelated knowledge system (Minbaeva, 2007) and should be easier to transfer. The results of the previous studies were mixed so further exploration on this issue is necessary.

The fourth characteristic of knowledge is teachability. It measures the ease by which knowledge can be taught to new workers. As previously stated, knowledge transfer often requires the sending of engineers and managers from the originating plant to assist in the building up of know-how in the sister plant. Kogut and Zander (1993) argued that if the knowledge is easily taught, the transfer is more feasible and can be expedited.

Tacitness, complexity, specificity, and teachability are the four main characteristics of knowledge. For the first category of the stickiness factors, we therefore propose the following set of hypotheses:

*Hypothesis 1a: The higher the degree of knowledge tacitness, the more difficult for expatriates to achieve the success of knowledge transfer.*

*Hypothesis 1b: The higher the degree of knowledge complexity, the more difficult for expatriates to achieve the success of knowledge transfer.*

*Hypothesis 1c: The higher the degree of knowledge specificity, the more difficult for expatriates to achieve the success of knowledge transfer.*

*Hypothesis 1d: The higher the degree of knowledge teachability, the less difficult for expatriates to achieve the success of knowledge transfer.*

## 3.2 Institutional Context

Previous research suggests that organizational practices vary across countries as they are affected by the social-cultural environments in which they develop and establish (Adler, 1995). Cross-country differences have been found in a variety of organizational practices such as leadership, power delegation, authority (Hofstede, 1980), and human resource management practices (Adler, 1995). For example, Cateora, Gilly and Graham (2009) pointed out that "promotion in American firms is based primarily on merit and performance; in Japanese companies it is based on seniority and loyalty to the organization". With regard to social context, research has shown that there will be country-level effects on the success of transfer, with some countries providing a more

favorable environment for the transfer of certain practices and others presenting a number of difficulties and challenges.

Researchers traditionally studied country-level effects by using the concept of national culture. A typical example is Hofstede's (1980) cultural dimensions. Researchers have widely employed this work to study the impact of culture on organizational behavior. For example, Kedia and Bhagat (1988) examined the effects of national cultural variations on the success of cross-border technology transfer. Janssens *et al*. (1995) studied the effects of Hofstede's cultural dimensions on the implementation of corporate-wide safety policies. Qin, Ramburuth and Wang (2008) studied the impact of national culture on knowledge transfer between Multinational Corporations headquarters and subsidiaries located in dissimilar cultural contexts. Although cultural context, as an exogenous factor, is significant in explaining the extent of difficulty of knowledge transfer, other factors such as host country's political and legal environment can also have impact on across border knowledge transfer. Different from cultural context perspective, Kostova (1999) used institutional theory to conceptualize country-level effects. Because countries differ in their institutional characteristics, when knowledge is transferred across borders, it may not "fit" in the institutional environment of the recipient country, which in turn may be an impediment to the transfer. In order to examine overall country-level effects, we include both cultural and institutional contexts in this study.

To examine the effects of the institutional environment in a more systematic manner, we adopt the concept of country institutional profile (CIP) to capture the institutional characteristics of a national environment. According to institutional theory, Scott (1995) proposed that institutional environments are composed of various types of institutions and can be characterized by three "pillars": regulatory, cognitive and normative. The *regulatory* component of an institutional environment reflects the existing laws and rules in a particular national environment that promote certain types of behaviors and restricts others. The *cognitive* component reflects the cognitive categories widely shared by the people in a particular country. Scott (1995) suggested that cognitive elements constitute the nature of reality and the frames through which meaning is made. Although carried by individuals, cognitive programs, such as schemas, frames, and inferential sets, are elements of the social environment and social

in nature, which affects the way people notice, categorize, and interpret stimuli from the environment. The *normative* component of institutional profile focuses on normative systems which are values, beliefs, norms, and assumptions about human nature and human behavior held by the individuals in a given country. Normative components introduce "a prescriptive, evaluative and obligatory dimension into social life" (Scott, 1995). Norms specify how things should be done; "they are the standards for values that exist within a group or category of people" (Hofstede, 1991). Although the regulatory, cognitive, and normative institutions reflect different facets of the same institutional environment, they may invoke different types of motivation for adopting social patterns, which in turn may lead to different types and levels of adoption. Thus, we examine the three pillars separately.

There are different ways in which the institutional profile of a host country may affect the adoption of knowledge at a foreign subsidiary. First, the institutional environment, particularly policies, regulations, and laws, may exert direct institutional pressures on the subsidiary to adopt the knowledge, independent from the initiatives of the parent organization to diffuse the knowledge. As a result, a subsidiary may adopt knowledge to become isomorphic with other organizations from its organizational field in the host country. Another way in which the recipient country's institutional profile will affect the adoption of the knowledge is through subsidiary employees. As institutional theorists suggested, institutional elements enter organizations through people working in them. Employees' judgments regarding new knowledge will be influenced by their cognitions and beliefs, which in turn have been shaped by the external institutional environment in which they operate. So, the institutional context influences the ability of the recipient unit employees to understand the knowledge, the way they interpret the knowledge and its value, and their motivation to adopt it (Kostova and Roth, 2002). When the institutional profile is favorable for the particular knowledge, such as regulations, laws, and rules supporting and /or requiring the knowledge; cognitive structures that help people understand and interpret the knowledge correctly; or social norms enforcing the knowledge, then the transfer will be less difficult.

However, when Multinational Corporations transfer their organizational knowledge across institutional environments, there is a possibility that knowledge may not be consistent with institutional environments into which it is transferred, and it may even

be in conflict with them. This, in turn, may increase the difficulty of the knowledge transfer.

The three components of institutional context can be the stickiness factors when organizational knowledge is transferred across countries, as is the case in transnational transfers of knowledge in Multinational Corporations. The effect of the three institutional dimensions on the international knowledge transfer is examined as follows. First, regarding the regulatory institutions, if the knowledge from Multinational Corporations headquarters is perceived by the employees at a subsidiary to be in conflict with the regulatory institutions in their country, it is highly unlikely that they will engage in transferring and implementing the knowledge. Therefore, the incompatibility of the host regulatory environment with the knowledge being transferred may increase the difficulties for expatriates to achieve the success of knowledge transfer. Second, if the knowledge from Multinational Corporations headquarters is inconsistent with the cognitive institutions in the host environment, it is also likely that employees will be reluctant to engage in its implementation, because they will probably have difficulties understanding, interpreting, and judging it correctly. Cognitive structures also affect learning processes; it is much easier to learn new knowledge when it is consistent with the prevalent social schemas than when it is inconsistent with these schemas. Thus, the cognitive difference across countries may put expatriates in a more challenging situation to transfer the knowledge in Multinational Corporations successfully. Third, regarding the normative dimension, researchers have found that the knowledge, in order to be implemented successfully in foreign subsidiaries, has to be consistent with and take into account the different assumptions and value systems of the national cultures of those subsidiaries (Schneider and DeMeyer, 1991). For example, the decision-making practices used in Japanese firms are different from those used in Western companies. In Japan, the focus is on consensus building through a lengthy process of organization-wide employee participation (Cateora, 2009), whereas in the Western countries, decision making tends to be a more specialized activity conducted by those directly responsible for the decision. Although the collective decision-making management style may be perfectly understandable to and valued by Japanese employees (Adler, 1995), the foreign employees of Japanese companies may be puzzled by the complexity, length, and subtlety of the process and may question the value of the practice (Kostova, 1999).

Thus, the normative dimension of institutional environment is a stickiness factor which may increase the difficulties for expatriates to achieve the success of knowledge transfer.

As Multinational Corporations may have their subsidiaries operating in different countries where the institutional environments vary, the effect of institutional dimensions upon knowledge transfer will be also different. With the same observation, Kostova (1999) proposed that the greater the difference between the institutional profiles of the home country of the practice and those of the recipient country, the greater the likelihood that there will be a misfit between the transferred practice and those of the recipient environment, which in turn may result in difficulties or even failure of the transfer. Regulatory, cognitive, and normative dimensions are the three components of social context. Each of these dimensions reflects the difference between the corresponding dimension in the institutional profiles of the home country and the host country of Multinational Corporations. For the second category of stickiness factors, we propose the following relationships on the three institutional dimensions and knowledge transfer through expatriates.

*Hypothesis 2a: The incompatibility of the host cognitive environment with the knowledge being transferred increases the difficulty for expatriates to achieve the success of knowledge transfer.*

*Hypothesis 2b: The incompatibility of the host normative environment with the knowledge being transferred increases the difficulty for expatriates to achieve the success of knowledge transfer.*

## 3.3 National cultural context

Culture is regarded as one of the most important contextual variables that impact on the knowledge transfer process in Multinational Corporations (Bhagat *et al*., 2002; Chow *et al*., 2000; Li and Scullion, 2006). Holden (2001) asserts that knowledge transfer in the global economy is essentially a form of cross-cultural management, involving acts of cross-cultural exchange. The literature offers a diversity of approaches to defining

culture (Hofstede, 1980, 2001). The general consensus appears to view culture as patterns of beliefs and values that are manifested in practice, behavior, and various artifacts shared by members of an organization or a nation (Trice and Beyer, 1993). To examine the effect of national cultural context on cross-border knowledge transfer, the term "cultural distance" is generally employed.

Differences between National cultures have often been conceptualized in terms of "cultural distance" (Shenkar, 2001), defined as the extent to which the shared norms and values in one country differ from those of another country (Hofstede, 2001). Cultural distance is the sum of factors creating, on one hand, a need for knowledge, and on the other hand, barriers to knowledge flow between the home and the target countries (Barkema, *et al*., 1997). Given the underlying distinctions between cultures throughout the world, understanding the similarities and differences, or relative "distance" between cultures become important from a management standpoint as these similarities and distinctions form the foundation on which managers make strategic decisions. As the national cultural distance between Multinational Corporations and their subsidiaries increases, the underlying gap in the norms, values and institutions that govern exchange between the parties increases. Increased national culture distance can reduce communication effectiveness. Lyles and Salk (1996) argued that national cultural distance increases conflict and misunderstandings, decreases the flow of information and learning among partners; therefore, constitute an obstacle to technology transfer between Multinational Corporations and their local subsidiaries. In the context of knowledge transfer within Multinational Corporations, it is a key issue when headquarters and subsidiaries are located in culturally distant environments (Bhagat *et al*., 2002; Holden, 2001).

Researchers have argued that cultural distance is related to knowledge transfer in Multinational Corporations (Cui *et al*., 2006; Javidan *et al*., 2005), because knowledge is created by individuals and embedded in a certain cognitive and behavioral context (Grant, 1996) and then transferred from its holders to its recipients by transmitting their culture-specific sets of values and frames of reference (Nonaka, 1994). Although specific culture values may have a positive impact on knowledge transfer (Almeida *et al*., 2002), most studies view cultural distance as an obstacle to knowledge transfer. The cultural dimensions of Hofstede (1980, 2001) are the most frequently used in studies of

cultural variations in knowledge transfer because they represent distinguishing characteristics of societies and the way in which people process information (Bhagat *et al*., 2002). They include the dimensions of individualism versus collectivism, power distance, uncertainty avoidance, masculinity versus femininity, and long-term versus short-term orientation.

Among the five dimensions of cultural variations (Hofstede, 1991), the individualism and collectivism dimension has been considered as the major distinguishing characteristic in the way that the various societies of the world analyze social behavior and process information. Some countries are clearly more individualistic than other countries in their orientations. People who are individualistic are motivated by their own preferences, needs, rights, and contracts. However, people with collectivism are motivated by norms, duties, and obligations, which are imposed by the collectives. People are inclined to give priority to the goals of these collectives over their own personal goals. Individualism and collectivism strongly influence ways of thinking. Specifically, they influence how people of a culture process, interpret, and make use of a body of information and knowledge. They provide a basis for sampling the domain of a message, how much weight to give to what is sampled, and what the relationships are among various domains of messages, as well as what pieces of information to sample and what kind of associations already exist among the items and the domains of knowledge. For example, people in individualist cultures think of the "self" as independent of the immediate social environment and see each piece of information as independent of its context. On the contrary, people in collectivist cultures see the "self" as functioning interdependently with significant others within the immediate social environment and look for contextual cues in each piece of information (Triandis, 1998).

People in collectivist cultures are likely to pay more attention to the knowledge concerning about organizational history, patterns of obligations, norms, or in-groups and out-groups. In terms of attending to, comprehending, and putting this knowledge into action, collectivists are much more sensitive to such types of context-specific information. In contrast, people in individualist cultures are more likely to focus on knowledge concerning personal attributes, such as personality, beliefs, feelings, and attitudes toward an event, object, or person. So, individualists are more concerned with rationality when they transfer and receive knowledge. In addition, as collectivists

emphasize historical and contextual knowledge to a greater extent than individualists, they are less likely to emphasize the significance of information that is written and codified compared to individualists.

In addition to the dimension of individualism and collectivism, the other four dimensions can also affect cross-border knowledge transfer. In high power distance culture, the processing of information and knowledge takes place according to hierarchical arrangements within the organization, with superiors having first access to important knowledge derived from external sources. Superiors may also have the power to decide when and how such knowledge is diffused. Because communication flows differently in the society with high power distance from those with low power distance, cross-border knowledge transfer can become more eventful or more difficult. In a low uncertainty avoidance culture, individuals have a high tolerance for ambiguity which helps them to better transfer and receive knowledge that is tacit and complex. Cultures that are high in the masculinity aspect have more difficulty in knowledge transfer between organizational members if competitiveness is between individuals and not limited to organizations. If a culture has a long term orientation, then members of that culture work for the long-term goals and benefits that accompany knowledge management. Since the benefits of knowledge management are not realized in the very short term, a long term orientation promotes and values knowledge transfer (Al-Shammari, 2010). In summary, the cultural differences identified along these dimensions which form cultural distance between societies can increase the difficulty of cross-border knowledge transfer.

Based on the previous observations, we propose the following relationships on the two national cultural constructs and knowledge transfer through expatriates for the third category of stickiness factors.

*Hypothesis 3a: Cultural distance increases the difficulty for expatriates to achieve the success of knowledge transfer.*

## 3.4 Organizational context

In addition to their social embeddedness, transfers are also organizationally embedded, since they occur in a corporate context that can be either favorable or unfavorable regarding a particular transfer. Several studies have illustrated the importance of organizational compatibility for the transfers. For example, in his work on diffusion of innovations, Rogers (1995) suggests that compatibility of an innovation with the systems at the recipient unit is one of several important dimensions of innovations that can explain the success of the diffusion. Similarly, Kogut and Zander (1992) and Zander and Kogut (1995) proposed that the success of transfer will be affected by the compatibility of the organizing principles of the recipient unit with the principles implied in the technology that is being transferred. They suggest such compatibility affects the ease or difficulty with which the new knowledge can be communicated and understood.

Considering differences in organizational cultures, Kedia and Bhagat (1998) proposed two types of organizational effects on the success of technological transfer: 1) compatibility of the organizational cultures of the two organizations involved in the transfer, and 2) the absorptive capacity of the recipient organization. Kedia and Bhagat (1998) defined compatibility as the similarity between the "negotiated order" of the two transacting organizations, reflected in an organizations' structural conditions and patterned lines of communication. They defined the absorptive capacity in terms of local versus cosmopolitan orientation, existence of a sophisticated technical core, and strategic management at the recipient organization. They also claimed that these factors will have a stronger impact on the success of transfer for process and person-embodied technologies than for product-embodied technologies. Therefore, these factors can apply fully to organizational knowledge which involves more process and people characteristics than product ones. Further, Ghoshal and Bartlett (1988) found that an Multinational Corporations subsidiary's ability to contribute to the task of creation, adoption, and diffusion of innovations is positively affected by the degree of normative integration of the subsidiary into the Multinational Corporations through organizational socialization and rich intra-unit communication.

Based on the above research, we argue that the organizational culture of the recipient unit has a great impact on the extent of knowledge transfer within Multinational

Corporations. In most studies, organizational culture is defined as a set of values and assumptions that act as the defining elements around which other elements of culture, such as norms, symbols, rituals, and cultural activities evolve. Management scholars have proposed various definitions for the concept of organizational culture. For example, O'Reilly, Chatman and Caldwell (1991) and Chatman and Jehn (1994) take a narrower approach, defining organizational culture as a set of values widely shared among organizational members. They group these values into seven dimensions: innovation, stability, respect for people, outcome orientation, detail orientation, team orientation, and aggressiveness. Ravasi and Schultz (2006) stated that organizational culture is a set of shared mental assumptions that guide interpretation and action in organizations by defining appropriate behavior for various situations. They argued that these largely tacit assumptions and beliefs are expressed and manifested in a web of formal and informal practices and of visual, verbal, and material artifacts which represent the most visible elements of the culture of an organization.

Focusing on the recipient unit, Kostova (1999) suggested that organizational culture can have two types of effects on the success of practice transfer: general and practice-specific. As for the general effect, she argued that since the transfer of practices typically is associated with organizational learning, change, and innovation at the host recipient unit, a cultural orientation of that unit toward learning, innovation, and change will likely result in more positive attitudes toward the transfer process and will lead to its eventual success. So it refers to an overall cultural orientation that the host recipient unit has to learn, innovate and change. Regarding the practice-specific effect of organizational culture, Kostova (1999) suggested that the success of transfer will be affected by the compatibility between the values implied by the particular practice and the values underlying the culture of the host firm. When these values are compatible, it will be easier for employees at the recipient unit to understand and internalize the practice. On the contrary, if the underlying values of the knowledge being transferred are incompatible with the values of the recipient unit, it will be difficult for employees to understand, implement, and internalize it.

The third potential stickiness factor in this category that may prove decisive in knowledge transfers reflects the recipient's understanding and application of new knowledge. Defined broadly as the ability and motivation of the organization to acquire,

assimilate, and exploit outside knowledge (Cohen and Levinthal, 1990), absorptive capacity is expected to have a direct influence on the overall level of difficulty in the transfer process (Lane and Lubatkin, 1998; Minbaeva *et al*. 2003; Mowery *et al*. 1996).

General effect, practice-specific effect, and absorptive capability are the three types of effects of organizational context. For the third category of stickiness factors, we propose the following relationships on three types of organizational effects and the success of knowledge transfer through expatriates.

*Hypothesis 4a: The incompatibility of the host recipient unit's organizational context at the general level with the knowledge being transferred increases the difficulty for expatriates to achieve the success of knowledge transfer.*

*Hypothesis 4b: The incompatibility of the host recipient unit's organizational context at the practice-specific level with the knowledge being transferred increases the difficulty for expatriates to achieve the success of knowledge transfer.*

*Hypothesis 4c: The low level of host recipient unit's absorptive capability of the knowledge being transferred increases the difficulty for expatriates to achieve the success of knowledge transfer.*

## 3.5 Relational Context

Even when both the social and organizational contexts are favorable, there is a possibility that knowledge transfer could fail. A potential reason for failure in such a case could reside in the relationships that exist between the parties involved in the transfer, namely, the Multinational Corporations parent company and the subsidiary. In examining the stickiness factors of knowledge transfer inside a firm, Szulanski (1996) argued that the difficulty in knowledge transfer is more likely to occur when there is a lack of motivation on the side of recipient, a lack of perceived reliability of the source, and an arduous (laborious and distant) relationship between the recipient and the source of the knowledge.

It is important to recognize that the knowledge that the Multinational Corporations attempts to transfer is formulated in the Multinational Corporations's home institutional

context. So its subsidiaries are influenced by the institutional forces of the home country. However, due to the dispersed nature of Multinational Corporations, home country institutional influences are indirect, as they are filtered through the parent organizations. Consequently, the relational context that links a foreign subsidiary to a parent becomes extremely important because it influences the way such pressures from a home country are interpreted and perceived by a foreign subsidiary. Previous research indicates that the quality of relationship between the source and recipient influences the knowledge transfer process. Oddou, Osland and Blakeney (2009) argued that an inadequate relationship can be a primary source of noise that hinders, distorts or even eliminates the transfer of knowledge. Thus, we propose that the willingness of the local employees to engage the process of transfer is affected by the quality of the relationship with the parent company. Kostova (1999) divides this relationship into the two measures: the attitudinal relationships and power/dependence relationship, in which attitudinal relationships refer to the levels of subsidiary employees' commitment to, identity with, and trust in Multinational Corporations parent company. Subsidiary dependence, or lack of autonomy, is grounded in resource dependence and institutional theory and refers to the extent that subsidiaries are either reliant on the parent or motivated by legitimacy. Both of the two measures can impact on the motivation of the local employees at subsidiaries to engage in the transfer process and are especially important when the direct value of knowledge is difficult to assess, e.g. it is more difficult to assess the value of tacit knowledge than to assess that of explicit knowledge.

In the context of attitudinal relationships, the commitment can be interpreted as the degree to which employees of a Multinational Corporation subsidiary are committed to the parent company's operation and goals. They must be willing to put in considerable effort in the process of knowledge transfer and have a strong desire to achieve the parent company's objectives. Individuals who are highly committed to the parent company will be likely committed to any task assigned by the parent company. In addition, committed people involved in the transfer process will be more willing to meet the challenges of the process of transfer by providing the necessary resources and organizational support, as well as by investing extra time and effort as needed (Kostova, 1999). Thus, the degree of commitment of the local employees of subsidiaries to the parent company will be directly related to the potential success of the knowledge

transfer. We propose the high level of host employees' commitment can reduce the difficulty for expatriates to transfer the knowledge.

Identification of the foreign subsidiary with Multinational Corporation parent company can be defined as the degree to which subsidiary employees experience a state of attachment to and identity with the parent company. They feel that they are part of the parent organization, belong to it, and partly derive their self-identities from Multinational Corporations membership. Previous research suggests that individual's identity with an organization results from a strong belief and acceptance of the values and goals of the organization (O'Reilly and Chatman, 1986). Therefore, if the subsidiary employees identify with the parent company, they will be more likely to share the values and the beliefs of the parent company embodied in the knowledge that is being transferred. They will have a better understanding of the meaning and value of the knowledge and apply it within their subsidiary. Thus, members who identify with the Multinational Corporations parent and its subsidiary will be more likely to become active in the transfer of the knowledge. In addition, identity with the parent company also reduces the effects of the "not-invented-here" syndrome and is viewed to a lesser extent as unfamiliar and transmitted from an outsider. In Child and Rodrigues' (1996) study, they found knowledge transfer was facilitated when partners involved in the transfer held similar social identities but it was impeded when partners held different social identities. So, when local employees at Multinational Corporation subsidiaries can have a high level of identity with their parent company, the expatriates may have less difficulty transferring the knowledge.

Trust of a foreign subsidiary in its parent company can be defined as believing that the parent company acts in good-faith to behave in accordance with previous commitments; is honest in whatever discussions preceded such commitments, and does not take excessive advantage of the subsidiary (Kostova and Roth, 2002). The previous research indicated that higher trust expressed in the perceived reliability of a parent company can positively influence practice transfer (Szulanski, 1996). Likewise, in the context of business trust and knowledge transfer, Roberts (2000) argues that the exchange of knowledge, particularly tacit knowledge, is not amenable to enforcement by contract but by trust. Hence, when mutual trust prevails, the Multinational Corporations headquarters will share and exchange their knowledge with subsidiaries; on the other

hand, if the subsidiaries do not trust their parent companies, they would probably have no intention to learn because they assume the headquarters will not transfer knowledge. The subsidiaries would be suspicious regarding the accuracy of information received from the parent company. In addition, trust can also help to reduce the uncertainty and ambiguity regarding the value of the knowledge for the subsidiary. When knowledge is transferred to Multinational Corporation subsidiaries, mixed and possibly conflicting messages about the value of the knowledge may be received by the subsidiary. This conflict may increase the uncertainty about the function of the knowledge. Under such conditions of increased uncertainty and ambiguity, trust becomes even more critical. So trusting the parent company will shape the perception that the knowledge is efficient and will likely ease the difficulty of knowledge transfer.

Besides the inter-organizational trust, we also assume that personal trust can contribute to the success of knowledge transfer in the Brazillian context. In the process of knowledge transfer, the subsidiaries expatriates, who represent the parent company, play a key role to make decisions on what knowledge is transferred and how the knowledge is transferred. Kostova (1999) referred to these key players as the "transfer coalition" which is composed of a stable "core" and a flexible "expert" group. We argue that personal relationship between the members of the transfer coalition and local employees at the subsidiary can have a significant influence on the knowledge transfer.

Dependence of a subsidiary on headquarters can be defined as the belief held by the subsidiary employees that the subsidiary relies on, and is contingent on, the support of the parent company for providing major resources, including technology, capital, and managerial expertise (Kostova and Roth, 2002). Implied in the notion of dependence is subordination and control. Thus, dependence reflects the nonsymmetrical, hierarchical nature of the relationships between the parent organization and the subsidiary. According to the institutional literature, the power/dependence of an organization affects its compliance with institutional pressures. So if a subsidiary depends on its parent company, it will be more likely to become isomorphic by implementing institutional structures or procedures in response to institutional pressures from the parent company. When its dependence on the parent company is high, the subsidiary will tend to comply with mandates coming from the parent.

In addition, these subsidiaries might be in a situation where they compete with other units for organizational resources provided by the parent company or the Multinational Corporations headquarters. Under such conditions of dependency and intra-organizational competition, a subsidiary will try to become legitimate with the Multinational Corporations headquarters and will try to gain favorable judgments. So implementing the knowledge that has been institutionalized at the parent company is one of the strategies that subsidiaries may use to achieve intra-organizational legitimacy (Powell and DiMaggio, 1991). Compliance with the requests from headquarters is a strategy that will be viewed positively by the headquarters and could increase the degree to which the subsidiary is perceived as cooperative and committed to headquarters. Therefore, the subsidiaries employees' perception of being dependent upon the headquarters may provide an alternative source of motivation to comply with the requests for knowledge transfer and to engage actively in this process.

Empirical evidence also leads us to expect that the relational context will have a notable impact on knowledge transfer. The relational variable in Szulanski's study (1996) proved to be the third significant predictor of knowledge stickiness. Similarly, Hansen's study (1999) found that "weak ties" between two parties hinder the transfer of complex knowledge.

The commitment, identity, trust, and power/dependence relationships are the four types of relationships. For the fourth category of stickiness factors, we propose the following connection to the four relationship factors and knowledge transfer through expatriates.

*Hypothesis 5a: Subsidiary employee's commitment to Organization headquarters can reduce the difficulty for expatriates to achieve the success of knowledge transfer.*

*Hypothesis 5b: Subsidiary employee's attitudinal with the Organization headquarters can reduce the difficulty for expatriates to achieve the success of knowledge transfer.*

*Hypothesis 5c: Subsidiary's dependence on the Organization headquarters can reduce the difficulty for expatriates to achieve the success of knowledge transfer.*

In summary, Chapter 3 developed five groups of hypotheses that define the relationship between the difficulty of knowledge transfer and characteristic of knowledge, institutional context, national culture context, organizational context and relational context. In next chapter, we will present the research design and methodology.

# CHAPTER IV – METHODOLOGY

## 4.1 Background

The purpose of this research is to examine capacity of absorption by the receiver of knowledge. Different methods were carefully chosen in this research because the researcher understands the role research methods play in any given research. Therefore, this chapter presents methods used by the researcher to gather, analyze and present data in this study. Subjects discussed in this study include research design, types of data, data collection, questionnaire, in-depth interview, case study, data analysis sampling, validity and reliability and ethical consideration.

## 4.2 Research Design

Research design is the strategy that researchers employ in a research to achieve the objectives of the research (Cozby, 2009). It is important that proper care is taken at this stage because when a researcher makes a mistake in designing a research strategy to use in order to achieve the research objectives, then the succeeding research processes would be in vain because they depend on the strategy employed for success (Churchill and Lacobucci, 2005). There are two main research designs that are commonly used by researchers. The research designs include qualitative research design and quantitative research design. When appropriate research design is employed in a research then the success of the research is ensured. Therefore, it is proper to deduce that quality of a research is dependent on the research method and research design used. Care should be taken by the researcher to first understand the significance of the research design before undertaking tasks associated with choosing the right design to employ in the research, since research success is dependent on the research design and method applied. Qualitative research design uses nominal data and it is inductive in nature (Bryman, 2001). Qualitative research design differs with quantitative research design in various ways with respect to type of data, nature of the research, data analysis and data collection methods among many others. In qualitative research design, the devices used to collect data include specimen records, oral histories, artefacts such as documents and

records, interviews and observations. Data analysis used in qualitative research design is interactive in nature.

Quantitative research design uses numerical data and is therefore deductive in nature (Churchill and Iacobucci, 2005). Quantitative research design can be applied to different types of research such as exploratory researches, descriptive studies, comparisons and hypothesis testing among other. One of the most commonly use method for collecting primary data in quantitative research design is questionnaires. Closed ended questionnaire is very instrumental in collecting quantitative data, which is one of the attributes that sets aside quantitative research design for qualitative research design. The most appropriate research design that the researcher deemed appropriate for this research is both the qualitative and quantitative research because the researcher intended to collect qualitative and quantitative data from the respondents, which would then be subjected to statistical analysis (Bryman, 2001). In-depth interviews and closed ended questionnaire are the data collection methods used in this research to collect qualitative and quantitative data. Questionnaires and interviews are often used together in mixed method studies investigating educational assessment (e.g., Brookhart & Durkin, 2003; Lai & Waltman, 2008). While questionnaires can provide evidence of patterns amongst large populations, qualitative interview data often gather more in-depth insights on participant attitudes, thoughts, and actions (Kendall, 2008). Closed ended questionnaire designed in accordance with 5 Likert scale were designed and distributed to potential respondents (appendix I).

## 4.3 Types of Data and Data Sources

### 4.3.1 Primary Data

Primary data on capacity of absorption by the receiver of knowledge was instrumental in making the research more successful. Primary data is firsthand information derived directly from respondents. Since this research employed quantitative research design, it follows that the research used quantitative instrument to gather numerical data that was analyzed to meet the objectives of the study (Rubin and Rubin, 2005). It is normally considered reliable, objective and authentic since it has not been documented anywhere and therefore has not been tampered with. This is why primary data is thought

of as valuable. Research studies are always conducted because they can be valid. Validity uses scientific methods to make a research study logical and acceptable. When primary data is used in a research study, the research study is considered valid. Primary data sources are considered authentic because they represent facts that have not been altered. This makes primary data reliable and valuable in getting research study conclusions (Cohen, Manion and Morrison, 2007). It is normally obtained and tailor made to fit some research specification. It is important to collect primary data because of the need to update existing information. The collection of primary data targets primary sources of information. The sources of primary data are; field observations, surveys, observations, unpublished manuscripts, experiments some interviews. The major advantage of using primary data is that the researcher gets information that has not been altered. The researcher needed primary data in this research in order to fill in the gap that is left by the secondary data. In this research, primary data was gathered from managers and employees working in different fields where closed ended questionnaire was used to collect data and in order to strengthen our results we also processed to in-depth interviews.

### 4.3.2 Secondary Data

The study on capacity of absorption by the receiver of knowledge could not be a success without primary data, which formed the basis upon which to base the research. Sources of secondary data include books, journals, periodicals, magazines and internet among many others (Saunders, Lewis and Thornhil, 2007). There is a lot of information available in the archives and secondary sources about knowledge transfer. Therefore, caution was taken to ensure that only relevant information was gathered and used in the study. Compared to primary data secondary data collection is considered less cumbersome and requires relatively shorter time. Hence, time was saved in the secondary data collection to be utilized in the primary data collection. The role that secondary data used in this study is quite great. For instance, secondary data provides the basis upon which this research is based (Cohen, Manion and Morrison, 2007). The research problem, research objectives and research questions as well as research hypotheses were formulated based on secondary data. Besides, secondary data in this

research was used to gauge the primary data gathered from the targeted population in a bid to ensure that the gathered primary data is in accordance with past studies.

## 4.4 Data Collection

### 4.4.1 Questionnaire

Questionnaire is the most appropriate method that was deemed right to use in this study due to a number of reasons. Questionnaires can be self-administered or interviewer administered (Myer, 2009). When they are self-administered, they are sent to the respondents by mail or email for example. When they are interviewer administered, the questions are asked by the interviewer and the respondents answer openly. A questionnaire can be done in different forms. It can be conducted through the telephone, mail, email and fax or even in a live public area. If telephone questioning is used geographical barriers between the interviewer and the respondent does not hinder the collection of information. Time and costs are saved as the data collector will not have to travel to get the information needed (McNeill and Chapman, 2005). On the other hand, the use of a telephone makes it harder for the data collector to see the respondent's reaction and expression. The most challenging part in a questionnaire is its construction and the interpretation of the results thereof. The researcher has to develop a questionnaire that indicate that he understands the content and the format that the questions should take. The questions in a questionnaire can either be open ended or close ended. Open ended questions are used when the answers to a question are not known (Cohen, Manion and Morrison, 2007). This is because they help in the identification of probable answers for a close ended questionnaire. Open ended questionnaires also help the researcher to avoid suggesting answer to the respondents and instead wait to get answers from the respondents. In this research, closed ended questionnaire designed in accordance with 5 Likert scale as referred above were designed and distributed to potential respondents.

### 4.4.2 In-Depth Interviews

Interviews are a common method in qualitative research (Hesse-Biber and Leavy, 2006; Miller and Glassner, 2011; Punch, 2005, 1998; Silverman, 2010; Yin, 2014). Qualitative interviewing is different in many aspects in comparison with interviewing in quantitative research, for instance, qualitative interviewing is generally much less structured (Bryman and Bell, 2007). Furthermore, qualitative interviewing is usually seen as being flexible; the interviewer adjusts and responds to the interviewee, there is a great interest in the respondents point of view, detailed and rich answers are desired, the interviewer is allowed to depart from any schedule that is being utilized, new questions may rise due to respondent´s replies and the order of questions may be revised (Bryman and Bell, 2007).

There are different approaches to qualitative interviewing; unstructured and semi-structured interviewing. During an unstructured interview the researcher might start the conversation with a question and then actively listens to the respondent who talks freely while a semi-structured interview follow a checklist of issues and questions that the researcher wish to cover during the session (Bryman and Bell, 2007). Thus, semi-structured interviews have been chosen as method in this thesis. The reason for choosing the semi-structured interview technique is essentially due to our aim to encourage the interviewees to freely discuss their own opinion on what is hampering the growth of their firms. This method with open-ended questions will allow us to adjust our questions depending on the attributes of the specific firm and the given type of problems that they face.

According to Bryman and Bell (2007) the semi-structured interview is neither a free conversation nor a highly-structured questionnaire. Semi-structure interviews provide the opportunity to regulate the order of the questions and the respondents have the possibility to expand their ideas and speak in detail about diverse subjects rather than relying only on concepts and questions defined in advance of the interview. In other words, semi-structured interviews are more flexible than standardized methods such as the structured interview or survey.

One general problem when conducting qualitative interviews, with open-ended questions, is that the interview is “flavored” by the interest and opinions of the

interviewer. Semi-structured interviews are rather organized in terms of what issue will be discussed during the interview but the follow-up questions will be depending on the opinions of the interviewer. Another problem that can occur is misunderstandings and misinterpretations of words.

## 4.5 Case Study

### 4.5.1 Why It Is Suitable

Case study is one of the most preferred designed in research due to its strengths in fields like health, administration, social work and education (Yin, 2003). All research designs are discussed on the basis of both their limitations and strengths. Strengths that research designs have influence to a great extent the rationale of selecting the design in any given research in a bid to effectively address a research problem. For instance, experimental design is known to have an important strength of being predictive in nature with respect to the research findings (Gobo, 2004). It becomes quite easy to predict behavior in experimental design due to the tightly controlled conditions, statistical probabilities and random sampling used in the research design. Similarly, in case a researcher need to investigate characteristics of a sample population or any area of interest, then it is imperative to employ a descriptive study (Yin, 2003). In the descriptive study, the findings or result is limited to describing phenomenon and not predicting future behavior as is the case of experimental research.

Researchers choose a research design to use in addressing the research problem depending on the nature of the research. Likewise, researchers select case study as their preferred research design due to nature of the research problem they intend to address as well as the nature of research question the research aim to find answers to (Yin, 2003). It has been ascertained that case study is one of the best plan that researchers can use to answer research questions due to the fact that the strengths of the research design outweigh its limitations. Case studies offer means of exploring complex social units, which consist of multiple elements of potential importance in understanding the phenomenon in question. Case study as research design offers insights and it also illuminates meanings that expand its readers' experiences. These insights can be construed as tentative hypotheses that help structure future research; hence, case study plays an important role in advancing a field's knowledge base. Because of its strengths, case study is a particularly appealing design for applied fields of study such as education, social work, administration, health, and so on (Wickham and Woods, 2005). Case study has been ascertained to be quite useful in the study of educational innovations, informing policy and in evaluating programs.

Case study is characterized by an attribute of generalizability compared to other qualitative research because it focuses on one unit, a single instance (Yin, 2003). However, the attribute of case study of generalizability, the research design enables learning of much from a particular case. Though a native description, a ready of a particular study can learn quite vigorously since case studies present detailed description about a given phenomenon. It has been ascertained that colorful description as is the case in case studies tend to create a clear image, which is quite suitable for excellent teaching (Wickham and Woods, 2005). Quality of case studies is determined by the researchers. For instance, qualitative case studies are limited by both integrity and sensitivity of the investigator. In this case the researcher is known to be the primary instrument of data collection and data analysis, which has its own sets of advantages. Observations and interviewing, which are very important concepts in social research ate not important for an aspiring case study research since the methods are not important in case study. In case study, the investigator or researcher is allowed to depend on his or her own instincts as well as abilities throughout the research making observation and interviewing less significant in case study (Yin, 2003). There biases that can affect the outcome of a case study, which both readers and research need to know. Other limitations of case study include issues with generalizability, validity and reliability. Case studies lack representativeness in research and rigor in data collection, construction and analysis making reliability and validity issues quite real in case studies. It is argued that lack of rigor in case studies is associated problem bias, which is introduced by subjectivity of the researcher as well as other people involved in the case (Hellström, Nolan and Lundh, 2005). However, recent studies indicate that the strength of qualitative approaches is that they account for and include difference ideologically, epistemologically, methodologically and most importantly, humanly. They do not attempt to eliminate what cannot be discounted. They do not attempt to simplify what cannot be simplified. Therefore, it is precisely because case study includes paradoxes and acknowledges that there are no simple answers, that it can and should qualify as the gold standard.

### 4.5.2 Advantages and disadvantages of Case Study

The advantages of case study include intensiveness, no sampling, continuous analysis, hypotheses formulation, comparison, increase knowledge, generalization of data, comprehensive, locate deviant cases and farming questionnaires or schedule (Wickham and Woods, 2005). Case studies are intensive in nature in the sense that the method makes the research exhaustive with respect to the unit or phenomenon under investigation. Case studies allow thorough investigations as well as exploration of issues under investigation thoroughly and deeply. There is no sampling in case studies since the method allows researchers to study a social unit in its entire perspective (Russell, Gregory, Ploeg, DiCenso and Guyatt, 2005). This makes no need of sampling population or elements in case study since a unit is studied in its entire perspectives. In addition, case studies have a continuous analysis in which the facts of life of a social unit are dug out through continuous analysis. Another advantage of case study is formulation of hypothesis in the sense that it is instrumental in formulation of hypotheses for further studies. Case study is also good in comparison where it compares different types of facts about the phenomenon or issue under discussion. Besides, case study suitable because they increase knowledge of readers about particular issues on which the research is based (Hellström, Nolan and Lundh, 2005). The method also provides grounds for generalization of data for illustrating statistical findings. Case studies are also known to be quite comprehensive because data collection process is quite comprehensive leading to collection of a wide range of data on a research topic. Case study has the ability to also locate deviant cases. Deviant cases in this case are those units that tend to behave against proposed hypotheses that the study aims to investigate (Wickham and Woods, 2005). Therefore, case study has the ability to identify such deviant cases. There is a tendency to ignore such cases but they are quite important for scientific research. The use of case study method in a research enables researchers to formulate as well as to develop schedule and questionnaires.

The use of case study as a method of data collection also has disadvantages (Gobo, 2004). Disadvantages of case study method include limited representativeness, no classification, possibility of errors, subjective method, no easy and simple, no fixed limits, bias can occur and costly and time consuming. Case Studies have limited representativeness due to narrow focuses that such studies have on the subject of the

studies (Flyvberg, 2006). Since case studies have narrow focuses on phenomenon under investigation, they tend to have limited representatives as well as generalization is known to be impossible in such situations. Since case studies study small unit, classification in the method becomes impossibility. In addition, since the study depends on the integrity and sensitivity of the researcher, it is prone to possibilities or errors. The errors that possible in case studies are due to judgement and memory of the researchers. Case study as a research method is also known to have no fixed limit with respect to investigation (Yin, 2003). This research method depends on situation and therefore has no fixed limits of investigation of a researcher. Case study by being intensive and generalized is known to consume a lot of time a part from being quite costly compared to other research methods.

In this researcher, one of the methods to use examination of capacity of absorption by the receiver of knowledge is case study method. There are several reasons that led into the decision of using case study method. According to Yin (2003) a case study should be considered by a researcher when the study aims to answer the how and why questions, when the researcher cannot control behavior of the people involved in the study, when the researcher aims to cover contextual conditions since he/she believe they are not relevant to the phenomenon in question or under study and case study should be used when the boundaries are not clear between the phenomenon and the context (Stake, 2005). The study on capacity of absorption by the receiver of knowledge suits this study since all the attributes that informed the choice of a case study is addressed by the research. The study capacity of absorption by the receiver of knowledge employs explanatory case study to address the research problem in the study. The researcher intends to analyze the capacity of absorption by the receiver of knowledge using case studies among other methods. The researcher intends to use a single case with embedded units in exploring capacity of absorption by the receiver of knowledge (Baxter, 2003). This is because; the research aims to examine capacity of absorption by the receiver of knowledge by looking at people in different fields who acquired knowledge differently.

## 4.6 Sampling Procedure

Purposive sampling technique was used in identification of participants in the study. There are different sampling techniques that can be used to sample target population in any given research. There are two main sampling methods, which are commonly used in social science to sample population (McBurney and White, 2009). They include probability and non-probability sampling procedure. In probability sampling techniques, all elements of the population in question have a chance of being chosen whether individual or household. Under non-probability sampling procedure are several other techniques. In non-probability sampling elements are chosen according to personal judgement of the research or according to their convenience (McNeill and Chapman, 2005). The techniques used as non-probability sampling include purposive sampling, self-selection, snowball sampling, convenience sampling and quota sampling. For this particular research purposive sampling techniques was employed. Purposive sampling is where a researcher chooses respondents from the identified sample population. The judgement of the research is key in this case since the individuals chosen should represent the population under investigation.

For this study we e-mailed 60 questionnaires to Portuguese Telecom employees who worked in Brazil. A total of 19 surveys were returned representing a response rate of 31,67%. According to Hambrick *et al*. (1993), the average response rate of the questionnaire survey regarding managerial personnel ranged from 10% to 12%. So, our research has achieved an acceptable response rate. And we also interviewed 7 expatriates from the 60 possible.

The respondents of the questionnaires were 14 males (73.7%) and 5 females (26.3%), aged between 25 and 54 years old. With most of them 94.8% between 25 and 44 years old as we can see in table 2.

Table 2 – Gender and Age

| | | Count | % |
|---|---|---|---|
| Gender | Female | 5 | 26.3% |
| | Male | 14 | 73.7% |
| Age | 25-34 | 9 | 47.4% |
| | 35-44 | 9 | 47.4% |
| | 45-54 | 1 | 5.3% |

Source: Personal elaboration

The description of the area of expertise that we took in the survey is presented in table 3. Most of the sample employees have been working in engineer 9 samples (47,4%) and in operations 7 samples (36.8%).

Table 3 - Area of Expertise

| | | Count | % |
|---|---|---|---|
| Area of Expertise | Engineer | 9 | 47.4% |
| | Finance | 2 | 10.5% |
| | Human Resources | 1 | 5.3% |
| | Operations | 7 | 36.8% |

Source: Personal elaboration

The interviewees were 6 males (85.7%) and 1 females (14.3%), aged between 25 and 54 years old. With most of them 71.4% between 35 and 44 years old as we can see in table 4.

Table 4 - Gender and Age

| | | Count | % |
|---|---|---|---|
| Gender | Female | 1 | 14.3% |
| | Male | 6 | 85.7% |
| Age | 25-34 | 1 | 14.3% |
| | 35-44 | 5 | 71,40% |
| | 45-54 | 1 | 14.3% |

Source: Personal elaboration

As seen in the following table (table 4) they were all from operations and engineering.

Table 5 - Area of Expertise

| | | Count | % |
|---|---|---|---|
| Area of Expertise | Engineer | 3 | 42.9% |
| | Finance | 0 | 0% |
| | Human Resources | 0 | 0% |
| | Operations | 4 | 57.1% |

Source: Personal elaboration

## 4.7 Measures Construction

The items forming all constructs used in the study are described in Table 6. Multi-item scales were developed for all the constructs to ensure the reliability and validity of the measurement system. A broad and thorough literature review helped in generation of the initial constructs.

### 4.7.1 Dependent Variable – Difficulty of Knowledge Transfer

The difficulty of knowledge transfer was defined in the questionnaire as to the degree of difficulty with which subsidiary expatriates perceived to transfer knowledge to the subsidiary from the organization headquarters. For practical reasons and ease of measurement, we adapted the operationalization method developed by Riusala and Smale (2007) for our research. Data on the following items were collected: 1) Transferring knowledge to. Brazil was a challenging and problematic process; 2) Realization of knowledge transfer was more difficult than we had expected. Respondents were asked to evaluate the degree of difficulty in transferring the knowledge from Portugal to Brazil for each aspect using a five-point Likert-type scale, where “1” indicated “strongly agree” and “5” indicated “strongly disagree”.

### 4.7.2 Independent Variables

The independent variables of the present study are predominantly based on pre-existing constructs:

1. Characteristics of Knowledge

   The knowledge-related factors of tacitness, complexity, and specificity are measured by using scales adapted from the empirical studies of Kogut and Zander (1993), Zander and Kogut (1995), and Minbaeva (2007). To measure tacitness, respondents were asked to identify their attitudes toward the two items 1) Content of the knowledge could be easily expressed through manuals or other documents. 2) Transferring knowledge involves a lot of personal interactions between you and other employees in your company. Another factor in the questionnaire is complexity which refers to the number of interdependent technologies, routines, individuals, and resources linked to a particular knowledge. The factor of complexity was evaluated by the respondents in terms of 1) Defining the content of the knowledge being transferred was not an easy task. 2) The knowledge being transferred was demanding and complicated., in the questionnaire, refers to the degree of difficulty involved in teaching the Brazilian employees. The respondents were asked to evaluate it from two aspects: 1) Teaching the knowledge to local employees was a quick and easy process. 2) Teaching the knowledge to local employees did not require much previous experience of similar tasks. Specificity in the questionnaire refers to the degree to which knowledge is about specific functional expertise. The respondents were asked to evaluate this factor from one item: 1) To transfer the experience and technology, your company needs to invest significantly in specialized equipment and facilities.

2. Institutional Context

   The measures related to the institutional context are adapted from the country institutional profile as developed in earlier theoretical and empirical work (Kostova 1999; Kostova and Roth 2002). According to their studies, the institutional profile measures were developed for the cognitive, and normative dimensions which may influence the knowledge transfer to the host country.

Considering the institutional context, we adapted their measures in the questionnaire for our study. The cognitive dimension was defined in the questionnaire as shared social knowledge which affects the way people notice and interpret the knowledge being transferred. The cognitive dimension was measured by one item: 1) Brazilian employees often made wrong interpretations about the knowledge transferred. The normative dimension was defined as the values and norms held by the individuals in Brazil. To measure this dimension, respondents were asked to decide on the two items: 1) The values and norms of Brazilian did not comply with the knowledge transferred. 2) The characteristics of the knowledge being transferred collided with the Brazilian culture.

3. Cultural Context

   As for the measures of cultural distance, they are adapted from the literature (Simonin 1999b) for our study. Cultural distance in the questionnaire was defined as the culture-based factors that influence knowledge transfer. The cultural distance is measured by one item:1) The cultural differences between Brazil and Portugal increases the difficulty of knowledge transfer.

4. Organizational Context

   Organizational context includes three sets of measures depicting general effect, practice-specific effect, and the absorptive capacity. General effect reflects characteristics of the subsidiary that apply to all types of activities associated with learning, innovation, and change in general. Practice-specific effect refers to the compatibility between the values implied by the particular knowledge and the values underlying the culture of subsidiaries. In terms of the general and practice-specific organizational context, measures were developed based on previous studies by O'Reilly, Chatman, and Caldwell (1991), Chatman and Jehn (1994) and Kostova (1999). To measure general effect, respondents were asked to comment on one item: 1) The organizational culture of Brazilian companies fosters attitudes toward learning new things, self-development and innovation. To measure practice-specific effect, the respondents were asked to assess three items 1) The values characterizing the organizational culture of your company

in Brazil supported knowledge transfer. 2) Characteristics of the knowledge being transferred were in harmony with the organizational culture of your company. 3) There were no major conflicts between the knowledge transferred and the organizational culture of your company. Absorptive capability was defined in the questionnaire as the employees' ability of identifying value and applies new knowledge in the subsidiaries. The absorptive capability measure was from the earlier studies of Szulanski (1996, 2000), which asked the respondents to clarify two items: 1) The skills of the employees in your company were at a lower level than what was required to implement the knowledge being transferred. 2) Your company ability to absorb the knowledge being transferred was not enough to receive knowledge.

5. Relational Context

   With regard to relational context, we measured two constructs: Attitudinal and dependence. To measure attitudinal, respondents were asked to clarify five items: 1) The employees in your company are committed to the parent company operation and goals. 2) The relationship between the employees of your company and the parent company is characterized by trust. 3) The expatriate has enjoyed a good relationship with local employees. 4) The employees of your company are proud to work for the parent company. 5) From the perspective of your company employees, your company in Brazil is an appreciated and highly valued employer. To measure the power and dependence, the respondents were asked to clarify the three items: 1) Your company needs daily support from the parent company. 2) Your company could not function without the parent company support. 3) There is a strong interdependence between your company and the parent company.

## 4.8 Reliability and Validity

Validity refers to the accuracy and appropriateness of data. Accuracy means how reliable data source are and appropriateness means data falling within the range of what we are trying to achieve (McNeill and Chapman, 2005). There are many ways data can be validated. Most common of them are internal validation and external validation. The

researcher identified consumers of different products and services and then chosen randomly depending on their knowledge of the subject in question. Internal validity addresses the "true" causes of the outcomes that we observed in our study. Strong internal validity means that we not only have reliable measures of our independent and dependent variables but a strong justification that causally links our independent variables to our dependent variables (Rubin and Rubin, 2005). External validity addresses the ability to generalize our study to other people and other situations. To have strong external validity (ideally), we need a probability sample of subjects or respondents drawn using "chance methods" from a clearly defined population. For this research purposes external validation will be done by cross checking previous result in this field. Besides, reliability was attained in the study by detailing the research process so that other researchers can replicate the approach and produce the same results (McBurney and White, 2009). At the same time in order to ensure validity of the study, the researcher will use multiple sources of evidence to establish the construct validity of the study. Using Cronbach's Alpha **(**α) as a measure of reliability, the values of all measures are shown in Table 6**:**

Table 6 - Cronbach's Alpha Measures

| | Cronbach's Alpha |
|---|---|
| Difficulty | .666 |
| Tacitness | .704 |
| Complexity | .712 |
| Teachability | .725 |
| Specificity | .682 |
| Cognitive | .674 |
| Normative | .645 |
| Cultural Distance | .669 |
| General | .692 |
| Pratice-Specific | .736 |
| Absorptive Capacity | .683 |
| Attitudinal | .729 |
| Power/Dependence | .722 |

Source: Personal elaboration

As illustrated in the table above, all the scores have values $\alpha > 0.6$. According to Kline (2000) and George & Mallery (2003), 0.6 is considered as an acceptable reliability

coefficient. Therefore, all measures are reliable. It is also important to refer that we grouped the variables by an arithmetic mean of the result questionnaires scores

Table 7 - Independent variables

| | |
|---|---|
| **Characteristics of Knowledge** | |
| Tacitness | 1. Content of the knowledge could be easily expressed through manuals or other documents.<br>2. Transferring knowledge involves a lot of personal interactions between you and other employees in your company. |
| Complexity | 1. Defining the content of the knowledge being transferred was not an easy task.<br>2. The knowledge being transferred was demanding and complicated. |
| Specificity | 1. To transfer the experience and technology, your company needs to invest significantly in specialized equipment and facilities. |
| Teachability | 1. Teaching the knowledge to local employees was a quick and easy process.<br>2. Teaching the knowledge to local employees did not require much previous experience of similar tasks. |
| **Institutional Context** | |
| Cognitive | 1. Brazilian employees often made wrong interpretations about the knowledge transferred. |
| Normative | 1. The values and norms of Brazilian did not comply with the knowledge transferred.<br>2. The characteristics of the knowledge being transferred collided with the Brazilian culture. |
| **Cultural Context** | |
| Cultural Distance | 1. The cultural differences between Brazil and Portugal increases the difficulty of knowledge transfer. |
| **Organizational Context** | |
| General | 1. The organizational culture of Brazilian companies fosters attitudes toward learning new things, self-development and innovation. |

| | |
|---|---|
| Practice Specific | 1. The values characterizing the organizational culture of your company in Brazil supported knowledge transfer.<br>2. Characteristics of the knowledge being transferred were in harmony with the organizational culture of your company.<br>3. There were no major conflicts between the knowledge transferred and the organizational culture of your company. |
| Absorptive Capacity | 1. The skills of the employees in your company were at a lower level than what was required to implement the knowledge being transferred.<br>2. Your company ability to absorb the knowledge being transferred was not enough to receive knowledge. |
| **Relational Context** | |
| Attitudinal | 1. The employees in your company are committed to the parent company operation and goals.<br>2. The relationship between the employees of your company and the parent company is characterized by trust.<br>3. The expatriate has enjoyed a good relationship with local employees.<br>4. The employees of your company are proud to work for the parent company.<br>5. From the perspective of your company employees, your company in Brazil is an appreciated and highly valued employer. |
| Power /dependence | 1. Your company needs daily support from the parent company.<br>2. Your company could not function without the parent company support.<br>3. There is a strong interdependence between your company and the parent company. |

Source: Personal elaboration

## 4.9 Ethical Considerations

In this study ethical issues were considered and dealt with appropriately. Permission was sought from the administration in organization from which the respondents were derived in this study. After which the consent of the respondents was also sought before administering the questions (Churchill and Iacobucci, 2005). The researcher explained to the respondents of their willingness to participate in the research and the fact that they are free to opt out at any point in the research. The respondents were made to know that should they feel like they are not willing to continue with the research they are free to leave at any point without any consequences or explanations for it is the right of the researchers. The research was conducted for a good cause of making available important information that could be used by different stakeholders for one reason to another (Morse, 2005). The fact that research is conducted for good purpose and reason is an ethical requirement. In addition, the privacy of the identity of the respondents was assured (McBurney and White, 2009). Respondents were assured that the information about their identity would not be revealed to third parties and that it would not be published in the research. Therefore, research ethics were upheld in the study of capacity of absorption by the receiver of knowledge.

# CHAPTER V – RESULTS PRESENTATION AND DISCUSSION

Chapter 4 described the methodology that was used to test the hypothesized relationship among the study variables and to answer the research questions. This chapter examines the results of the survey and reports on the descriptive and statistical analysis of the study relative to the research objectives.

The objectives of the empirical analysis were (1) to describe the types of knowledge transferred from Portugal Telecom headquarters to its subsidiary in Brazil through expatriates and the corresponding levels of involvement in this process, and (2) to test the proposed hypotheses; the relationships between the difficulty of knowledge transfers and their various contextual factors. To meet the first objective, a discussion of descriptive statistics follows and for the second objective, we present the results of a multiple regression analysis. In order to strengthen our results, we also present some results from the in-depth interview.

## 5.1 Types of knowledge transferred

In order to identify the types of knowledge transferred to Brazil from Portugal Telecom, we asked the respondents to choose from the most common key knowledge areas listed in a multiple-choice question. In their qualitative study, Riusala and Suutari (2004) identified seven most typical key knowledge transfers among the Finnish companies in Poland. In the quantitative research work, Riusala and Smale (2007) captured the common central knowledge transfer areas, which were the same as those in the previous study. In addition, they ranked the frequency of the knowledge areas transferred with the most common central knowledge transfer areas in the field of finance and accounting and the least common knowledge in the areas of HRM, product/service, and technical/production. In our questionnaire, we adopted seven types of knowledge transfers identified by the two studies. The reasons for our utilizing the seven items are 1) the two studies are contextually similar to the present one because they were carried out in the context of European Multinational Corporations cross-border knowledge

transferring to other countries; 2) it can increase the reliability of our research for they are both empirically tested.

In our study, we collected the data of the types of knowledge transferred from the Portugal Telecom to its subsidiary in Brazil via the expatriates. A descriptive result is reported in Table 8.

From the data presented, Technical knowledge was identified as the most common central knowledge transfer area by 16 respondents (84.2%). It was followed by accounting/finance knowledge (5.3%), human resources management (5.3%) and sales and marketing (5.3%). In addition to the seven types of knowledge, we expected the respondents to specify other types of knowledge under the item “others”. However, no respondent selected this category.

Table 8 - Type of knowledge transferred through expatriates

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|
| Accounting/Finance Knowledge | 1 | 5.3 | 5.3 | 5.3 |
| Human Resources Management Knowledge | 1 | 5.3 | 5.3 | 10.5 |
| Sales and Marketing Knowledge | 1 | 5.3 | 5.3 | 15.8 |
| Technical Knowledge | 16 | 84.2 | 84.2 | 100.0 |
| Total | 19 | 100.0 | 100.0 | |

Source: Personal elaboration

## 5.2 The expatriates' role in the process of knowledge transfers

In the process of transferring knowledge, the role of the expatriates of Multinational Corporations may vary from one type of knowledge to another due to the nature of the different knowledge areas and the degree to which respondents are familiar with the knowledge. In order to identify the expatriates' level of participation in different knowledge transfer areas, we asked them to describe the degree for their involvement in each type of knowledge transfer. In the questionnaire, we set five levels for their participation for each knowledge transfer area, level 1 is labeled "not active", level 2 is "rarely active", level 3 "fairly active", level 4 "active", and level 5 "very active". The findings are reported in Table 9.

Table 9 - Areas of expatriate involvement in international knowledge transfers

| | | not active | rarely active | fairly active | active | very active |
|---|---|---|---|---|---|---|
| Management Knowledge | Count | 6 | 1 | 2 | 6 | 4 |
| | N % | 31.6 % | 5.3% | 10.5% | 31.6% | 21.1% |
| Cultural Knowledge | Count | 4 | 6 | 3 | 5 | 1 |
| | N % | 21.1 % | 31.6% | 15.8% | 26.3% | 5.3% |
| Sales and Marketing Knowledge | Count | 11 | 2 | 3 | 3 | 0 |
| | N % | 57.9 % | 10.5% | 15.8% | 15.8% | 0.0% |
| Technical Knowledge | Count | 2 | 1 | 0 | 4 | 12 |
| | N % | 10.5 % | 5.3% | 0.0% | 21.1% | 63.2% |
| Product/Service | Count | 2 | 2 | 5 | 7 | 3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Knowledge | N % | 10.5 % | 10.5% | 26.3% | 36.8% | 15.8% |
| Human Resources Management Knowledge | Count | 11 | 3 | 4 | 0 | 1 |
| | N % | 57.9 % | 15.8% | 21.1% | 0.0% | 5.3% |
| Accounting/Finance Knowledge | Count | 12 | 4 | 1 | 0 | 2 |
| | N % | 63.2 % | 21.1% | 5.3% | 0.0% | 10.5% |

Source: Personal elaboration

As illustrated in Table 9, the expatriates' participation in technical knowledge was significant with 84 percent of respondents describing themselves as being active to very active in knowledge transfer. Product and service knowledge transfer also involves the expatriates, and 79 percent of respondents claimed they were from fairly active to very active participation. When it comes to management knowledge transfer, 63 percent of the respondents indicated from fairly actively to very actively, which was lower than the two previous knowledge areas. For accounting and finance knowledge, the level of the expatriates' participation was quite low, approximately 63 percent of the respondents claimed that they were not active in this area of knowledge transfer while only 11 percent of the respondents were very actively involved. In the area of cultural, about 53 percent of the respondents participated from not active to rarely active. Approximately 84 percent of the respondents reported to be not active to fairly active in human resources management knowledge transfers. Similarly, with human resources knowledge transfer, the expatriates were not actively involved in the knowledge transfer sales and marketing, only 16 percent of respondents described themselves as being active in sales and marketing knowledge transfer. In summary, the expatriates were more active participating in technical knowledge transfer than in other knowledge areas.

## 5.3 Descriptive statistics for all the variables

Univariate statistics for the dependent and independent variables are presented in Table 10, which includes the mean and standard deviation for each matrix variable as well as the minimum and maximum values.

Table 10 - Descriptive Statistics (Based on 19 samples)

| | Mean | Minimum | Maximum | Standard Deviation |
|---|---|---|---|---|
| Tacitness | 3,61 | 2,00 | 5,00 | 1,08 |
| Complexity | 3,16 | 1,00 | 5,00 | 1,08 |
| Teachability | 2,50 | 1,00 | 5,00 | ,98 |
| Specificity | 2,95 | 1,00 | 5,00 | 1,08 |
| Cognitive | 4,26 | 1,00 | 5,00 | ,99 |
| Normative | 2,97 | 1,00 | 5,00 | 1,22 |
| Cultural Distance | 3,11 | 1,00 | 5,00 | 1,15 |
| General | 2,63 | 1,00 | 4,00 | ,96 |
| Pratice-Specific | 3,58 | 1,00 | 5,00 | 1,03 |
| Absorptive Capacity | 2,08 | 1,00 | 4,00 | 1,02 |
| Attitudinal | 3,71 | 1,00 | 5,00 | 1,17 |
| Power/Dependence | 2,79 | 1,00 | 5,00 | 1,26 |
| Difficulty | 3,68 | 2,00 | 5,00 | ,99 |

Source: Personal elaboration

In the analysis, all variables were measured on a 5-point Likert scale using the following categories: (1) Strongly disagree, (2) disagree, (3) neutral, (4) agree, (5) Strongly agree. From Table 8, we find that the mean values of all variables are between 2.0 and 4.0, which indicated that the respondents tend to choose neutral scales. Taking a closer look, the variables such as Difficulty, Tacitness, Cognitive, Attitudinal and Practice-Specific

have the mean value more than 3.5, which are close to the agree scale. The mean value of other variables is less than 3.5, reflecting that most of respondents tended to be neutral regarding these variables. The Cultural distance, Normative and Power/dependence have a high standard deviation of more than 1.2, indicating the respondents had a wider range of views relative to these variables. One of the lowest standard deviation is for the dependent variable with a standard deviation of 0.99, which shows that the respondents had a concentrated opinion regarding the difficulty of Knowledge Transfer.

## 5.4 Analysis of Pearson Correlation Matrix of all variables

To find out the correlations between the dependent variable and the independent variables of this study, Pearson Correlations were performed using SPSS 23.0 software. Pearson correlation coefficient ( r ), which is used to measure the strength of the association between the two types of variables, is employed to illustrate the correlations among all of the study variables. Table 9 contains the r-values along with significance levels from all the bivariate correlations. Significance levels were assessed at $p<.05$ (with one asterisk) and $p<.01$ (with two asterisks), which indicate a significant level of correlation and a highly significant level correlation respectively. When the correlation coefficients (r) is $0 < r < 1$, it indicates there is a positive relationship between two variables; on the contrary, when r is between -1 and 0 ($-1<r<0$), indicating the relationship is negative (Wang, 2007). This study attempted to answer the following question: what factors affect the difficulty of knowledge transfer within Portugal Telecom? We tried to identify the relationship between the dependent variables (difficulty of knowledge transfer, hereafter referred to as “the difficulty”) and the independent variables involving the four categories of context factors and control variables. The first column of the correlation matrix indicates strength, direction, significance level between the dependent variable and independent variables of the study.

Table 11 - Pearson Correlation Matrix of all variables

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Difficulty | 1 | | | | | | | | | | | | |
| Tacitness | .083 | 1 | | | | | | | | | | | |
| Complexity | .175 | -.061 | 1 | | | | | | | | | | |
| Teachability | .139 | .166 | .077 | 1 | | | | | | | | | |
| Specificity | .423 | -.144 | .265 | -.044 | 1 | | | | | | | | |
| Cognitive | .614** | .288 | .130 | -.342 | .429 | 1 | | | | | | | |
| Normative | .464** | .238 | .332* | .351* | .170 | .472* | 1 | | | | | | |
| Cultural Distance | .669** | .175 | .324 | .193 | .408 | .706** | .770** | 1 | | | | | |
| General | -.122 | .579** | -.031 | -.077 | .250 | .225 | .081 | -.013 | 1 | | | | |
| Practice-Specific | -.079 | .324* | .025 | .296 | .152 | -.356 | -.152 | -.422 | .441 | 1 | | | |
| Absorptive Capacity | .212 | .298 | .013 | .202 | .086 | .280 | .262 | .241 | .436 | .075 | 1 | | |
| Attitudinal | .039 | -.401* | -.167 | -.164 | .189 | .137 | .047 | .059 | 0.000 | -.316* | -.077 | 1 | |
| Power/Dependence | .338* | .049 | .044 | .066 | .331 | .202 | .011 | -.154 | .365 | -.165 | .149 | .142 | 1 |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Personal elaboration

### 5.4.1 Correlations between the difficulty and the knowledge characteristics

Included in the category of knowledge characteristics are tacitness, complexity, teachability, and specificity. There was no asterisk displayed with the knowledge characteristics, however, as the correlation coefficients of all four independent variables were greater than zero, it indicates that their relationships with difficulty are positive.

### 5.4.2 Correlations between the difficulty and the institutional context

The institutional context is measured by two variables: cognitive, and normative components. As can be seen in the first column of Table 11, the correlation between cognitive and difficulty was highly significant, at r = 0.614, which indicated the cognitive context had a significant impact on knowledge transfer. And also, as it can be seen, the correlation between normative and difficulty was highly significant, at r= 0.464, which indicated the normative context had a significant impact on knowledge transfer. As the correlation coefficients of both independent variables were greater than zero, it indicates that their relationships with the difficulty are positive. The results were in accordance with the expected direction in the hypothesis.

### 5.4.3 Correlations between the difficulty and the national culture context

The third category involves the national cultural context. A single dimension, cultural distance, was included as independent variables. Cultural distance was significantly correlated with difficulty at a correlation coefficient of 0.669, which showed a positive relationship between the cultural distance and difficulty as expected. The result was in accordance with the expected direction in the hypothesis.

### 5.4.4 Correlations between the difficulty and the organizational context

The organizational context contains three variables: general level compatibility of the organization, practice specific level compatibility, and absorptive capacity. The general level effects were barely associated with the difficulty at r = -0.122. The correlation coefficient was between -1 and 0, indicating the relationship between the general effects and the difficulty was negative. This result was opposite to expectations. The correlation between the practice specific

and the difficulty was also barely associated with the difficulty, at r = -0.079. The negative correlation coefficient shows that there was a negative relationship. The absorptive capacity was slightly significant correlated with the difficulty and they were positive correlated as the correlation coefficient was at 0.212. The result was in accordance with our hypothesis.

### 5.4.5 Correlations between the difficulty and the relational context

The attitudinal measure was slightly correlated with difficulty. As the correlation coefficient was 0.039, the relationship between the variable and the difficulty were positive associated, which was in line with the hypothesis. The second measure of "power/dependence' was highly significant correlated with the difficulty. As the coefficient of the "power/dependence" variable was -0.464, its relationship with the difficulty was negative, which was in accordance with the expected direction.

### 5.4.6 Summary of Correlations

To summarize, 4 out of 12 independent variables were significantly correlated with the dependent variable. Regarding the Hypothesis test and their results the table 12 has the result summarized:

Table 12 - Resume of Correlation results

| **Characteristics of knowledge** | | |
|---|---|---|
| *Hypothesis 1a: The higher the degree of knowledge tacitness, the more difficult for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Tacitness** |
| *Hypothesis 1b: The higher the degree of knowledge complexity, the more difficult for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Complexity** |
| *Hypothesis 1c: The higher the degree of knowledge specificity, the more difficult for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Specificity** |
| *Hypothesis 1d: The higher the degree of knowledge teachability, the less difficult for expatriates to achieve the success of knowledge transfer.* | **Rejected** | **Teachability** |
| **Institutional Context** | | |

| | | |
|---|---|---|
| *Hypothesis 2a: The incompatibility of the host cognitive environment with the knowledge being transferred increases the difficulty for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Cognitive** |
| *Hypothesis 2b: The incompatibility of the host normative environment with the knowledge being transferred increases the difficulty for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Normative** |
| **National cultural context** | | |
| *Hypothesis 3a: Cultural distance increases the difficulty for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Cultural Distance** |
| **Organizational context** | | |
| *Hypothesis 4a: The incompatibility of the host recipient unit's organizational context at the general level with the knowledge being transferred increases the difficulty for expatriates to achieve the success of knowledge transfer.* | **Rejected** | **General** |
| *Hypothesis 4b: The incompatibility of the host recipient unit's organizational context at the practice-specific level with the knowledge being transferred increases the difficulty for expatriates to achieve the success of knowledge transfer.* | **Rejected** | **Practice-Specific** |
| *Hypothesis 4c: The low level of host recipient unit's absorptive capability of the knowledge being transferred increases the difficulty for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Absorptive Capacity** |
| **Relational Context** | | |
| *Hypothesis 5a: Subsidiary employee's commitment to the Multinational Corporation headquarters can reduce the difficulty for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Attitudinal** |
| *Hypothesis 5b: Subsidiary employee's attitudinal with the Multinational Corporation headquarters can reduce the difficulty for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Attitudinal** |
| *Hypothesis 5c: Subsidiary's dependence on the Multinational Corporations headquarters can reduce the difficulty for expatriates to achieve the success of knowledge transfer.* | **Rejected** | **Power/Dependence** |

Source: Personal elaboration

## 5.5 Results of regression analysis

Since regression analysis is a statistical process for estimating the relationships among variables, consequently, in order to test the hypotheses and to measure the true strength and direction of association among the multiple independent variables and the continuous dependent variable, a five-step regression analysis was performed. At the first step, the factors regarding to the characteristics of knowledge transferred (tacitness, complexity, specificity, and teachability) were inserted into the regression analysis; at the second step, the two variables of the institutional context including cognitive, and normative dimensions entered the regression analysis process; at the third step, the variable of cultural distance of the national cultural context were added in the regression analysis; at the fourth step, the three variables of general, practice-specific, and absorptive capacity of organizational context were included into the regression analysis process; and at the fifth step, the group of relational context variables, which contained attitudinal and power/dependence) were inserted into the regression analysis. Taking the five groups of independent variables, a total five regression models were created, from which we can identify and analyze the specific relationships between the dependent variable and the independent variables. Is is also important to refer that we used the ordinary least squares (OLS) method since it is a standard approach in regression analysis to the approximate solution of a set of equations. The detailed information about the regression analysis is presented in Table 13.

Table 13 - Regression Analysis Model

| **Models** | **Model 1** | | **Model 2** | | **Model 3** | | **Model 4** | | **Model 5** | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Variables** | B | Std. Error | B | Std. Error | B | Std. Error | B | Std. Error | B | Std. Error |
| **Step 1** | | | | | | | | | | |
| Tacitness | 0.180 | 0.242 | -0.124 | 0.212 | -0.124 | 0.224 | 0.188 | 0.273 | 0.167 | 0.321 |
| Complexity | 0.210 | 0.214 | 0.023 | 0.197 | 0.023 | 0.209 | -0.045 | 0.199 | -0.001 | 0.237 |
| Teachability | 0.077 | 0.279 | -0.100 | 0.340 | -0.099 | 0.380 | -0.303 | 0.474 | -0.224 | 0.576 |
| Specificity | 0.381 | 0.236 | 0.179 | 0.220 | 0.179 | 0.231 | 0.507 | 0.282 | 0.340 | 0.443 |
| **Step 2** | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Cognitive | | | 0.293 | 0.342 | 0.294 | 0.451 | 0.106 | 0.502 | 0.122 | 0.627 |
| Normative | | | 0.474 | 0.278 | 0.474 | 0.317 | 0.577 | 0.311 | 0.386 | 0.528 |
| **Step 3** | | | | | | | | | | |
| Cultural Distance | | | | | 0.000 | 0.387 | -0.219 | 0.503 | 0.057 | 0.828 |
| **Step 4** | | | | | | | | | | |
| General | | | | | | | -0.616 | 0.316 | -0.648 | 0.386 |
| Practice-Specific | | | | | | | -0.110 | 0.312 | 0.010 | 0.419 |
| Absorptive Capacity | | | | | | | 0.300 | 0.234 | 0.265 | 0.338 |
| **Step 5** | | | | | | | | | | |
| Attitudinal | | | | | | | | | -0.049 | 0.354 |
| Power/Dependence | | | | | | | | | 0.156 | 0.289 |
| **R Square** | **0.261** | | **0.608** | | **0.608** | | **0.762** | | **0.774** | |

Source: Personal elaboration

### 5.5.1 Regression result of Model One.

From Model 1, the four knowledge characteristics were found to explain 26.1% of the difficulty of knowledge transfers (*R* Square = 0.261). Among the four independent variables, all of them were positively correlated with the difficulty but they were not statistically significant with the difficulty. The result confirmed that our hypotheses H1a, H1b and H1c were supported but not H1d. However, the result of Step 1 changed when the variables of other steps entered the regression analysis.

### 5.5.2 Regression result of Model Two

When the variables relating to the institutional context were introduced to Model 2, approximately 60.8% (*R* Square = 0.608) of the difficulty of knowledge transfers were explained by the joint variance of the independent variables. At this step, the correlation of

tacitness and teachability with the difficulty changed to negative. The Beta of complexity and specificity remained positive. Cognitive and normative dimensions were not significantly correlated with the difficulty. The beta of both variables was positive, indicating its relationship with the difficulty was positive, so the result supported H2a and H2b.

### 5.5.3 Regression result of Model Three

The joint effect of the variables of knowledge characteristics, the institutional context and the national cultural context explained the same 60.8 % (*R* Square = 0.608) of the difficulty of knowledge transfers. The result indicated that the cultural distance did not significantly influence the difficulty of knowledge transfers. The introduction of the national cultural context did not change the impact of the former variables. This result did not support the posited hypothesis H3a.

### 5.5.4 Regression result of Model Four

Introducing the organization context into Model 4, the joint effect of the independent variables explained 76.2% (*R* Square = 0.762) of the difficulty of knowledge transfers, a 15.4% increase from the previous step. The result demonstrated the organization context had a significant impact on difficulty of knowledge transfer. The introduction of the organization context brought changes to the impact of the variables performed in the previous models. First, complexity and cultural distance changed to negatively and tacitness changed to positively influence correlated with the difficult. About the organizational context, the general context was negatively related to the difficulty, which did not support H4a. Practice-specific context was also negatively related to the difficulty, making the result to not support H4b. Absorptive capacity was found to positively impact the difficulty of knowledge, which indicated the result supported H4c.

### 5.5.5 Regression result of Model Five

Model 5 illustrated the regression result after the relational context variables were entered. The joint effect of the independent variables explained 77.4% (*R* Square = 0.774) of the difficulty

of knowledge transfers, which increased by 1.2%. Attitudinal measure, was negatively related to the difficulty, which indicates the result supported H5a, H5b, and H5c. However, Power/dependence was positive correlated to difficulty. The result did not support H5d as we expected.

### 5.5.7 Summary of the regression results

In general, the hypothesized model of factors performs very well in explaining nearly 77.4% of the variance in the existence of knowledge transfer difficulties. However, in terms of the overall performance of the theoretical model in its ability to identify effective predictors of knowledge transfer difficulties, the model does not perform as well as the individual correlation coefficients might suggest. With regard to the relative contribution of each independent variable, the regression analysis did not identify any statistically significant factors.

Table 14 - Resume of regression results

| **Characteristics of knowledge** | | |
|---|---|---|
| *Hypothesis 1a: The higher the degree of knowledge tacitness, the more difficult for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Tacitness** |
| *Hypothesis 1b: The higher the degree of knowledge complexity, the more difficult for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Complexity** |
| *Hypothesis 1c: The higher the degree of knowledge specificity, the more difficult for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Specificity** |
| *Hypothesis 1d: The higher the degree of knowledge teachability, the less difficult for expatriates to achieve the success of knowledge transfer.* | **Rejected** | **Teachability** |
| **Institutional Context** | | |
| *Hypothesis 2a: The incompatibility of the host cognitive environment with the knowledge being transferred increases the difficulty for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Cognitive** |
| *Hypothesis 2b: The incompatibility of the host normative environment with the knowledge being transferred increases the difficulty for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Normative** |
| **National cultural context** | | |

| | | |
|---|---|---|
| *Hypothesis 3a: Cultural distance increases the difficulty for expatriates to achieve the success of knowledge transfer.* | **Rejected** | **Cultural Distance** |
| **Organizational context** | | |
| *Hypothesis 4a: The incompatibility of the host recipient unit's organizational context at the general level with the knowledge being transferred increases the difficulty for expatriates to achieve the success of knowledge transfer.* | **Rejected** | **General** |
| *Hypothesis 4b: The incompatibility of the host recipient unit's organizational context at the practice-specific level with the knowledge being transferred increases the difficulty for expatriates to achieve the success of knowledge transfer.* | **Rejected** | **Practice-Specific** |
| *Hypothesis 4c: The low level of host recipient unit's absorptive capability of the knowledge being transferred increases the difficulty for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Absorptive Capacity** |
| **Relational Context** | | |
| *Hypothesis 5a: Subsidiary employee's commitment to the Multinational Corporation headquarters can reduce the difficulty for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Attitudinal** |
| *Hypothesis 5b: Subsidiary employee's attitudinal with the Multinational Corporation headquarters can reduce the difficulty for expatriates to achieve the success of knowledge transfer.* | **Not Rejected** | **Attitudinal** |
| *Hypothesis 5c: Subsidiary's dependence on the Multinational Corporations headquarters can reduce the difficulty for expatriates to achieve the success of knowledge transfer.* | **Rejected** | **Power/Dependence** |

Source: Personal elaboration

## 5.6 Results of in-depth interview

As mentioned above, in order to strengthen the results obtained in the quantitative analysis, we interviewed some employees who participated in the knowledge transfer to Oi with a semi-structured questionnaire. The interview script is presented in appendix 2, which will state what issues and in what order they were asked. It is important to refer that these interviews were conducted to the 2 top management of operations and engineering of Portugal Telecom, to two operations team leaders and three technical employees involved in the project. Another important fact is that these interviews were conducted between June and September of 2014 in Portugal Telecom headquarters in Lisbon. These interviewed employees preferred to remain

anonymous.

In terms of knowledge characteristics, all of the employees were very peremptory saying that "teaching was quiet complicated", the subsidiary employees need a lot of interaction to learn the new knowledge. And the headquarters had to invest a lot of time to teach the subsidiary employees. It was also noted that the technical expatriates found that the content of knowledge was not very easy to document for instant the top manage didn't think it was so difficult.

Concerning the institutional context, all of them agreed that Brazilian employees often misinterpreted the knowledge even in the level of top management to top management. Regarding if the knowledge collided with the Brazilian cultural nothing to point, the knowledge being transferred were mostly technical so there was not any conflict. In respect to cultural differences, every one said that despite of the Portuguese language was the same, the way of working, the way of living the day to day life was very different from the Portuguese culture. In terms of organizational context, there were some differences between the top management and the technical employees. One of the top management said "our expatriates are very well prepared to transfer knowledge because we are used to present our work to other employees inside our company" but the technicians were peremptory saying that "despite of all training that we gave to all of our colleagues in Portugal, Brazil was a different challenge". About the relational context everyone was committed in this big project, everyone wanted to be a part of the biggest Portuguese telecom operator. The commitment was very present in every one. Everyone enjoyed the time spent in Brazil, even the ones that only spend there a couple of weeks to other that spent a couple of months, from the top management to the technicians.

Regarding the point of view of the subsidiary employees it is import to refer that most of the employees recognized Portugal Telecom as a technical advantaged but some employees mistrust the headquarters regarding their job, some peers admitted to expatriates that "we are quiet afraid that Portugal Telecom will close all the operations in Brazil and do everything from Lisbon". As we delved deeper into these opinions, it was easy to understand that this feeling was among Oi's older employees. The younger ones saw Portugal Telecom as a gateway to a very promising professional career. Lastly, the interviewers agreed that the task of knowledge transfer was more difficult than they firstly expected but they believe that they were able to complete that task. And with the development of the project the subsidiary depended less from the headquarters.

# CHAPTER VI – CONCLUSIONS

## 6.1 Conclusions

Since the early 1990's, interest of the topic of knowledge as it relates to organizations and value creation for organizations has increased dramatically in both the popular and scholarly literature (von Krogh, Ichijo, & Nonaka, 2000). As is often the case in applied fields, it appears that the practices related to the phenomenon of knowledge management and knowledge creation have accelerated faster than the scholarly work to explain them. Numerous books have been written documenting the practices organizations are using to try to capitalize on the value that knowledge management and knowledge creation promise. Organizations are spending millions of dollars each year on information systems to capture knowledge and consultants to help organizations better share and use knowledge. Organizations rely on innovation for new products and services to provide them with growth in revenue.

The changing business environment has made organizational knowledge a critical factor of sustainable competitive advantage. Knowledge transfer plays a critical role in the long-term existence of the organization: it has strategic importance. According with literature review, knowledge transfer is any form of knowledge, expertise, capabilities and skills that are transferred from the knowledge base. The main purpose of knowledge transfer is to facilitate and catalyze innovation. Knowledge transfer is a systematically organized process that enables exchange of skills and information between both the source and the recipient. Knowledge transfer is the learning aspect through which one can obtain knowledge from an external entity. Knowledge can be transferred either through tacit knowledge or explicit knowledge. The difficulties in the process of knowledge transfer will mainly occur only when tacit knowledge is transferred. Tacit knowledge transfer is based on knowledge characteristics and situation characteristics. Expatriates have the ability to transfer tacit knowledge efficiently for both managerial as well as technical people in an organization. Expatriates are generally home-country assignees who hold key positions or top management posts in functional foreign subsidiaries. Thus, expatriates play a significant role in the process of tacit knowledge transfer. It is also important to care about the will to learn and also to teach.

The goals of this study were to examine quantitatively the international transfers of knowledge within Portugal Telecom to Oi from expatriate's perspective. First, we identified what type of

knowledge is being transferred and the corresponding levels of the expatriates' involvement in these processes. Second, we applied a theoretical model of factors to find out those factors that increase the level of difficulty in knowledge transfer by expatriates. Based on the literature review, we developed a theoretical model covering an array of factors that appear to present particular difficulties to expatriates during the process of knowledge transfer. The theoretical difficulties factors which involve the characteristics of knowledge, institutional context, national cultural context, organizational context and relational context were explored relative to the difficulty of knowledge transfer, necessitating five sets of hypotheses.

In the study, we employed a quantitative and qualitative approach in order to obtain a comprehensive understanding of the variables and how the variables may significantly impact on knowledge transfer. For the data collection, we e-mailed 60 questionnaires to the Portugal Telecom expatriates working in Oi and interviewed some of them. To achieve validity and equilibrium of data, we managed to administer the survey to the expatriates with 19 valid responses and in order to strengthen our results we interview 7 expatriates. We obtained the findings for the study through analyzing the data with IBM SPSS software.

The results of the study indicate that the key areas of knowledge transfer for this case study is technical knowledge. This finding also indicates that expatriates play a strategic role not only in terms of control, coordination, but also in knowledge transfer (Bonache *et al*., 2001). As well, our study provided confirmatory evidence that expatriation continues to act as an effective mechanism for transferring tacit technical know-how. The role of expatriates in these international knowledge transfer processes has been stressed in research (Bonache and Brewster, 2000; Downes and Thomas, 2000; Inkpen, 1998).

Regarding the characteristics of knowledge, we found that the higher the degree of knowledge tacitness, complexity and specificity the more expatriates achieve the success of knowledge transfer. And the higher the degree of knowledge teachability the less the difficult expatriates to achieve the success in knowledge transfer. Concerning the institutional context, the incompatibility of the host cognitive and normative environment proves to increase the difficult for expatriates to achieve the success in knowledge transfer. About the national cultural context, it is important to refer that we didn't achieve the same results in correlation and in regression, however in the interview we realize that the major problem for the expatriates was due to cultural differences, the lifestyle of the Brazilian. Regarding the organizational context, it was found that the low level of the host recipient absorptive capability of the knowledge

being transferred increases the difficulty for expatriates to achieve the success, the expatriates found some resistance to transfer knowledge, the Oi's employees often misunderstood the knowledge being transferred. And for the relational context we found that the subsidiary employees' commitment with the Headquarters can reduce the difficulty for the expatriates to achieve the success of knowledge transfer. It is also important to refer that in the in-depth interview everyone agreed that all of the employees, Portuguese and Brazilian were very committed to the success of the new operator. All of them believed in the project of creation the biggest Portuguese telco operator.

In conclusion, the interviewers agreed that the task of knowledge transfer was more difficult than they firstly expected but they believe that they were able to complete that task with success and with the development of the project the subsidiary depended less from the headquarters, which indicate the success of the knowledge transfer.

## 6.2 Limitations And Suggestions For Future Research

It is also important to refer that it is possible to identify one major limitations of this study. First of all, the sample size of our study is relatively small, however we tried to strengthen our study using both quantitative and qualitative analyses. According to the Manager of Portugal Telecoms' Human Resources only sixty persons were working in Oi, we were able to reach 19 of them by questionnaires and 7 more by interviewing them. Although the sampling bias or error could affect the stability of all the constructs and generalization of the findings. It will be very interesting to establish additional investigations into another organization that are based in Portugal and have business in Brazil and be able to examine the role of the expatriates. It would also be very interesting to study other countries for example investigating the relations between all Portuguese language based countries and analyze the differences between them.

# APPENDIX

## Appendix A - Questionnaire to Expatriates

**Personal Information * Required**

1. Gender * Mark only one oval.

Male

Female

2. Age * Mark only one oval.

18-24

25-34

35-44

45-54

55-64

3. Contracted by * Mark only one oval.

Portugal Telecom

Oi

4. Working Time Abroad * Mark only one oval.

Never worked Abroad

Less than 1 Month

1-3 Months

3-6 Months

More than 6 Months

5. Area of Expertise * Mark only one oval.

Engineer

Finance

Human Resources

Operations

6. What type of key knowledge have you transferred? * Mark only one oval.

Management Knowledge
Cultural Knowledge
Sales and Marketing Knowledge
Technical Knowledge
Product/Service Knowledge
Human Resources Management Knowledge
Accounting/Finance Knowledge

**Please put the corresponding number of your choice into the brackets after the statement.**

7. Content of the knowledge could be easily expressed through manuals or other documents. * Mark only one oval.
1 2 3 4 5
Strongly Disagree Strongly Agree

8. Transferring knowledge involves a lot of personal interactions between you and other employees in your company. * Mark only one oval.
1 2 3 4 5
Strongly Disagree Strongly Agree

9. Defining the content of the knowledge being transferred was not an easy task. * Mark only one oval.
1 2 3 4 5
Strongly Disagree Strongly Agree

10. The knowledge being transferred was demanding and complicated. * Mark only one oval.
1 2 3 4 5
Strongly Disagree Strongly Agree

11. Teaching the knowledge to local employees was a quick and easy process. * Mark only one oval.
1 2 3 4 5
Strongly Disagree Strongly Agree

12. Teaching the knowledge to local employees did not require much previous experience of similar tasks. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

13. To transfer the experience and technology, your company needs to invest significantly in specialized equipment and facilities. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

14. Brazilian employees often made wrong interpretations about the knowledge transferred. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

15. The values and norms of Brazilian did not comply with the knowledge transferred. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

16. The characteristics of the knowledge being transferred collided with the Brazilian culture. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

17. The cultural differences between Brazil and Portugal increases the difficulty of knowledge transfer. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

18. The organizational culture of Brazilian companies fosters attitudes toward learning new things, self-development and innovation. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

19. The values characterizing the organizational culture of your company in Brazil supported knowledge transfer. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

20. Characteristics of the knowledge being transferred were in harmony with the organizational culture of your company. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

21. There were no major conflicts between the knowledge transferred and the organizational culture of your company. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

22. The skills of the employees in your company were at a lower level than what was required to implement the knowledge being transferred. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

23. Your company's ability to absorb the knowledge being transferred was not enough to receive knowledge. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

24. The employees in your company are committed to the parent company's operation and goals. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

25. The relationship between the employees of your company and the parent company is characterized by trust. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

26. The expatriate has enjoyed a good relationship with local employees. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

27. The employees of your company are proud to work for the parent company. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

28. From the perspective of your company's employees, your company in Brazil is an appreciated and highly valued employer. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

29. Your company needs daily support from the parent company. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

30. Your company could not function without the parent company's support. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

31. There is a strong interdependence between your company and the parent company. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

32. Transferring knowledge to your company in Brasil was a challenging and problematic process. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

33. Realization of the knowledge transfer was more difficult than I had expected. * Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

**Please identify your involvement in the following areas of knowledge transfer.**

34. Management Knowledge * Mark only one oval.

1 2 3 4 5

Not Active Very Active

35. Cultural Knowledge * Mark only one oval.

1 2 3 4 5

Not Active Very Active

36. Sales and Marketing Knowledge * Mark only one oval.

1 2 3 4 5

Not Active Very Active

Powered by

37. Technical Knowledge * Mark only one oval.

1 2 3 4 5

Not Active Very Active

38. Product/Service Knowledge * Mark only one oval.

1 2 3 4 5

Not Active Very Active

39. Human Resources Management Knowledge * Mark only one oval.

1 2 3 4 5

Not Active Very Active

40.Accounting/Finance Knowledge * Mark only one oval.

1 2 3 4 5

Not Active Very Active

## Appendix B - Interview Script

**Characteristics of Knowledge**

1. Were the contents of knowledge to be transferred easily documented?
2. Has need a lot of interaction between you and the recipients of knowledge?
3. Was easy to define what kind of knowledge should/could be?
4. Teaching to local employees was a quick and easy process?
5. To transfer knowledge, your headquarters had to invest significantly in specialized equipment and installations?

**Institutional Context**

6. Was it true that the Brazilian employees often misinterpreted the knowledge transferred?
7. The type of the transferred knowledge collided with the Brazilian culture?

**Cultural Context**

8. Cultural differences between Brazil and Portugal increased the difficulty of knowledge transfer?

**Organizational Context**

9. Were expatriates prepared to teach the local employees?

**Relational Context**

10. Were your company's employees committed to the operation and goals of the parent company?
11. The relationship between the expatriate and the local employees was good?
12. From the point of view of your company's employees, was the headquarters company in Brazil an appreciated and highly valued employer?
13. Does the Subsidiary need daily support from the parent company?
14. Was the transfer of knowledge to the subsidiary in Brazil more difficult than expected?

## Appendix C - Interviews Resume

| Interview | Role | Gender | Age | Local | Date | Duration | Duration as Expatriate |
|---|---|---|---|---|---|---|---|
| Interview 1 | Top Operations Manager | Male | 35-44 | Picoas | June 2014 | 15 | 3Months |
| Interview 2 | Intermetiary Operations Manager | Male | 35-44 | Picoas | July 2014 | 25 | 1Month |
| Interview 3 | Intermetiary Operations Manager | Female | 35-44 | Picoas | July 2014 | 25 | 1Month |
| Interview 4 | Techincal Operations Manager | Male | 45-54 | Picoas | August 2014 | 30 | 6Months |
| Interview 5 | Technical Engineer | Male | 35-44 | Picoas | August 2014 | 30 | 6Months |
| Interview 6 | Top Engenieering Manager | Male | 35-44 | Picoas | June 2014 | 15 | 3Months |
| Interview 7 | Technical Engineer | Male | 25-34 | Skype | September 2014 | 30 | 1Year |

# REFERENCES


Abell, A. and Oxbrow, N. (2001), Knowledge Management Handbook, CRC Press, Boca Raton, FL.

Abernathy, T., Coutts, J., Royce, D., Bartram, J., Kramer, D., Chapesike, K., Gold, I., Marsh.L. (2001). Knowledge transfer: Looking beyond health, Report on the conference held in Toronto.

Afrazeh A (2009). Knowledge Management; concepts, models, measurement and implementation. Amir Kabir University publication.

Alavi, M. and Leidner, D.E. (2001), "Review: knowledge management and knowledge management systems: conceptual foundations and research issues", MIS Quarterly.

Alavi, M., Leidner, D. E. (2001). "Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues", MIS Quarterly.

Alavi.M and Leidner. E (2001). "Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues". MIS Quarterly.

Allee, V. (1997), "Twelve principles of knowledge management", Training&Development.

Allen, T. (1977). Managing the flow of technology: Technology transfer and the dissemination of technological information within the R&D organization. MIT Press Books, 1.

Allen, T. and Cohen, S. (1969). Information flow in research and development laboratories. Administrative Science Quarterly, pp. 12--19.

Ambrosini, V & Bowman, C (2001), „Tacit knowledge: Some suggestions for Operationalisation"peJournal of Management Studies, Vol. 38 No.6, pp. 811- 829

Ambrosini, V & Bowman, C (2001), „Tacit knowledge: Some suggestions for Operationalisation", Journal of Management Studies, Vol. 38 No.6, pp. 811- 829

Ambrosini, V. And C. Bowman (2001). Tacit Knowledge: Some Suggestions For Operationalisation. Journal Of Management Studies.

Anderson, L. and Bateman, T. (2000). Individual environmental initiative: Championing natural environmental issues in US business organizations. Academy of Management Journal, 43 (4), pp. 548--570.

Andrews, K. and Delahaye, B. (2000). nfluences on knowledge processes in organisational learning: The psychosocial filter. The Journal of Management Studies,

(37(6)), pp. 797-810.

Andriessen.D (2004). "Reconciling the rigor-relevance dilemma in intellectual capital research". The Learning Organization

Applehans.W.E et al (1999), Managing Knowledge: A Practical Web-based Approach, Addison Wesley, MA.

APQC. (1996). Emerging best practices in knowledge mangement. Houston TX: American Productivity and quality centre.

APQC. (1997). Using Technology to support Knowledge Management. Houston TX: American Productivity and quality centre.

Araujo, L., & Novello, S. (2004), "Stickness knowledge: Barriers to knowing in the firm." Management Learning, 35, 1, 90-92.

Ardichvili, A., Cardozo, R. and Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. Journal of Business Venturing, 18 (1), pp. 105--123.

Argote, L (1999), Organizational Learning: Creating, Retaining and Transferring Knowledge. Massachusetts: Kluwer Academic Publishers

Argote, L, Ingram, P, Levine, JM & Moreland, RL (2000), „Knowledge transfer in organizationns: Learning from the experience of others", Organisational Behaviour and Human Decision Processes, Vol. 82 No.1, pp. 1-8.

Argote, L., Mcevily, B. and Reagans, R. (2003). Managing knowledge in organizations: An integrative framework and review of emerging themes. Management science, 49 (4), pp. 571--582.

Argote, L., McEvily, B., & Reagans, R. (2003). Managing knowledge in organizations: An integrative framework and review of emergent themes. Management Science, 49, pp 571-582.

Argote.L and Ingram.P (2000), Knowledge Transfer: A Basis For Competitive Advantage in Firms, Organizational Behavior and Human Decision Processes.

Arnott, D. (2004). "Decision Support Systems Evolution: Framework, Case Study and Research Agenda", European Journal of Information Systems.

Arora, A., Gambardella, A., 1994, Evaluating Technological Information and Utilizing It: Scientific Knowledge, Technological Capability, and External Linkages in Biotechnology. Journal of Economic Behavior and Organization, Vol. 24 (1), pp.91-114.

Augier, M. and Vendelo, M.T. (1999), ``Networks, cognition and management of tacit knowledge", Journal of Knowledge Management, Vol. 3 No. 4, pp. 252-61.

Awad.E.M and Ghaziri.H.M (2004), Knowledge Management, Pearson Education, NJ.

Aycan Z. & Kanungo R.N. (1997). Current issues and future challenges in expatriate management, New approaches to employee management Press.

Barton.D (1995),Wellsprings of Knowledge — Building and Sustaining Sources of Innovation, Harvard Business School Press.

Bates, RA & Holton, EF III (1999), 'Learning transfer in a social service agency: tes of an expectancy model of motivation', in KP Kuchinke (eds.), Academy of Human Resource Development 1999 Conference Proceedings (pp.1092-1099),

Becerra, M., Lunnan, R., Huemer, L. (2008). Trustworthiness, Risk, and the Transfer of Tacit and Explicit Knowledge Between Alliance Partners. Journal of Management Studies.

Bender, S. & Fish, A. (2000), 'The transfer of knowledge and the retention of expertise: The continuing need for global assignment', Journal of Knowledge Management.

Bender.S and Fish.A (2000), The Transfer of Knowledge and the Retention of Expertise: The Continuing Need For Global Assignments, Journal of Knowledge Management.

Bennet, A. & Bennet, D. (2004), Organizational Survival in the New World: The Intelligent Complex Adaptive System, Elseiner, Amsterdam.

Bennett, R. and Gabriel, H. (1999), ``Organizational factors and knowledge management within large marketing departments: an empirical study", Journal of Knowledge Management, Vol. 3 No. 3, pp. 212-25.

Bhatt, G. (2001), "Knowledge management in organizations: examining the interaction between technologies, techniques, and people", Journal of Knowledge Management

Bjorkman, I., Stahl, G. K. and Vaara, E. (2007). 'Cultural differences and capability transfer in cross-border acquisitions: the mediating roles of capability complementarity, absorptive capacity, and social integration'. Journal of International Business Studies, 38, 658–72

Bock, G. and Kim, Y. (2002). Breaking the myths of rewards: an exploratory study of attitudes about knowledge sharing. Information Resources Management Journal (IRMJ), 15 (2), pp. 14--21.

Bolino, M.C. and Feldman, D.C. (2000) 'The antecedents and consequences of underemployment among expatriates', Journal of Organizational Behavior

Bonache et al., (2001), Knowledge Transfer And The Management Of Expatriation. Thunderbird International Business Review

Bonache, J and Brewster, C (2001), Knowledge Transfer and Management of Expatriation. Thunderbird International Business Review, 43 (1), pp 145-168.

Bonache, J. and Brewster, C. (2001). 'Knowledge transfer and the management of expatriation'. Thunderbird International Business Review, 43, 145–68.

Bonache, J., Brewster, C. & Suutari, V. 2001. Expatriation: A Developing Research Agenda. Thunderbird International Business Review, 43, 3-20.

Bresman, H., Birkinshaw, J. and Nobel, R. (1999). 'Knowledge transfer in international acquisitions'. Journal of International Business Studies, 30, 439–62.

Brock, D., and Yaniv, E., (2007), Knowledge is not Enough: Organisational Attention and Replication Strategies, Service Industries Journal.

Brokel, T., and Binder, M., (2007), The Regional Dimension of Knowledge Transfers—A Behavioral Approach, Industry and Innovation.

Brown, J. and Duguid, P. (2000). The social life of information. Boston: Harvard Business School Press.

Brown, S., J. & Duguid, P., (2001). "Knowledge and Organization: A Social-Practice Perspective", Organization Science, vol. 12, no. 2, pp. 126-207.

Bryman, A. and Bell, E. (2007). Business Research Methods, 2nd ed., Oxford: Oxford University Press.

Buttolph.D (1992), A New Look At Adaptation. Knowledge: Creation, Diffusion, Utilization.

Cabrera, A. and Cabrera, E. (2002). Knowledge-sharing dilemmas. Organization studies, 23 (5), pp. 687--710.

Caligiuri, P and Colakoglu, S (2007), A strategic contingency approach to expatriate assignment management. Human Resource Management Journal, 17, pp 393-410.

Calo, T., (2008). Talent management in the era of the aging workforce: The critical role of knowledge transfer. Public Personn. Manage, Retrieved On:27th Aug 2013, Retrieved From:http://www.entrepreneur.com/tradejournals/article/

Cantwell, J. A. (1995). The globalisation of technology: what remains of the product cycle model? Cambridge Journal of Economics.

Carlile, P. 2002. A pragmatic view of knowledge and boundaries: Boundary objects in new product development. Organization science, 13 (4), pp. 442--455.

Carlile, P. 2004. Transferring, translating and transforming: an integrative relational approach to sharing and assessing knowledge across boundaries. pp. 5--7.

Carlile, P. and Rebentisch, E. (2003). "Into the black box: The knowledge transformation cycle". Management Science

Carpenter, D., Nieva, V., Albaghal, T, Sorra, J. (2005). Development of a Planning Tool to Guide Research Dissemination. Advances in Patient Safety: From Research to Implementation, Agency for Healthcare and Research Quality.

Carraher, S.M., Sullivan S E and Crocitto M M (2008), Mentoring across global boundaries: an empirical examination of home- and host-country mentors on expatriate career outcomes. Journal of International Business Studies, 39, pp 1310-1326.

Castillo. J (2002), A Note On the Concept Of Tacit Knowledge, Journal Of Management Inquiry.

Chait, L. (1998), ``Creating a successful knowledge management system'', Prism, second quarter.

Chang et al (2012), Expatriate Knowledge Transfer, Subsidiary Absorptive Capacity, And Subsidiary Perform, Journal Of Management Journal.

Chang.Y et al, (2012) Expatriate Knowledge Transfer, Subsidiary Absorptive Capacity And Subsidiary Performance, Academy Of Management Journal.

Chen, CH 2003, Cross cultural construct validation of the learning transfer systeminventory in taiwan, Unpublished Doctoral Dissertation, Louisiana State University.

Cheng, EWL & Ho, DCK 2001, 'The influence of jobs and career attitudes on learning motivation and transfer', Career Development International, vol. 6, no.1, pp.20-27.

Chew.W.B et al (1991), Beating Murphy's Law. Sloan Management Review.

Christensen.P.H (2007), Knowledge Sharing: Moving Away From The Obsession With Best Practice, Journal Of Knowledge Management.

Church, A. and Burke, W. 1993. What are the basic values of OS?. Newsletter of Organizational Development and Change, Academy of Management, Winter.

Clark, C (1990), Social process in work groups: a model of the effect of involvement, credibility and goal linkage on training success, Unpublished Doctoral Dissertation, University of Tennessee, Knoxville.

Clark, CS., Dobbins, GH & Ladd, RT 1993, 'Exploratory field study of training motivation. Influence of involvement, credibility and transfer climate', Group & Organization Management, vol.18, no.3, pp.292-307.

Clarke, N (2002), 'Job/work environment factors influencing training transfer within a human service agency: some indicative support for Baldwin and Ford's transfer climate

construct', International Journal of Training and Development, vol.6, no.3, pp.146-162.
Clemmer, J. (1995). Pathways to performance: a guide to transforming yourself, your team and your organization.
Cockburn, I. and Henderson, R. (1998). Absorptive capacity, coauthoring behavior, and the organization of research in drug discovery. The Journal of Industrial Economics, 46 (2), pp. 157--182.
Cohen W., and Levinthal D., (1990), Absorptive capacity: A new perspective on learning and innovation, Administrative Science Quarterly.
Cohen, D. (1998). Toward a Knowledge Context : Report on the First Annual U.C. Berkeley Forum on Knowledge and the Firm. California Management Review, 44 (3), pp. 22-39.
Cohen, W. M. and Levinthal, D. A. (1990). 'Absorptive capacity: a new perspective on learning and innovation'. Administrative Science Quarterly, 35, 128–52.
Cohen, W.M., Levinthal, D.A. (1989), Innovation and Learning : The Two Faces of R&D. Economic Journal, 99: pp.569-596.
Cooper, R. 1990. Stage-gate systems: A new tool for managing new products.. Business Horizons, pp. 44-54. [Accessed: 24 Dec 2013].
Cortada.J.W and Woods.J.W (1999), The Knowledge Management Yearbook, 1999-2000, Butterworth Heinemann, Bostan.
Crawford, V. and Sobel, J. (1982). strategic information transformation. Econometrica, 50 (6), pp. 1431-1451
Dampney.C.N et al (2002), "The meaning of tacit knowledge," Australasian Journal of Information System.
Danskin, P., Englis, B.G., Solomon, M.R., Goldsmith, M. & Dave, R. (2005). 'Knowledge management as competitive advantage: Lessons from the textile and apparel value chain', Journal of Knowledge Management.
Darr, ED, Argote, L & Epple, D (1995), „The acquisition, transfer and deprecation of knowledge in service organisations: Productivity in franchises", Management Science, Vol. 41 No.11, pp. 1750-1762.
Davenport, T. and Prusak, L. (1998).Working knowledge. Boston, Mass: Harvard Business School Press.
Davenport.T and Prusak.L (2000), Working Knowledge, Harward Business School Press, Boston.

Davenport.T.H and Prusak.L (1998), Working Knowledge-How Organizations Manage What They Know, Harvard Business School Press, Boton.

Dawson, R (2000), Developing Knowledge-Based Client Relationships: The Future of Professional Services. MA: Butterworth-Heinemann

Delios, A. and Bjorkman, I. (2000), "Expatriate staffing in foreign subsidiaries of Japanese multinational corporations in the PRC and the United States", International Journal of Human Resource Management, Vol. 11 No. 2, pp. 278-93.

Desouza.K et al (2005), Maintaining Knowledge Management Systems: A Strategic Imperative, Journal of the American Society for Information Science and Technology.

Dixon, N. (2002). The neglected receiver of knowledge sharing. Ivey Business Journal, (March/April), pp. 35-40. [Accessed: 24 Dec 2013].

Dixon.N (2000), Common Knowledge: How Companies Thrive By Sharing What They Know, Harward University Press, Boston.

Dodgson, M. (1993). Learning, trust, and technological collaboration. Human relations, 46 (1), pp. 77--95.

Dougherty, Deborah (1992) 'Interpretive barriers to successful product innovation in large firms'. Organization Science, 3: 179–203

Downes.M And Thomas.A (2000) Knowledge Transfer Through Expatriation: The Ucurve Approach To Overseas Staffing. Journal Of Managerial Issues

Doz.Y and Santo.J.F.P (1997), On the management of knowledge: from the transparency of collocation and co-setting to the quandary of dispersion and differentiation, in INSEAD working paper series.

Easterby-Smith, M, Lyles, MA & Tsang, EWK (2008), „Inter-organizational knowledge transfer: Current themes and future prospects", Journal of Management Studies, Vol.45, No. 4, pp. 677-690

Easterby-Smith, M., Lyles, M. A., and Tsang, E. W. K. (2008), Inter-Organizational Knowledge Transfer: Current Themes and Future Prospects, Journal of Management Studies

Edwards, J. and Shaw, D. (2004). Supporting knowledge management with IT.. In Proceedings of DSS 2004, [Accessed: 24 Dec 2013].

Ellis.R and Barkhuizen.G (2005), Analysing Learner Language, Oxford.

Eppler, M. 2003. Managing information quality. Berlin: Springer.

Fey C F and Furu, P (2008), Top management incentive compensation and knowledge sharing in multinational corporations. Strategic Management Journal, 29: pp 1301-1323.

Fishbein, M. and Ajzen, I. (1975). Belief, attitude, intention, and behavior. Reading, Mass.: Addison-Wesley Pub. Co..

Fleming, L. and Sorenson, O. (2001). Technology as a complex adaptive system: evidence from patent data. Research Policy, 30 (7), pp. 1019--1039.

Foss, N., Laursen, K. and Pedersen, T. (2011). Linking customer interaction and innovation: The mediating role of new organizational practices. Organization Science, 22 (4), pp. 980--999.

Foss.N.J et al (2002), Transferring Knowledge in MNCs: The Role of Sources of Subsidiary Knowledge and Organizational Context. Journal of International Management.

Freire, P. (2000). Pedagogy of the oppressed. New York: Continuum.

Gaglio, C. and Katz, J. 2001. The psychological basis of opportunity identification: Entrepreneurial alertness. Small Business Economics, 16 (2), pp. 95--111.

Galunic, D. and Rodan, S. (1998). Resource recombinations in the firm: Knowledge structures and the potential for schumpeterian innovation. Strategic Management Journal, pp. 1193- 1201.

Galup.S et al (2002), Knowledge Management Systems: An Architecture For Active and Passive Knowledge, Information Resource Management Journal.

Gamble.P.R and Blackwell.J (2001), Knowledge Management, A State of the Art Guide, London.

Gibbons, M. and Johnston, R. (1974). The roles of science in technological innovation. Research Policy, 3 (3), pp. 220--242.

Girdauskienė, L., Savanevičienė, A (2007), Influence of Knowledge Culture on Effective Knowledge Transfer. Engineering Economics.

Glazer, R. (1998). Measuring the Knower: TOWARDS A THEORY OF KNOWLEDGE EQUITY..California management review, 40 (3).

Gluckler J., (2007), Economic geography and the evolution of networks, Journal of Economic Geography.

Goh, S. (2002). "Managing Effective Knowledge Transfer: An Integrative Framework and Some Practice Implications", Journal of Knowledge Management.

Goh.S.C (2002), Managing Effective Knowledge Transfer: An Integrative Framework and Some Practice Implication, Journal Of Knowledge Management.

Gold.A.H et al (2001), Knowledge Management: an organizational capabilities perspective. Journal of Management Information Systems.

Gooderham.P (2006), Enhancing Knowledge Transfer In Multinational Corporations: A Dynamic Capabilities Drive Model, Knowledge Management Research and Practice.

Gopalakrishnan.S and Santoro. M.D. (2004), Distinguishing between knowledge transfer and technology transfer activities: The role of key organizational factors. Transactions on Engineering Management.

Grant, R. (1996). Prospering in dynamically-competitive environments: organizational capability as knowledge integration.Organization science, 7 (4), pp. 375--387.

Grant, RM (1996), „Toward a knowledge-based theory of the firm", Strategic Management Journal, Vol 17 Winter Special Issue, pp. 109-112.

Green, J. and Stokey, N. (1980). A Two Person Game of Information Transmission. Harvard institute of Economic discussion paper, 751 .

Grotenhuis F and Weggeman M (2002), Knowledge management in international mergers.

Groven.V and Davenport.H (2001), General Perspectives On Knowledge Management, Fostering ans Agenda, Journal Of Management Informations Systems.

Gupta, A. and Govindarajan, V. (2000). Knowledge flows within multinational corporations. Strategic management journal, 21 (4), pp. 473--496.

Gupta, B., Iyer, L.S. and Aronson, J.E. (2000), "Knowledge management: practices and challenges", Industrial Management & Data Systems.

Gupta.A.K and Govindarajan.L (2000). Knowledge flows within multinational corporations, Strategic Management Journal.

Hackett.B (2000), Beyond Knowledge Management: New Ways to Work and Learn, The Conference Board, Research Report.

Hagedoorn, J., Duysters, G (2002), The Effect of Mergers and Acquisitions on the Technological Performance of Companies in a High-tech Environment, Technology Analysis & Strategic Management.

Haldin- Herrgard, T (2000), „Difficulties in diffusion of tacit knowledge in Organizations", Journal of Intellectual Capital, Vol.1, No.4, pp. 357-365.

Hall, H. (2001). "Input-friendliness: Motivating Knowledge Sharing Across Intranets", Journal of Information Science

Hall, H. (2001). Input-friendliness: motivating knowledge sharing across intranets. Journal of information science, 27 (3), pp. 139--146.

Hameed, R & Analoui, F (1999), 'The problem of transfer in management training and development: case study of an industry in Malaysia', Malaysian Management Review, vol.34, no.2, pp.65-75.

Hansen, M. (1999). The search-transfer problem: The role of weak ties in sharing knowledge across organization subunits. Administrative science quarterly, 44 (1), pp. 82--111.

Hansen, M.T., Nohria, N. and Tierney, T. (1999), "What's your strategy for managing knowledge?'', Harvard Business Review.

Harris, H. (2002), "Strategic management of international workers", Innovations in International HR

Harzing, A. W. (2001). 'Who's in charge? An empirical study of executive staffing practices in foreign subsidiaries'. Human Resource Management, 40, 139–58.

Harzing.A.W (2001), An Analysis Of The Functions Of International Transfer Of Managers In Mncs, Employee Relations.

Hatchuel, A. and B. Weil, (1992), L'expert et le système., Economic: Paris. 263 p.

Hébert, L., Very, P. and Beamish, P. W. (2005). 'Expatriation as a bridge over troubled water: a knowledge based perspective applied to cross-border acquisitions'. Organization Studies, **26**, 1455–76.

Henderson, R., Cockburn, I., (1994), Measuring competence? Exploring firm effects in pharmaceutical research. Strategic management journal, 15: pp.63-84.

Hendriks, P (1999), „Why share knowledge? The influence of ICT on the motivation for knowledge sharing", Knowledge and Process Management, Vol. 6 No. 2, pp.91-100.

Hendriks, P.H.J. (2004). Assessing the role of culture in knowledge sharing, In Proceedings of Fifth European Conference in Organization, Knowledge, Learning and Capabilities, Innsbruk.

Hicks, D., (1995), Published Papers, Tacit Competencies and Corporate Management of the Public/Private Character of Knowledge. Industrial and Corporate Change, 4(2): pp.401-24.

Hinds, P. and Pfeffer, J. (2003). Why organizations don't "know what they know": Cognitive and motivational factors affecting the transfer of expertise. Sharing expertise: Beyond knowledge management, pp. 3--26.

Hippel (1994) "Stickness Information" And The Locus Of Problem Solving: Implications For Innovation, Management Science.

Hislop, D (2005), Knowledge Management in Organizations-A Critical Introduction. NY: Oxford University Press

Hobert L, Very P and Beamish P W (2005), Expatriation as a bridge over troubled water: A knowledge based perspective applied to cross border acquisitions, Organization studies, 26, pp 1455-1476.

Hocking J B, Brown M and Harzing A W K (2004), A knowledge transfer perspective of strategic assignment purposes and their path dependent outcomes, International Journal of Human Resource Management, 15, pp 565-586.

Hocking, J. B., Brown, M. and Harzing, A.-W. (2004). 'A knowledge transfer perspective of strategic assignment purposes and their path-dependent outcomes'. International Journal of Human Resource Management, **15**, 565–86.

Hocking.J.B et al (2007), A Knowledge Transfer Perspective Ofstrategic Assignment Purposes And Their Path-Dependent Outcomes, International Journal Of Human Resource Management.

Hogberg, C & Edvinsson, L 1998, „A design for futurizing knowledge networking", Journal of Knowledge Management, Vol. 2 No. 2, pp. 81-92.

Holm, J. (2001), "Capturing the spirit of knowledge management", paper presented at the

Holton, EF III 1996, 'The flawed four level evaluation model', Human Resource Development Quarterly, vol.7, pp.5-21.

Holton, EF III., Bates RA & Ruona, WEA 2000, 'The development of a generalized learning transfer system inventory', Human Resource Development Quarterly, vol.11, no. 4, pp.333-360.

Holton, EF III., Bates, RA., Seyler, DL & Carvalho, MB 1997, 'Toward construct validation of a transfer climate instrument', Human Resource Development Quarterly, vol. 8, no.2, pp.95-113.

Holtshouse, D. (1998), ``Knowledge research issues", California Management Review, Vol. 40 No. 3, pp. 277-80.

Hooff, B. and Ridder, J. A (2004). "Knowledge sharing in context - the influence of organisational commitment, communication climate and CMC use on knowledge sharing". Journal of Knowledge Management

Horwitch, M. and Armacost, R. (2002), “Helping knowledge management be all it can be”, Journal of Business Strategy.

Howell, J. and Higgins, C. 1990. A qualitative analysis of the leadership behaviors, influence tactics & career experiences of champions of technological innovation. [London]: Research and Publications, School of Business Administration, University of Western Ontario.

Howell, J. and Sheab, C. 2001. Individual differences, environmental scanning, innovation framing, and champion behavior: key predictors of project performance. Journal of Product Innovation Management, 18 (1), pp. 15--27.

Huczynski, AA & Lewis, JW 1980, ‘An empirical study into the learning transferprocess in management training’, Journal of Management Studies, vol.17, pp. 227-240.

Huczynski, AA & Lewis, JW 1980, ‘An empirical study into the learning transfer process in management training’, Journal of Management Studies, vol.17, pp. 227-240.

Husted, K. and Michailova, S. (2002), “Diagnosing and fighting knowledge sharing hostility”, Organizational Dynamics, Vol. 31 No. 1, pp. 60-73.

Husted, K. and Michailova, S. 2002. Diagnosing and fighting knowledge sharing hostility. Organizational Dynamics, pp. 60-73.

Huysman, M. and Wit, D. 2002. Knowledge sharing in practice. Dordrecht: Kluwer Academic Publishers.

Hyondong, K. (2005). Expatriate Capabilities, Knowledge Transfer, and Foreign Direct Investment Performance

Iliev, I. P. (2004), "Stickness knowledge - Barriers to knowing in the firm." Work Employment and Society

Inkpen, A. C. & Dinur, A (1998), Knowledge management processes and international joint ventures. Organization Science.

Inkpen.A.C and Tsang.E.W.K (2005), Social capital, networks, and knowledge transfer, Academy of Management Review.

Ipe, M 2003, „Knowledge sharing in organizations: A conceptual framework“, Human Resource Development Review, Vol. 2 No. 4, pp. 337-359.

Jansen, J., Van Den Bosch, F. and Volberda, H. 2005. Managing potential and realized absorptive capacity: how do organizational antecedents matter?. Academy of Management Journal, 48 (6), pp. 999--1015.

Jensen, R., & Szulanski, G. (2004), "Stickiness and the adaptation of organizational practices in cross-border knowledge transfers." Journal Of International Business Studies, 35, 6, 508-523.

Kaish, S. and Gilad, B. (1991). Characteristics of opportunities search of entrepreneurs versus executives: Sources, interests, general alertness. Journal of business venturing, 6 (1), pp. 45--61.

Kale, P., Singh, H., Perlmutter, H. (2000). Learning and protection of proprietary assets in strategic alliance: building relational capital, Strategic Management Journal.

Kalling, T 2003, „Organization-internal transfer of knowledge and the role of motivation: A qualitative case study" T Knowledge and Process Management, Vol. 10 No. 2, pp. 115-126

Kane, A.A., Argote, L., & Levine, J.M. (2005) Knowledge transfer between groups via personnel rotation: Effects of social identity and knowledge quality, Organizational Behavior and Human Decision Processes, 96, pp 56-71.

Katila, R. and Ahuja, G. (2002). Something old, something new: A longitudinal study of search behavior and new product introduction. Academy of management journal, 45 (6), pp. 1183--1194.

Katz, R. and Allen, T. (1982). Investigating the Not Invented Here (NIH) syndrome: A look at the performance, tenure, and communication patterns of 50 R & D Project Groups. R&D Management, 12 (1), pp. 7--20.

Kikoski et al (2004), The Inquiring Organization: Tacit Knowledge, Conversation, and Knowledge Creation Skills for 21st-Century Organizations, Praeger, Westport, CT and London.

Kilduff, M. and Tsai, W. (2003). Social networks and organizations. London: SAGE.

Kim, S. K., Trimmi, S. (2007). "IT for KM in the Management Consulting Industry", Journal of Knowledge Management

Kinetika (2008), Introduction to Knowledge Management, Retrieved On : 5th Sep 2013, retrieved From: http://www.aseanfoundation.org/documents/knowledge_management_book.pdf

Kirzner, I. (1973). Competition and entrepreneurship. Chicago: University of Chicago Press.

Knowledge and Process Management, 9(2), pp 83–89.

Ko et al., (2005), Antecedents of Knowledge Transfer from Consultants to Clients in Enterprise System Implementations", MIS Quarterly.

Ko, D (2010), „Consultant competence trust doesn‟t pay off, but benevolence trust does! Managing knowledge with care‟, Journal of Knowledge Management, Vol. 14, No. 2, pp. 202-213

Kogut, B. & Zander, U. (1992), Knowledge of the firm and the replication of technology. Organization Science, and also Itami H., 1987, Mobilising invisible assets., Cambridge, MA.: Havard University Press.

Kogut, B., & Zander, U. (1993). Knowledge of the firm and the evolutionary theory of themultinational corporation. Journal of International Business Studies.

Kogut, B., Zander, U(1992), "Knowledge of the firm, combinative capabilities, and the replication of technology"; Organization Science.

Kontoghiorghes, C (2001), "Factors affecting training effectiveness in the context of the introduction of new technology. A US case study', International Journal of Training and Development, vol.5, no.4, pp. 248-260.

Kontoghiorghes, C (2004), 'Reconceptualizing the learning transfer conceptual framework: empirical validation of a new systemic model', International Journal of Training and Development, vol.8, no.3, pp. 210-220.

Kostova, T. (1999). Transnational transfer of strategic organizational practices: A contextual perspective. Academy of Management Review.

Kostova, T. and Roth, K. (2003). 'Social capital in multinational corporations and a micro-macro model of its formation'. Academy of Management Review, 28, 297–317.

Kulik, G. T., Gregan, G., Metz, I and Brown, M (2009), HR managers as toxin handlers: The buffering effect of formalizing toxin handling responsibilities. Human Resource Management, 48: 695-716.

Lane, P. and Lubatkin, M. (1998). Relative absorptive capacity and inter-organizational learning. Strategic Management Journal, pp. 461-477.

Lane, P. J., Salk, J. E. and Lyles, M. A. (2001). Absorptive capacity, learning, and performance in international joint ventures. Strategic Management Journal.

Lane, P., Koka, B. and Pathak, S. 2006. The reification of absorptive capacity: a critical review and rejuvenation of the construct. Academy of management review, 31 (4), pp. 833--863.

Lasserre, P. (2003), 'Global Strategic Management, Palgrave Macmillan

Laudon, K. C et al (2004). Management Information Systems: Managing the Digital Firm, Pearson Education, USA.

Laursen, K. and Salter, A. 2006. Open for innovation: the role of openness in explaining

innovation performance among UK manufacturing firms. Strategic management journal, 27 (2), pp. 131--150.

Lavis, J., Robertson, D., Woodside, J., McLeod, C., & Abelson, J. (2003), How can research organizations more effectively transfer research knowledge to decisionmakers? The Milbank Quarterly

Leach.P (1994), La Empresa Familiar. Barcelona: Ediciones Granica.

Lei.D et al (1999), Designing Organizations for Competitive Advantage: The Power Of Unlearning and Learning Organizational Dynamics, AMA.

Leonard, D. and Sensiper, S. (1998), ``The role of tacit knowledge in group innovation", California Management Review, Vol. 40 No. 3, pp. 112-32.

Leonard.D (2007), Knowledge Transfer Within Organizations in: Ichijo.K et al (eds), Knowledge Creation and Management: New Challenges For Managers, Oxford University Press.

Levinson, M. (2008). Knowledge management definition and solutions. Retrieved On:5th Sep 2013, Retrieved from:http://www.cio.com/article/40343/Knowledge_ Management_Definition_and_Solutions?

Levinthal, D. and March, J. (1981). A model of adaptive organizational search. Journal of Economic Behavior & Organization, 2 (4), pp. 307--333.

Lichtenstein, S. and Hunter, A. (2005). Considering the receiver in knowledge sharing: When the receiver seems ready the sharer appears. In Proceedings of 7th Australian Conference on Knowledge Management and Intelligent Decision Support (ACKMIDS 2004), pp. 48--70.

Liebowitz, J. (2000). Building organizational intelligence: a knowledge management primer, Boca Raton, CRC Press, FL.Alder.P.S (1990), Shared Learning. Management Science.

Liebowitz, J., & Beckman, T. (1998). Knowledge organizations: what every manager should know, CRC Press, FL.

Liebowitz.J and Wilcox.L.C (1997), Knowledge Management, CRC Press, FL.

Lucas.M (2006), The Role Of Culture On Knowledge Transfer: The Case Of The Multinational Corporation, The Learning Organization.

Lyles, M. A. and Salk, J. E. (1996). Knowledge acquisition from foreign parents in international joint ventures. Journal of International Business Studies.

Mahoney, J. T., & Williams, C. (2003), "Stickness knowledge: Barriers to knowing in the firm." Academy of Management Review, 28, 4, 679-681.

Majumdar, S. K. (2000), "Sluggish giants, stickness cultures, and dynamic capability transformation." Journal of Business Venturing, 15, 1, 59-78.

Mäkela K（2007), "Knowledge Sharing through Expatriate Relationships: A Social Capital Perspective," International Studies of Management and Organization, 37: pp 108-125.

Markham, S. (1998). A longitudinal examination of how champions influence others to support their projects. Journal of Product Innovation Management, 15 (6), pp. 490--504.

Mas-Colell, A., Whinston, M. and Green, J. (1995). Microeconomic Theory. Newyork: Oxford University Press

Mathieu, JE., Tannenbaum, SI & Salas, E (1992), 'Influences of individual and situational characteristics on measures of training effectiveness', Academy of Management Journal, vol.35, no.4, pp.828-847.

Matusik, S. F., Hill, C. W (1998), "The utilization of contingent work, knowledge creation, and competitive advantage"; Academy of Management Review

McEvily, S. K. and Chakravarthy, B (2002), The persistence of knowledge-based advantage: an empirical test for product performance and technological knowledge. Strategic Management Journal.

Mendenhall.M et al (2002), Employee Development and Expatriate Assignments', in M.Gannon and K. Newman (eds.) The Blackwell Handbook of Cross-Cultural Management, Blackwell Publishers: Oxford.

Menon, T., Pfeffer J (2003), Valuing internal versus external knowledge, Management Science.

Miller, J., Glassner, B., (2011). The "Inside" and the "Outside": Finding Realities in Interviews, in: Silverman, D. (Ed.), Qualitative Research : Issues of Theory, Method and Practice. Sage Publications Ltd, Thousand Oaks, California.

Minbaeva, D. and Michailova, S (2004). Knowledge Transfer and Expatriation Practices in MNCs: The Role of Disseminative Capacity, Employee Relations, 26(6), pp. 663-679.

Minbaeva, D. B. and Michailova S. (2004). ‘Knowledge transfer and expatriation in multinational corporations: the role of disseminative capacity’. Employee Relations, 26, 663–79.

Nahapiet, J.& Ghosal, S (1998), „Social capital, intellectual capital, and the organizational advantage“, The Academy of Management Review, Vol. 2 No.23, pp. 242-266

Naumann, E. (1992). ‘A conceptual model of expatriate turnover’. Journal of International Business Studies, **23**,499–529.

Neve, T. (2003). Right questions to capture knowledge. Electronic Journal of Knowledge Management, 1 (1), pp. 47--54.

Newman.W (1992) ,"Some Observations of a Developing Field", in NA - Advances in Consumer Research Volume

Ngoc.P (2006), An Empirical Study Of Knowledge Transfer Within Vietnam’s IT Companies, Retrieved On: 6th Sep 2013, Retrieved From: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.128.7421&rep=rep1&type=pdf

Noe, R., (2008). Employee Training and Development.4th Edn., Mcgraw-Hill, New Delhi.

Noe, RA & Schmitt, N (1986), ‘The influence of trainee attitudes on training effectiveness: test of a model’, Personnel Psychology, vol.39, pp.497-523.

Nonaka, I. 1994. A Dynamic Theory of Organizational Knowledge Creation.Organization Science, 5 (1), pp. 14-37.

Nonaka, I. and Konno (1998), ``The concept of `BA' ± building a foundation for knowledge creation", California Management Review, Vol. 40 No. 3, pp. 40-54.

Nonaka.I (1994), A Dynamic Theory of Organizational Knowledge Creation, Organization Science.

Nonaka.I and Takeuchi.H (1995), The Knowledge Creating Company-How The Japanese Companies Create The Dynamic Innovations, Oxford Univ Press, NY.

Nooteboom, B. (1999). Inter-firm alliances. London: Routledge.

O’Dell, C. and Grayson, C. (1998). If only we knew what we know. California management review, 40 (3), pp. 154--174.

O’Dell.C and Grayson.C (1999), If Only We Knew What We Know: The Transfer of Internal Knowledge and Best Practices, The Free Press, New York.

O'Leary.D.E (1998) , Knowledge Management Systems: Converting and Connecting," IEEE Intelligent Systems.

Oddou, G., Derr, B. and Black, S. (1995). 'Internationalizing managers: expatriation and other strategies'. In Selmer, J. (Ed.), Expatriate Management: New Ideas for International Business. Westport, CT: Quorum Books.

OECD (2000), Knowledge Transfer Definition, Retrieved On:27th Aug 2013, Retrieved From: http://www.compilerpress.atfreeweb.com/Anno%20ASI%20KV.htm

Office of the e-Envoy (2002), Knowledge management definition, . Retrieved On:5th Sep 2013, Retrieved from:www.**e-envoy**.gov.uk

Osterloh, M & Frey, BS (2000), „Motivation, knowledge transfer and organisational Forms", Organizational science, Vol.11 No. 5, pp. 538-550.

Ouintas, P., Lefrere, P. and Jones, G. (1997), "Knowledge management: a strategic agenda", Long Range Planning

Pavlicek.A (2009), "The challenges of tacit knowledge sharing in a Wiki system," in 17th Interdisciplinary Information and Management Talks (IDIMT), Jindrichuv Hradec, Czech.

Peng M W (2011), Global business, South-Western Cengage Learning, Gincinnati.

Pérez–Nordtvedt, L. P., Kedia, B. L., Datta, D. K., Rasheed, A.A (2008), Effectiveness and Efficiency of Cross-Border Knowledge Transfer: An Empirical Examination, Journal of Management Studies.

Pisano.G.P (1996), Learning-Before-Doing In The Development Of New Process Technology. Research Policy.

Polanyi, M., (1967), The Tacit Dimension, ed. A. Doubleday., New York.

Poon, J & Idris, Z (1985), 'Perceptions toward rewards: survey results of selected bank employees', Jurnal Pengurusan, vol.4, pp.59-68.

Powell, W., Koput, K. and Smith-Doerr, L. (1996). Interorganizational collaboration and the locus of innovation: Networks of learning in biotechnology. Administrative science quarterly, pp. 116--145.

Powell, W.W., Kogut, K.W., Easterby-Smith-Doerr, L. (1996), Interorganizational collaboration and the locus of innovation: networks of learning in biotechnology, Administrative Science Quarterly.

Probst, G. et al. (2003): Wissen managen, Wiesbaden.

Probust.G et al (2000), Managing Knowledge, Building Blocks for Success, John Wiley and Sons, New York.

Punch, K.F., (2005). Introduction to social research: quantitative and qualitative approaches, 2nd ed. Sage Publications Ltd, London.

Ras, E., Avram, G., Waterson, P., Weibelzahl, S. (2005). "Using Web logs for Knowledge Sharing and Learning in Information Spaces", Journal of Universal Computer Science

Reber, RA & Wallin, JA (1984), 'The effects of training, goal setting and knowledge of results on safe behaviour: a component analysis', Academy of Management Journal, vol. 27, no.3, pp.544-560.

Reed, R. & DeFillippi, R. J (1990), Causal ambiguity, barriers to imitation, and sustainable competitive advantage. Academy of Management Review

Rennie.M (1999), Accounting For Knowledge Assets: Do We Need a New Financial Statement? International Journal Of Technology Management.

Rerup, C., & Szulanski, G. (2004), "Imperfection, transfer failure, and the replication of knowledge." Journal of Management Inquiry, 13, 2, 141-150.

Riege.A (2007), Actions To Overcome Knowledge Transfer Barriers In MNCs, Journal Of Knowledge Management.

Riusala.K and Suutari.V (2004), "International Knowledge Transfers through Expatriates", Thunderbird International Business Review.

Robert.J Ed et al, (2012), Innovation Through Knowledge Transfer 2012, Springer Publications, NJ.

Rogers, E. M. (1995). Diffusion of Innovations. New York: The Free Press.

Romero, J. (2002),' The Effect of Expatriate Training on Expatriate Effectiveness', Journal of Management Research

Rosenberg, N., 1990, Why do companies do basic research with their own money ? Research Policy, 19: pp.165-174.

Rosenkopf, L., Metiu, A. and George, V. (2001). From the bottom up? Technical committee activity and alliance formation. Administrative Science Quarterly, 46 (4), pp. 748--772.

Rouiller, JZ & Goldstein, IL (1993), 'The relationship between organisational transfer climate and positive transfer of training', Human Resource Development Quarterly, vol.4, no.4, pp.95-113.

Ruchi Bhatnagar, Jihye Kim, Joyce E. Many, "Examining Instrument Reliability, Validity and Program Effectiveness" in American Journal of Educational Research, (2014).

Ruona, WEA., Leimbach, M., Holton, EF & Bates, R (2002), 'The relationship between learner utility reactions and predicted learning transfer among trainees," International Journal of Training and Development, vol.6, no.4, pp.218-228.

Rusting, C.L., & Larsen, R.J. (1998). Personality and cognitive processing of affective information. Personality and Social Psychology Bulletin

Saviotti, P. (1994), Knowledge, information and organisational structure. in Eleventh International Economic History congress. Milan.

Schwartz (2006), Encyclopedia of Knowledge Management, Idea Group Reference, London.

Seidman, W. H. & McCauley, M. (2003), The Performance Improvement Multiplier. Performance Improvement.

Seidman, W. H. & McCauley, M. (2005), Optimizing Knowledge Transfer and Use, Retrieved On: 6th Sep 2013, Retrieved From: http://www.cerebyte.com/articles/Optimizing%20Knowledge%20Transfer.pdf

Seidman, W. H. (2004), A Behavioral Approach to Knowledge Management. Cutter IT Journal.

Selmer.J And De Leon.C.T (2002), Parent Cultural Control Of Foreign Subsidiaries Through Organizational Acculturation: A Longitudinal Study", International Journal Of Human Resource Management.

Servin.G (2005), ABC of Knowledge Management, Retrieved On5th Sep 2013, Retrieved From: http://www.fao.org/fileadmin/user_upload/knowledge/docs/ABC_of_KM.pdf

Seyler, DL., Holton, EF., Bates, RA., Burnett, MF & Carvalho, MA (1998), 'Factor affecting motivation to transfer training', International Journal of Training and Development, vol.2, no.1, pp.2-16.

Shaffer, M. A., Harrison, D.A. & Gilley, K.M. (1999). Dimensions, determinants, and differences in the expatriate adjustment process. Journal of International Business Studies.

Shaffer, M.A., Harrison, D.A., & Gilley, K.M. (1999). Dimensions, determinants, and differences in the expatriate adjustment process. Journal of International Business Studies.

Silver, C. A. (2000). "Where Technology and Knowledge Meet", Journal of Business Strategy.

Silverman, D., (2010). Doing qualitative research : a practical handbook, 3rd ed. Sage Publications Ltd, London.

Simonin, B. L (2000), "Ambiguity and the Process of Knowledge Transfer in Strategic Alliances", Strategic Management Journal.

Skyrme, D. J. And Amidon, D. M. (1997) Creating the Knowledge-Based Business, London, Business Intelligence Limited

Spencer, J. W (2003), Firms' Knowledge-sharing Strategies in the Global Innovation System: Empirical Evidence from the Flat Panel Display Industry. Strategic Management Journal.

Spender, J. (1993). Competitive advantage from tacit knowledge? unpacking the concept and its strategic implications. Best Paper Proceedings of management, pp. 37-41.

Spender, JC (1996), „Making knowledge the basis of a dynamic theory of the firm", Strategic Management Journal, Vol.17 Winter Special Issue, pp. 45-62.

Stanley.T (2001), Personal Communications With Lucent Technologies, Reference Material.

Steensma, H. K., Tihanyi, L., Lyles, M. A. and Dhanaraj, C. (2005). The evolving value of foreign partnerships in transitioning economies. Academy of Management Journal.

Stenmark, D (2001), „Leveraging tacit Organizational knowledge", Journal of Management Information Systems, Vol. 17 No. 3, pp.9-24.

Stewart, T.A. (1997), Intellectual Capital, Currency/Doubleday, New York.

Storti, C. (2001). The Art of Crossing Borders. Nicholas Brealey & Intercultural Press: London.

Straub, D. and Karahanna, E. (1998). Knowledge worker communications and recipient availability: Toward a task closure explanation of media choice. Organization Science, (9(2)), pp. 160-175..

Sturgeon, T., Van Biesebroeck J., and Gereffi G., (2008), Value Chains, networks and clusters: Refining the global automotive industry, Journal of Economic Geography,

Sveiby.K (1997), The New Organizational Wealth; Management and Measuring Knowledge-Based Assets, Berrett Koehler Publisher, CA.

Swagler, M.A., & Jome, L.M. (2005). The effects of personality and acculturation on the adjustment of North American sojourners in Taiwan. Journal of Counseling Psychology.

Szulanski G and Capetta R (2003), 'Stickiness: Conceptualising Measuring and Predicting Difficulties in the Transfer of Knowledge Within Organizations', in M Easterby-Smith and MA Lyles (eds.), The Blackwell handbook of organizational learning and knowledge management, Malden, MA, Blackwell Publishing.

Szulanski G., (1996), Exploring internal Stickiness: Impediments to the transfer of best practice within the firm, Strategic Management Journal.

Szulanski, G (2000), The process of knowledge transfer: A diachronic analysis of stickiness, Organizational Behavior and Human Decision Process, 82 (1), pp 9-27.

Szulanski, G. (2003). Stickness Knowledge Barriers to Knowing in the Firm, Sage Publications, CA.

Szulanski, G. (2003). Sticky knowledge: Barriers to knowing in the firm. In Great Britian: Sage Publications.

Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. Strategic management journal, 17 pp. 27--43.

Szulanski, G., & Jensen, R. J. (2006), "Presumptive adaptation and the effectiveness of knowledge transfer." Strategic Management Journal.

Szulanski, G., (2000), The Process of Knowledge Transfer: A Diachronic Analysis of Stickiness, Organizational Behavior & Human Decision Process.

Szulanski, G., et al. (2004), "When and how trustworthiness matters: Knowledge transfer and the moderating effect of causal ambiguity." Organization Science, 15, 5, 600-613.

Szulanski.G (2000), The Process Of Knowledge Transfer: a Diachronic Analysis Of Stickness, Organizational Behavior and Human Decision Processes.

Tahir, A.H.M., & Ismail, M. (2007). Cross-cultural Challenges and Adjustment of Expatriates: A Case Study in Malaysia. Turkish Journal of International Relations

Tannenbaum, SI., Mathieu, JE., Salas, E & Cannon-Bowers, JA (1991), 'Meeting trainees' expectations: the influence of training fulfillment on the development of commitment, self-efficacy and motivation', Journal of Applied Psychology, vol.76, no.6, pp.759-769.

Teece, D. (1981). The market for know-how and the efficient international transfer of technology.The Annals of the American Academy of Political and Social Science, 458 (1), pp. 81--96.

Teece, D. (2003). Capturing value from knowledge assets: the new economy, markets for know-how and intangible assets. Essays on Technology Management and Policy,

pp. 47--75.

Thußbas, C. (2001): Wissenstransfer, Köln.

Torrington, D. (1994), International Human Resource Management, Prentice-Hall, London.

Tracey, JB., Tannenbaum, SI & Kavanagh, MJ (1995), 'Applying trained skills on the job: the importance of the work environment', Journal of Applied Psychology, vol.80, no.2, pp.239-252.

Tracey, JB., Tannenbaum, SI & Kavanagh, MJ (1995), 'Applying trained skills on the job: the importance of the work environment', Journal of Applied Psychology, vol.80, no.2, pp.239-252.

Trott, P., Cordey-Hayes, M. and Seaton, R. A. F. (1995). "Inward technology transfer as an interactive process". Technovation.

Truch, A., Higgs, M., Bartram, D. and Brown, A. (2002). "Knowledge sharing and personality". Henley Knowledge Management Forum.

Tsai, W (2001), Knowledge transfer in intra-organizational networks: effects of network position and absorptive capacity on business unit innovation and performance. Academy of Management Journal.

Tsang, E. W. K., Nguyen, D. T. and Erramilli, M. K. 2004. Knowledge acquisition and performance of international joint ventures in the transition economy of Vietnam. Journal of International Marketing.

Tyre, M. J. & von Hippel, E. (1997), The Situated Nature of Adaptive Learning in Organizations. Organization Science.

Tyre, M., (1991), Managing the introduction of new process technology: International differences in a multi-plant network, Research Policy.

Tyre.M.J And Orlikowski.W.J (1994), Windows Of Opportunity: Temporal Patterns Of Technological Adaptation In The Organization, Organization Science

Van De Ven, A. 1999. The innovation journey. New York: Oxford University Press.

van Wijk, R., Jansen, J. J. P. & Lyles, M. A (2008), Inter-and intra-organizational knowledge transfer: a meta-analytic review and assessment of its antecedents & consequences. Journal of Management Studies.

Voelpel, S. C. (2006), "Stickness knowledge: Barriers to knowing in the firm." Academy of Management Learning & Education, 5, 2, 249-251.

Volberda, H., Foss, N. and Lyles, M. 2010. PERSPECTIVE—absorbing the concept of absorptive capacity: How to realize its potential in the organization field. Organization

Science, 21 (4).

Von Hippel E (2006), Democratizing innovation, MA, MIT Press, Cambridge.

von Hippel, E. (1998), "Economics of product development by users: The impact of "stickness" local information." Management Science, 44, 5, 629-644.

Von Hippel, E. (1994). "Sticky information" and the locus of problem solving: implications for innovation. Management science, 40 (4), pp. 429--439.

Wagner, C., Bolloju, N. (2005). "Supporting Knowledge Management in Organizations with Conversational Technologies: Discussion Forums, Web logs and Wikis", Journal of Database Management

Wah, L. (1999), "Making knowledge stick", Management Review.

Wang Ed et al., (2001), Introduction to Knowledge Management: Principles and Practice, Tapir Academic Press, Trondheim.

Wang, J, Ashleigh, M & Meyer, E 2006, „Knowledge sharing and team Trustworthiness: it's all about social ties" Knowledge Management Research & Practice, Vol.4, pp. 175-186

Wang.J and Xiao.J (2009). Knowledge management audit framework and methodology based on processes. J. Technol. Management.

Wasonga T. A. And J. F. Murphy (2006). Learning from Tacit Knowledge: The Impact Of The Internship. The International Journal Of Educational Management.

Watson.S and Hewett.K (2006), A Multi-theoretical Model of Knowledge Transfer in Organizations: Determinants Of Knowledge contribution and knowledge reuse. Journal Of Management Studies.

Wenger.E et al (2002), Cultivating Communities of Practice, Harvard Business School Press, Boston.

White, M. (2003). Creating an Effective Intranet. Intranet Focus Ltd, Retrieved 24 March, 2005: http://www.intranetfocus.com/pdf/IntranetMangement.pdf.

Wickham, M., and Woods, M., 2005. Reflecting on the strategic use of CAQDAS to manage and report on the qualitative research process. The Qualitative Report, 10(4), 687-702.

Wiig. K. M (2004), People-Focused Knowledge Management: How Effective Decision Making Leads To Corporate Success, Elsevier, Oxford.

Williams, C (2007), Transfer in context: replication & adaptation in knowledge transfer relationships. Strategic Management Journal.

Yeung, A. 1999. Organizational learning capability. New YorK: Oxford University

Press.

Yli-Renko, H., Autio, E. and Sapienza, H. J (2001), Social capital, knowledge acquisitions, and knowledge exploitation in young technology-based firms. Strategic Management Journal.

Zack, M. (1999), ``Managing codified knowledge'', Sloan Management Review, Summer, pp. 45-58.

Zahra, S. A., Ireland, R. D. and Hitt, M. A (2001), International expansion by new venture firms: international diversity, mode of market entry, technological learning and performance. Academy of Management Journal.

Zahra, S. and George, G. 2002. Absorptive capacity: A review, reconceptualization, and extension. Academy of management review, 27 (2), pp. 185--203.

Zander, U., Kogut, B (1995), Knowledge and the Speed of the Transfer and Imitation of Organizational Capabilities: An Empirical Test, Organization Science.