ROLE OF HRM PRACTICES IN THE PROCESS OF ORGANIZATIONAL KNOWLEDGE TRANSFER IN MNCs:

theoretical framework for empirical study

Dana Minbaeva, Ph.D. student

LINK Project

Department of International Economics and Management

Copenhagen Business School

Howitzvej 60, DK-2000, Copenhagen F, Denmark

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Abstract

This paper is a part of on-going LINK project 7[1] and represents a work-in-progress towards building a theoretical framework for future empirical study on organizational knowledge transfer from Danish-based MNCs HQs to their subsidiaries with emphasis of the role of HRM practices in the process.

The overall project focuses on two major objectives:

(1) to analyze the process of organizational knowledge transfer between headquarter and subsidiary, determine facilitators and constraints of effective knowledge transfer,

(2) and to understand the role of HRM practices in the process of effective organizational knowledge transfer.

Theoretical framework of this study is based on four major theoretical streams: resource-based perspective of the firm, theory of multinational enterprises, organizational learning theory, and strategic human resource management literature.

Current paper is structured in the following way: at first, organizational knowledge is defined and components are described; next, the process of organizational knowledge transfer and its determinants are identified; finally, existing theoretical concepts are integrated to clear up the "mission" of HRM practices in the process of organizational knowledge transfer. Lastly future research directions are presented.

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[1] For more information, see <http://www.cbs.dk/link>

Introduction

Since Kogut and Zander (1992) presented an argument that *a firm's ability to transfer knowledge is a reason for its very existence,* research in knowledge transfer has become one of the most promising areas of research in knowledge management. Special attention has been given to the critical issue of the importance of knowledge transfer in managing multinational corporations (MNCs). Despite this question has been addressed in many theoretical discussions, but still there is a lack of empirical studies on knowledge transfer (Simonin, 1999).

In general, knowledge transfer in hybrid organizational arrangement[2] raised significant questions both for researchers and practitioners. Even though there are many similarities in the knowledge transfer process under different modes of governance, some unique elements could be found as well. This study focuses on the organizational knowledge transfer in MNCs from headquarters (HQs) to their subsidiaries, i.e. Greenfield and acquisitions scenario. Such perspective could usefully be directed towards "a more explicit understanding of the peculiarities of the different governance structures, in order to understand the ways in which the knowledge transfer process differs from one to the next". (Bresman, Birkinshaw, Nobel, 1999: 458). There are a lot of possible angles to look at the knowledge transfer process in MNCs. My choice is to look at the process of knowledge transfer by identifying its determinants, facilitators and constraints. Such approach is not new and has being used by several researchers recently. However, as many studies on the knowledge transfer process as many frameworks for analysis have been introduced. Most of the studies variables are interdependent, and some of them are derivatives or combinative results of others. Thus, some clearance in classification of the determinants is needed.

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[2] Hybrids are organizational arrangements that use resources and/or governance structures from more than one existing organization. This definition encompasses a broad range of organizational combinations of various sizes, shapes and purposes, some of which are formal organizations (e.g. mergers), whereas others are formalized relationships that are not properly organizations (e.g. license agreements). (Borys and Jemison, 1989)

So, the paper presents a theoretical framework for studying the process of organizational knowledge transfer from MNCs HQs to their subsidiaries with emphasis of the role of HRM practices in the process.

Drawing on the theoretical insights of the "*resource based view*" of organizational strategy and competitive advantage (Conner, 1991; Wernerfelt, 1984), Lado and Wilson (1994) suggested that HRM practices "can contribute to sustained competitive advantage through facilitating the development of competencies that are firm specific, produce complex social relationships, … and generate organizational knowledge" (p.699). Despite the powerful recent trends in resource-based literature to look at knowledge as inextricably linked to human resources (Laursen and Mahnke, 2000) and consider practices as referred to organizations' routine use of knowledge (Szulanski, 1996), very little is known about "how, and in which combinations human resource management practices matter…" (Laursen and Mahnke, 2000: 1). In fact, an examination of the role of HRM system and/or several practices in developing "*organizational capabilities*" has been given some but still little attention (Schuler and MacMillan, 1984; Ulrich and Lake, 1991; Lado and Wilson, 1994; Baron and Kreps, 1999, Laursen and Mahnke, 2000). The link between HRM practices and organizational knowledge transfer just started to be discussed. Eric Tsang (1999) examined the organizational knowledge transfer and learning aspects of international HRM (IHRM) and empirically evaluated IHRM practices adopted by 12 Singapore MNCs from a knowledge-based and learning perspective. Tsang focused mainly on the role of expatriates in replicating organizational routines in a foreign subsidiary, and concluded that effective expatriation (including selection of expatriates, pre-assignment training, rotation and their learning experience) in combination with inter-operation communication and training will help in achieving knowledge diffusion within MNCs, and thus lead to success in international market operations. This conclusion was supported by later researchers (for example, Sparkes and Miyake, 2000 on the use of closely monitored training as the best way to assimilate knowledge transfer). However, due to the complexity of overall HRM practices and since there are a number of other HRM practices that "a firm can employ in order to enhance knowledge transfer" (Sparkes and Miyake, 2000: 611), more investigations are needed on understanding the role of HRM practices in organizational knowledge transfer process.

Clearly, two subjects are interrelated, but their link still misses some important aspects of the interpretation and empirical support. “It deserves more attention from not only researchers but also practitioners, as international assignments can be designed in such a way as to enhance knowledge transfer and learning” (Tsang, 1999: 607).

A “sub-mission” of this paper is to bring more understanding to the term of “organizational knowledge”, which exists in the literature as a theoretically relevant concept for studying organization-level phenomena of learning. However, existing definitions and conceptions are excessively broad; this fact has created a lot of misunderstanding of the original concept and lead to misinterpretation of research results. Better understanding of the phenomena of “organizational knowledge” requires integration of a large body of literature and combining theoretical conclusion with insights from filed studies.

The paper is structured in a very simple way. At first, organizational knowledge is defined and components are described. Next, the process of organizational knowledge transfer and its determinants are identified. Finally, existing theoretical concepts are integrated to clear up the mission of HRM practices in the process of organizational knowledge transfer. In the conclusion, future research horizons are presented.

1. Organizational Knowledge of MNCs

The concept of "*organizational knowledge*" is not new: for example, Sproul (1981) defined organizational knowledge as "*recipe knowledge*" – the organizational routine performance programs and standard operating procedures that provide organizational individuals with ways of acting in particular situations. However, in the current knowledge-based literature there are different approaches to understand and define organizational knowledge. To get a better understanding of the phenomena of organizational knowledge and its definition, I start with the brief review of evolution of the term "organizational knowledge" in resource-based perspective. Then, I differentiate between two kinds of knowledge in organization: functional (chunks of expertise) and organizing (organizing policies and principles). Finally, components of organizational knowledge are identified.

Resource-base literature distinguishes between "*resources*" and "*capabilities*". "One pertinent distinction is that resources can be both tangible (physical capital) and intangible (human capital), while capabilities are always intangible" (Foss and Eriksen, 1995: 46). Capabilities have been often defined as distinctive knowledge and abilities a firm possesses and analyzed at different levels (for example, "*industry capabilities*" in Porter, 1990), but since "all resource-based analysis has been moving on a strict firm level" (Foss and Eriksen, 1995: 47), the term "*firm capabilities*" has been used more and more often. Hedlund and Zander (1993), referring to "a growing interest in better understanding the relationships between distinctive organizational competencies, competitive advantage, and firm performance" (p. 3), summarized accurately main ideas of *distinctive organizational capabilities*. However, there is a remaining problem in the literature on competencies: "definitions are wide enough to encompass virtually everything a firm does" (p. 6).

Kogut and Zander (1992), answering the question "how should we understand why firms exist?" wrote: "what firms do better than markets is the sharing and transfer of the knowledge of individuals and groups within an organization" (p.383). They agreed that knowledge is held by individuals, but, as they pointed out, “is also expressed in regularities by which members cooperate in a social community (i.e. group, organization or network)” (p.383). These types of knowledge have competitive implications since they are shared by organizational members and difficult to be replicated by outsiders. Following these ideas, researchers more and more often have started using two terms to describe “organizing principles by which relationships among individuals, within and between groups, and among organizations are structured” (Kogut and Zander, 1992: 384) - “*firm’s knowledge*” or “*organizational knowledge*”.

1.1. Organizational Knowledge: is there such a thing?[3]

Organizational knowledge is about the collective dynamic capabilities of the group, which dependent on the distinct knowledge held by the various individuals concerned, and explain the reason for groups of individuals to co-specialize (working together in production for sale to others) (Buckley and Carter, 2000). Organizational knowledge is shared among organizational members and is connected to the organizational history and experience. Such historical dimension of a firm activities “is critical, since its past experiences engender the underlying routines on the basis of which it undertakes subsequent actions” (Madhok, 1997: 40).

Organizations ”own” the knowledge in the sense that it is produced by their actors. Individuals are learners, while organizations are holders. “All learning takes place inside individual human heads; an organization learns in only two ways: by the learning of its members, or by investing new members who have knowledge the organization did not previously have” (Simon, 1991: 125). Often, knowledge of an organization has been defined as aggregation of individual knowledge of individuals working in organization, since “a great deal of knowledge is both produced and held collectively” (Brown and Duguit, 1998: 92). Do organizations know anything? It is too simple to say that knowledge of organization is a sum of individual knowledge, because organization might

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[3] Narashima (2000)

not "know" everything what each organizational individual knows. Furthermore, organizations do not "know" anything; they rather provide organizational routines - the forms, rules, procedures, conventions, strategies, technologies, the structure of beliefs, frameworks, paradigms, codes, etc. - to keep knowledge of individuals within the firm's boundaries.

Organizational knowledge could be both tacit and explicit. Furthermore, Nonaka and Takeuchi (1995) argued that these two dimensions are mutually dependent and there will be another strong tacit dimension associated with how to use their interdependency. In a view of Kogut and Zander (1993, 1995, 1997), a central competitive dimension is *what* firms know about *how* to do things. They categorized organizational knowledge into information and know-how. In line with other researchers they also perceive organizations more than mechanisms, which transfers knowledge[4], but also by which knowledge is created[5].

Nonaka (1994) has seen organizational knowledge creation as a process whereby the knowledge held by individuals is amplified and internalized as part of an organization's knowledge basis. When knowledge of organizational individuals is shared with other individuals and by doing so is transformed to the organizational level, organizational knowledge is created (Nonaka and Takeuchi, 1995). This is a dynamic process, which involves various organizational levels. At different levels of knowledge creation – individual, group and organizational, there are different processes at work. Inkpen and Crossan (1995) identified three processes: at the individual level, the critical process is

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[4] For example, to explore the process of knowledge creation Kogut and Zander (1995) have introduced the concept of "*combinative capabilities*". Combinative capabilities are the intersection of the capability of the firm to exploit its knowledge and the unexplored potential of the technology. The purpose of the intersection is to synthesize and apply current and acquired knowledge, and then to be explored in the context of a competitive environment.

[5] There is a huge field of knowledge management research, which analyzes and describes the process of knowledge creation. As it was stated before, this study focuses on that part of knowledge body, which is already exist at a MNC's HQ – it was created by the MNC and/or acquired from the previous experience. Thus, the process of knowledge creation will not be discussed here. However, since it will be difficult to separate knowledge transfer and knowledge creation, certain consequences of the knowledge creation process will be taken into consideration.

interpreting; at the group level – *integrating*; and at the organizational level – *institutionalizing*. Nonaka (1994, 1998) considered knowledge creation as a spiraling process of interactions between explicit and tacit knowledge. Interactions between these two types of knowledge occur in four steps: *socialization, externalization, combination* and *internalization*[6].

To summarize the discussion on organizational knowledge definition, I would like to present this study perspective on organizational knowledge. In this study, organizational knowledge is defined as knowledge about lessons from previous organizational experience embodied into routines, which guide behavior of organizational individuals. Organizational knowledge is based on individual knowledge which individuals share with each other while solving organizational problems. Such experience is shared by organizational individuals, connected to the organizational history and experience, and kept in organizational memory. The existence of unique organizational knowledge and future possibilities to embody it in practice could be explored in the context of the firm's competitive advantage.

1.2. Components of Organizational Knowledge

Organizational knowledge is a complex concept that can become useful and workable only when its components are described, understood and brought down to an operational level. From the perspective of this study, organizational knowledge is viewed as divided into two big concept families: *functional* and *organizing.* The next section discusses components of organizational knowledge both functional and organizing, but mainly focusing on the second - knowledge of general organizational performance policies and standard operating procedures.

Organizations perform different functional activities, and organizational knowledge is developed and integrated around them. If an organization provides a single product or

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[6] Nonaka's model was called later SECI model and mainly describes a dynamic process of exchanging and transforming tacit and explicit knowledge.

service, departmentalizing by function appears to be the most suitable (Jackson, Schuler and Rivero, 1989). Functionally structured organizations can operate only within limited environment. Instead, recent studies (ex., Foss, 2000) focused on fostering "dynamic capabilities by imposing structural ambiguity on the organization" (Foss, 2000:1). However, in recent Scandinavian empirical studies more and more often functional knowledge is connected to functional activities of organizations. Indeed, in Zander (1991)[7]: R&D. manufacturing, marketing and sales, technical service; in COE data base[8]: research (basic or applied)m development, production of goods and services), marketing/sales, logistics/distribution, purchasing, HRM; in HANKEN questionnaire[9]: general management, manufacturing, marketing/sales, service, R&D.

Taking into consideration experience of studies described above and previous empirical evidence, functional knowledge of a MNC in this study includes organizational distinctive competencies in the following areas:

- Production of Goods or Services
- Marketing Research and Development
- Finance and Accounting
- Technical service
- HRM[10]

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7 Data base for the doctoral dissertation: a survey questionnaire of 44 innovations made within 21 multinational groups.

8 Center of excellence data base: submitted to all foreign owned subsidiaries in more than 14 countries including Finland, Sweden, Denmark, Norway, Germany, England, Austria, etc.

9 Questionnaire on all foreign-owned subsidiaries in Finland: not submitted yet.

10 Some researchers are considering organizational competencies in HRM area as a part of overall organizing principles. Indeed, until recently HRM practices had focused primarily on the operational/transaction issues (Ulrich, 1987a) and were represented often as a part of a functional organization. However, competition has taken human resources from the backwater to the boardroom (Noble,

Zander and Kogut (1995) assumed the existence of other components of organizational knowledge but "*chunks*" of expertise. After studying transfer and imitation of organizational capabilities on 100 major Swedish innovations, they concluded: "the analysis of the transfer of manufacturing capability, and the relationship of this capability to imitation is limited only to a single function… An organization is, obviously, more than a collection of disjoined manufacturing sites and functional groups" (p.87). Obviously, functional knowledge is nested within a higher-order set of recipes (Kogut and Zander, 1997), but organizing knowledge exists to combine different functional expertise by organizing principles within organizational boundaries. Organizing knowledge is "*glue*", which holds the organization together. Without this "glue" there will be just separate pieces of functional information and preliminary ideas how modular "chunks" of expertise could "function" together. Organizing knowledge makes them work together by providing general organizational performance policies and standard operating procedures[11]. See Table 1.

Special attention should be given to organizing knowledge when companies are expanding their activities globally:

- companies have become large, thus they need directives that cut across their organization lines;
- companies have become global, thus they need policies and procedures to provide a link between HQs and subsidiaries;

1994) and nowadays there is a clear trend toward a strategic human resource management. Despite this tendency, "the most of the work conducted by HR practitioners still consists of traditional personnel administration activities" (p. 158).

[11] Few terms need to be defined to have a better understanding. A *policy* is a guide for carrying out action. It establishes a specific course of action that has been adopted as expedient in order to govern the operations of an organization. Thus, it expresses the philosophy, principles, and purposes of the organization, as well as its values. In a word, a policy stated how goals are to be reached. A *procedure* is a series of related tasks that make up the chronological sequence and the established way of performing the work to be accomplished. A *practice* is a customary way of carrying out an activity. (Higginson, 1966)

- companies have become more structured and specialized, but the organization and specialization so necessary for effectiveness tend to restrict communication;
- departments and divisions become insular and employees develop little identification with the company.

Adopted from Higginson (1966)

Policies and procedures help to close such "*information gap*" and serve as "*communication bridge*" between different divisions and departments within the company. The needs of these policies and procedures differ from the needs of centralized and decentralized, big and small, global and domestic companies, BUT only in terms of context.

Unfortunately, neither Zander and Kogut (1995), nor other researchers later did go further in describing and understanding the phenomena of organizing knowledge. I assume that since a MNC's subsidiary needs to get information about corporation in general and to know how the corporation is organized, organizing knowledge of the MNC - general organizational performance policies and standard operating procedures – could be described in the following way - see Table 2.

Table 1.

Components of organizational knowledge

Organizing Knowledge					
Policies and Procedures					
Functional Knowledge					
Production of Goods or Services	Marketing	Research and Development	Finance and Accounting	Technical service	HRM

Table 2.

Organizing knowledge of MNCs.

Policies. ***What are we?***	Corporate mission statement	What is a reason of corporation's existence
	Corporate culture	What corporation basic assumptions, values and believes are.
	Corporate distinctive competencies	What the corporation does exceptionally well
	Corporate business strategies	What businesses the corporation operates What the corporation does to bit its competitors
	Tactical goals and plans	What tactical goals and plans the corporation wants to achieve
Procedures. ***How are we organized?***	Corporate structure	How the corporation is organized
	Intra-corporate information flows	How different parts of the corporation communicate
	Corporate decision making process	How the decision making process is organized
	Corporate control framework	How the corporation keeps itself on target toward its strategic goals

2. A Process of Organizational Knowledge Transfer in MNCs

The importance of knowledge creation and transfer, especially for MNCs, have been emphasized by many researchers (for example, Appleyard, 1996; Barkema and Vermeulen, 1998; Bresman, Birkinshaw and Nobel, 1999; Hitt, Hoskisson and Kim, 1997; and others). The most recent studies are summarized in the Table 3A. Despite this question has been addressed in many theoretical discussions, but still there is a lack of empirical studies on knowledge transfer: existing studies are limited usually by three dimensions: theoretical vs. empirical, outcomes vs. process, and focus on technology vs. focus on other competencies (see Simonin, 1999).

2.1. Organizational knowledge transfer under different modes of governance.

The term "*multinational corporations*" is used to identify firms that have extensive engagement in international business, engage in foreign direct investment and own or control potentially value-adding activities in more than one country. There are three methods of FDI, which assume ownership or control value-adding activities in another country:

- building new facilities – *Greenfield strategy*
- buying existing assets in a foreign country – *acquisition strategy*
- participating in a *joint venture* (JV) – a special type of international corporate cooperation in which two or more firms join together to create a new business entity that is legally separate and distinct from its parents (Griffin and Pustay, 1999)

Research on knowledge transfer through acquisitions and joint ventures is quite recent phenomena; there have been much more studies on knowledge transfer in joint ventures then through acquisitions. The common result of studies on JVs is that the partners' ability to re-evaluate and motivation to learn are keys to successful knowledge transfer. Moreover, Kogut (1988) stated that one of the reasons for forming a joint venture is necessity to transfer "organizationally embedded knowledge which cannot be easily blueprinted or packaged through licensing or market transactions” (p.319). Such view of JVs as learning opportunities was supported by Inkpen and Crossan (1995), who suggested that JVs scenario provides firms with access to the embedded knowledge of partners’ organizations, which later creates the potential for firms to internalize partner skills and capabilities Partners of international JVs may contribute various types of knowledge. Inkpen and Beamish (1997) distinguished between local knowledge (knowledge of local environment), which is a key resource of a local partner, and foreign knowledge (skill-based resource contribution by its foreign partner), which makes the JV attractive for the local partner. Kogut (1988) described two main motivations for JVs: “one or both firms desire to acquire the other’s organizational know-how, or one firms wishes to maintain an organizational capability while benefiting from another firm’s current knowledge or cost advantage” (p. 323). However, not all international JVs are the same: most firms enter into a JV where knowledge acquisition is just one part of a complex set of goals (Si and Bruton, 1999), but very valuable one. Thus, firms will attach different values to JV knowledge and knowledge transfer strategies will differ across MNCs (Inkpen, 1997).

Knowledge transfer in acquisitions has not received nearly as much attention as the previous mode. Acquisitions represent a different situation: it assumes acquiring of new resources – financial, human, technological, etc. It also assumes certain *unlearning* process - the acquired firm has to “forget” old knowledge and “accept” new one. This is particularly difficult if new rules, procedures, conventions, and strategies of acquiring firm do not match the beliefs, codes, knowledge and culture of the acquired firm (Barkema and Vermeulen, 1998). In addition to such “*organizational inertia*”, differences in culture, levels of economic development, and other social factors could make the process even more sophisticated, but at the same time extremely interesting. While many of the determinants of knowledge transfer are likely to be the same as in joint ventures, one “can expect their relative importance and the process itself to change significantly over time as the integration of the acquisition runs its course” (Bresman, Birkinshaw, Nobel, 1999: 444). An important conclusion of the previously mentioned authors was that “the knowledge transfer process in acquisitions is distinctly differently from the process under other modes of governance, because of the rapidly-evolving relationship between two parties" (p. 457). In acquisition scenario, the type of knowledge being transferred shifts over time in emphasis from relatively explicit to more tacit, which was not seen under other modes of governance.

Research on knowledge transfer in Greenfield scenario was not addressed to a great extent in the recent literature at all.

Once again, this study focuses on the organizational knowledge transfer in MNCs from HQs to their subsidiaries, i.e. Greenfield and acquisitions cases. Later, some outcomes could be used to analyze the knowledge transfer process in JVs, which is rather complex due to the nature of JVs' cooperation (for example, two or more headquarters, power distribution, control, etc.).

Table 3A.

Summary of recent studies on knowledge transfer within MNCs.

Author	*Studies on …*	*Sample and Research Method*	*Exogenous Variables*
Gupta and Govindarajan, 1994	MNC as a network of three types of transaction – capital flows, product flows and knowledge flows. The paper argues that within the same MNC subsidiary strategic role can be expected to differ in terms of the extent and directionality of knowledge flows between a focal subsidiary and the rest of corporation	Data were collected through a pilot-tested questionnaire survey of the heads of 359 foreign subsidiaries of major multinational firms headquartered in the US (19 MNCs), Japan (45 MNCs) and Europe (15 British and Scandinavian MNCs). The number of subsidiaries from each of these three regional groups of MNCs in the total sample is 105, 111 and 143 respectively.	Subsidiary's initiative Differentiated control system within MNC
Zander and Kogut, 1995	The influence of the degree of codification and how easily capabilities are taught on the speed of knowledge transfer. Authors argue that firms, as repositories of social knowledge, compete not only through the creation, replication, and transfer of their own knowledge, but also through their ability to imitate the product innovations of competitors.	Based on previous studies, 44 Swedish innovations for which 20 firms were responsible, due to multiple innovations. Of the 44 questionnaires, a response rate of 80% was attained.	Characteristics of knowledge (codifiability, complexity, teachability) System dependence (the extent to which transfer of a capability is impaired due to dependence on many different groups of experienced people for its production) Product observability Parallel development of a similar product
Appleyard, 1996;	Interfirm information flows in a knowledge intensive industry. The study looks beyond assumptions that knowledge simply "spills" across company boundaries to identify and examine the mechanisms by which technical knowledge is	The survey sample comprises questionnaire results from 134 employees of semiconductor companies. Out of 134, 96 worked for US companies and 27worked for Japanese companies. The response rate was 40%.	Industry standards and the level of technological change Communication channels Level of education and assess to professional networks for employees.

	disseminated. Survey data were used to explore why patterns of knowledge exchange are different both across industries and across countries.		Country of origin and national economy-wide growth
Inkpen and Beamish, 1997	Acquisition of local knowledge by the foreign partner and the impact that this acquisition of knowledge has on the stability of the international joint ventures.	Theoretical framework only	Strategic value of local knowledge for foreigners and foreign knowledge for locals. Effectiveness in acquiring local knowledge Resource contributions of partners Attachment between the partners
Barkema and Vermeulen, 1998	How multinational diversity and multi-product diversity influence the decision to expand abroad through start-ups or acquisitions. The results show that multinational diversity leads to foreign start-ups rather than acquisitions. Product diversity has a curvilinear effect on the tendency to use start-ups. The curvilinear effect becomes weaker at higher levels of multinational diversity. The study used an organizational learning perspective to offer a coherent theoretical framework for explanatory variables.	The sample contained data on foreign ventures of 25 large non-financial Dutch firms in a wide variety of industries	Mode of foreign entry and time Product diversity and relatedness Ownership Return on equity Firm size National cultural distance Local experience Gross National Product Legal restrictions and country risk

Birkinshaw, Hood, and Jonsson, 1998	How subsidiary companies are able to contribute to the firm-specific advantages of the MNC, specifically examining the determinants of the contributory role of the subsidiary and subsidiary initiative	Mail questionnaires, which were completed by top managers in 229 manufacturing subsidiaries (34% response rate) of large MNCs in Canada. Scotland and Sweden. The most common parent company nationality was the Us (95), followed by Japan, Germany, England, Finland and Switzerland (each with 10-20 responses).	Subsidiary leadership Entrepreneurial culture Subsidiary autonomy Communication frequency Local competition Industry globalization
O'Dell and Grayson, 1998	Internal benchmarking as a process of identifying, sharing, and using the knowledge and best practices inside its own organization. Three themes are evident in all successful internal benchmarking: people-to-people relations. Learning and transfer interaction, specific skills and capabilities needed.	Theoretical framework	Organizational structures Cultural distance (both national and corporate) The lack of contacts An over-reliance on transmitting "explicit" rather than "tacit" information. Not allowing or rewarding learning
Bresman, Birkinshaw, Nobel, 1999	The transfer of technological know-how is facilitated by communication by time elapsed since acquisition, while the transfer of patents is associated with the articulability of the knowledge, size of the acquired unit, and the regency of the acquisition.	A survey of R&D organizations in 42 multinationals analyzed with OLS and negative binominal regression, combines with detailed longitudinal case studies of three international acquisitions.	Communication channels Frequency of communication The nature of knowledge (explicit and implicit) Time elapsed Size of acquired unit

Buckley and Carter, 1999	Conceptual model of knowledge transfer and combination. The proposed framework has two drivers: knowledge characteristics and value added from combined knowledge; two constraints: the participants: the participants and the technology of knowledge transfer; and two outcomes: the governance structure of the firm and performance characteristics of the process.	The framework is derived mainly from theoretical development, but also incorporated a small-scale exploratory study of US and UK MNCs in two contrasting industries: chemical/pharmaceuticals and engineering.	Knowledge characteristics (tacitness and articulability) Complementarity in knowledge Process participants Knowledge transfer methods Governance of the firm
Si and Bruton, 1999	Knowledge transfer (with a focus on knowledge acquisition goals assessment) in international joint ventures in operating China with possible implications to other transitional economies where the local understanding and knowledge of the Western partner firm needs to be improved and the special knowledge needs of the domestic partner recognized.	125 randomly chosen Sino-Western joint ventures, each with a minimum of 50 employees and each in business for over one year, placed in Shanghai.	National cultural characteristics Partner characteristics Technology utilized Nature of market
Simonin, 1999	The role of knowledge ambiguity (tacitness, asset specificity, complexity, experience, partner protectiveness, cultural and organizational distance) pertaining the process of knowledge transfer in international strategic alliances	Cross-sectional sample of 151 multinationals and a structural equation methodology	Knowledge characteristics (tacitness, specificity, complexity) Experience Partner protectiveness National cultural distance Organizational distance
Downes and Thomas, 2000	Unique role of expatriate managers in enhancing group intellectual capital by facilitating the transfer	The sample of companies was drawn from US Fortune 500 MNCs in two sets of related industries – computers/office and electronic	Degree of internalization of the firm

	of knowledge across national borders	industries, and petroleum refining and chemicals industries. The sample was restricted to US MNCs in order to maintain parent-country homogeneity.	Country international experience (subsidiary age in years)
Gupta and Govindarajan, 2000	Theoretical and empirical investigations into the determinants of internal knowledge transfers within MNCs. Results of the study show that (1) knowledge outflows from a subsidiary are positively associated with value of the subsidiary's knowledge stock, its motivational disposition to share knowledge, and the richness of transmission channels; and (2) knowledge inflows into subsidiary are positively associated with richness of transmission channels, motivational disposition to acquire knowledge, and the capacity to absorb the incoming knowledge.	Data are gathered from 374 subsidiaries within 75 MNCs headquartered in the US, Europe and Japan.	Value of source unit's knowledge stock (mode of entry, subsidiary size, relative economic level) Motivational disposition of the source unit (incentive focus) Existence and richness of transmission channels (formal integrative mechanisms, corporate socialization mechanisms) Motivational disposition of the target unit (incentive focus, relative economic level, headquarter-subsidiary decentralization) Absorptive capacity of the target unit (mode of entry, proportion of local nationals in the subsidiary's top management team) Country of origin Industry resource characteristics Nature of subsidiary's operations

2.2. Special issues of consideration in organizational knowledge transfer process

The concept of transfer itself is very difficult to capture. First of all, transfer of knowledge does not imply a full replication of knowledge: "knowledge is transferred as a particular practice following certain rules and procedures that originate in the knowledge sending unit and then undertaken in the recipient unit". (Pedersen, Petersen, Sharma, forthcoming: 5). Secondly, knowledge is transferred in organizations whether or not we manage the process at all (Dovenport and Prusak, 1998) – this is a part of everyday organizational life. But those firms which leaves knowledge to its own devices put itself in a far from being competitive situation: "at best, this extremely valuable asset remains underleveraged, isolated in pockets of the organization, trapped in individual minds and local venues" (Ruggles, 2000:3). Thus, both making knowledge available and managing knowledge transfer are crucial factors for effective organizational learning but to different extent. The goal of knowledge transfer is to improve an organization's ability to do things, and therefore increase value. Even transmission (sending or presenting knowledge to a potential recipient) and absorption (by that recipient) together (transfer = transmission +absorption) have no useful value if the new knowledge does not lead to some change in behavior, or the development of a new idea that leads to new behavior (Dovenport and Prusak, 1998).

Apparently, the importance of the clear choice in terminology was emphasized by many researchers. For example, Hollinshead and Michailova (forthcoming), referring Latour (1986, 1993), wrote:

> "The view of knowledge as a socially constructed rather than a dispatched item prompts a reconsideration of the terminology associated with "knowledge transfer" to account for the contribution of the learner… the concept of translation is preferable to tat of transfer or diffusion as it possesses richness of meaning evoking movement and transformation" (p. 6).

In this study the word "*transfer*" is used rather than "*diffusion*", "*transmission*", or "*translation*", to emphasize (following, Szulanski, 1996) that "the movement of knowledge within the organization is a distinct experience, not a gradual process of dissemination, and depends on the characteristics of everyone involved" (p. 28).

Finally, how to evaluate knowledge transfer? The term of "*successful knowledge transfer*" was used by Zander (1991) to describe the transfer that results in the receiving unit accumulating or assimilating new knowledge. Furthermore, in line with the previous statement, Bresman, Birkinshaw and Nobel (1999) argued that even though an alternative dependent variable would be the result of the transfer (for example, a revenue from jointly developed products), the successful knowledge transfer is such an important prerequisite for financial success that it qualifies as a dependent variable in its own right. Wathne, Roos and Von Krogh (1996) measured the effectiveness of knowledge transfer by three measures, which reflect the perceived effectiveness of knowledge transfer:

- the degree to which respondents had acquired knowledge that generally caused them to develop new insights,
- the degree to which they had received knowledge that enabled them to see new ways of performing tasks within their own company, and
- the degree to which the cooperative project enabled them to perform new tasks as a result of acquired knowledge.

For the purpose of this study, knowledge transfer is defined as a long-lasting process (not a single act) of moving (having a concrete direction and an object at the end) internally accumulated (created and previously acquired) knowledge (information and know-how) between organizational sub-units. The effectiveness of knowledge transferred is evaluated based on perception of knowledge receivers and more associated with knowledge received, rather than applied or used.

Even though the process of knowledge transfer is very complex and rather sophisticated, it could be described, with certain degree of oversimplification, as a communication process. In communication theory there are different elements of the communication process, but major are “*sender*”, “*receiver*”, “*message*”, “*media/transmission channel*”, “*feedback*” and “*barriers of encoding/decoding*”. In this study, a MNC’s HQ (sender) transfers organizational knowledge (message) by different HRM practices (transmission channels) to its subsidiary (receiver). Since it is very difficult to evaluate the immediate effect of knowledge transfer (feedback), results in the receiving unit accumulating or assimilating new knowledge are based on receivers’ perception. There are several other determinants of effective knowledge transfer process, which could play a role of both facilitators and constraints, which are going to be discussed in the next section.

2.3. Determinants of organizational knowledge transfer process

Holtshouse (1998) named three priority areas for further research in the field of knowledge management. The highest demand for a more systematic approach was on research on “how to optimally structure knowledge flow between knowledge seekers and knowledge providers to maximize the impact of knowledge” (Holtshouse, 1998: 277). Despite growing interest from academicians, managers do not hold high opinion of their organizations‘ performance in this area. According to Ruggles (1998)[12], only 13 per cent thought they were showed good or excellent performance in transferring knowledge held by one part of organizations to other parts. In the same study, respondents named the biggest difficulties in managing knowledge in their organizations in general, and managing knowledge transfer in particular: they are culture, lack of shared understanding of strategy, organizational structure, lack of ownership problems, non-standardized processes, etc.

Since studies of the knowledge transfer process “turn almost invariably to technology transfer when empirical investigation is in order” (Simonin, 1999), the process of technology transfer and its determinants has been relatively well researched during the last decades (Zander, 1991). Davidson (1980) pointed out three basic decisions on the

[12] The study summarized the results of a survey of 431 US and European organizations conducted in 1997 by the Ernst&Young Center for Business Innovation. Full report issued by the Ernst&Young Center for Business Innovation and Business Intelligence as “Executive Perspectives on Knowledge in the Organizations”, 1997

mode, timing and destination of manufacturing technology transfer. Later, he also examined the role of organizational structure and its effects on the mode of international transfer of manufacturing technology (Davidson, 1983). Other variables that affect the process of technology transfer relate to firm's nationality and operating environment (cultural distance, host country market size, prior presence in a country of the transferring firm), industry, size relative to competitors, age, degree of diversification, R&D intensity, international experience, and experience of technology transfer (Zander, 1991).

Neither a process of organizational knowledge transfer nor its determinants (facilitators and constraints) were not so well summarized in any studies. However, in current literature one can find several comprehensive pieces of research on particular variables. See Table 3A. For example, there was a study of the influence of certain knowledge characteristics on the speed of the transfer: "the degree of *codification* and *how easy capabilities are taught* has influence on the speed of transfer and the time to imitation of the new products" (Kogut and Zander, 1995). The simultaneous effects of *tacitness*, *asset specificity*, *prior experience*, *complexity*, *partner protectiveness*, *cultural distance and organizational distance* on technological knowledge transfer was studied by Simonin (1999). His study further established the critical role of *knowledge ambiguity* by showing that it fully mediates the effects of some mentioned variables of knowledge transfer. Such factors as specificity and partner protectiveness were not significant. The role of prior experience was different: for older alliances – the effects of prior experience and complexity on ambiguity disappear; for younger alliances – the effects of cultural and organizational distance disappear.

Hansen (1999) used 120 new product development projects undertaken by 41 divisions in a large electronic company to examine the role of *weak ties* in sharing knowledge across organizational sub-units. He found out that weak inter-unit ties from one side help projects' teams to keep for useful knowledge within sub-units but from the other side were a barrier for knowledge transfer across the company.

The emphasis on *national* and *organizational cultures* of both parties, as well as necessity of understanding of the knowledge of local partner, was made by Si and Bruton (1999) in their study of knowledge transfer in international JVs (IJVs) in China. They argued that satisfaction with the performance of IJVs is declining due to inability of many firms to assess their knowledge acquisition goals within JVs. In the study, knowledge acquisition goals were ranked in the following way: knowledge of governmental issues, knowledge of culture (both national and organizational), and knowledge of markets.

Since any knowledge transfer process is dependent on the individuals within the firm, both the location of these individuals, geographically and organizationally, and their individual characteristics may also matter. Buckley and Carter (1999) named this factor the *process participants.*

Bresman, Birkinshaw and Nobel (1999) aimed to identify facilitators of international knowledge transfer in acquisitions: they showed that *interpersonal communication* (visits, meetings, etc.) were significant predictors of technological know-how transfer, while *characteristics of knowledge* and *time elapsed* since acquisition depended on the types of knowledge transferred. They concluded that the knowledge transferred later in the process was more sophisticated. “This change over time in the pattern of knowledge transfer is an important characteristic that distinguishes acquisitions from other modes of knowledge transfer” (Bresman, Birkinshaw, Nobel, 1999).

A significant relation between degree of a firm’s internalization and country experience was found by Downes and Thomas (2000). Degree of internalization incorporated five measures of *prior overseas experience of MNCs*: foreign sales as a percentage of total sales, foreign assets as a percentage of total assets, overseas subsidiaries as a percentage of total subsidiaries, physic dispersion of international operations and top managers’ international experience. Subsidiary’s *age* was used to measure country experience. Findings also indicated the necessity to control for *industry* factor.

Gupta and Govindarajan (2000) conceptualized knowledge flows (in and out of a subsidiary) as a function of (1) *value of the source units knowledge stock* (mode of entry, subsidiary size, and relative economic level); (2) *motivational disposition of the source unit* (incentive focus); (3) *existence and richness of transmission channels* (formal integrative mechanisms and lateral socialization mechanisms): and (4) *absorptive* *capacity of the target unit.* They also presented results of empirical investigations into other determinants of internal knowledge transfer within MNCs such as *country of origin*, indust*ry resource characteristics* and *nature of subsidiary's operations*.

Most of mentioned above variables are interdependent, and some of them are derivatives or combinative results of others. See Table 3B. For example, attachment between partners (in Inkpen and Beamish, 1997) develops through experience in collaborative relations between partners. It could be a result of "individual or structural ties that reflect the prior history of relations" (Inkpen and Beamish, 1997) and thus might be connected very much to national character of individuals and previous international experience of both parties. Factors of interdependence and autonomy between MNCs' HQs and their subsidiaries (in Foss and Pedersen, 2000) and weak ties between different organizational sub-units (in Hansen, 1999) could be explained by duration of current relations between parties, as well as by cultural perception of power and control, and lessons from current and previous international relations. Time elapsed after acquisition (in Bresman, Birkinshaw and Nobel, 1999) represents age of current relations, while presence of previous experience is more close to the experience/level of familiarity with context and content of international relations (in Simonin, 1999).

This study analyzes eight determinants on four levels – country, industry, corporation, and individuals. The first six, which are main preconditions for majority of above mentioned variables, presented below:

Country

- *Differences in relative economic levels* – levels of economic advances of the countries
- *Cultural distance* – differences in national characteristics between host and home countries

Industry

- *Level of industry's globalization* – there are certain industries more prone to global integration than others: pure global industries (Porter, 1986) versus multi-domestic industries (Birkinshaw, Hood and Jonsson, 1998)

Corporation

- *Presence or absence of previous international experience*
- *Age of current relations*
- *Age of acquired unit*

Among other determinants of knowledge transfer process, there are several "which are associated with the competence itself and the characteristics of the sender, the recipient and the relationship between them" (Andersson, Bjorkman, and Furu, 2000: 4). Two problems are related to the above mentioned barriers: (1) recipient's ability or willingness to absorb new information (Cohen and Levinthal, 1990; Szulanski, 1996; Andersson, Bjorkman, and Furu, 2000) and (2) the willingness of senders to share information with others (Szulanski, 1996; Forsgren, 1997; Andersson, Bjorkman, and Furu, 2000). "Knowledge is held by individuals, and any knowledge transfer process is dependent on the individuals within the firm who acquire knowledge, transfer it, and receive it" (Buckley and Carter, 1999: p. 90). Thus, in addition to six previously mentioned determinants there are two other major variables on individual level, the importance of which was emphasized by many researchers. See Table 9A.

Individuals

- *Subsidiary's activism to absorb knowledge*
- *HQ's activism to provide knowledge*

Note, ability of individuals to "accept" knowledge was often associated with *absorptive capacity*. Cohen and Levinthal (1990) defined absorptive capacity as "ability to recognize the value of new information, assimilate it, and apply it to commercial ends" (p. 128). Such ability is based on prior related knowledge and related not only to motivational dispositions of receivers (Gupta and Govindarajan, 2000), but also to their national cultural characteristics, level of economic development (as an indicator of social development) and age of current relations. Gupta and Govindarajan (2000) pointed out to the importance of examining "a *subsidiary's activism* at knowledge creation on its capacity to absorb incoming knowledge" (p. 492). However, they did not mention any implications for further research on *HQ's activism* on knowledge providing. Since communication is about two actors – senders and receivers – I assume certain influence from both sides on the transfer process. In both cases, activism is about behavior of knowledge senders and knowledge receivers respectively to provide and absorb knowledge. Based on composite models of attitude-behavior relations (see Ajzen and Fishbein, 1980; Eagly and Chaiken, 1993) I put two major factors which determines behavior of individuals – attitude towards target and satisfaction with outcomes. A person's attitude influences that person to act in a certain way instead of another (Cooper and Croyle, 1984). Satisfaction with outcomes forms beliefs that the behavior leads to desired outcomes. People tend to engage in behavior, which then becomes more likely. So, in this study, HQ's activism is dependent on knowledge senders' attitude towards knowledge transfer and satisfaction with knowledge provided and subsidiary activism - attitude towards knowledge transfer and satisfaction with knowledge received.

Identified process determinants at all four levels could "act" as both facilitators and constraints in the process of organizational knowledge transfer. See Table 4.

Table 3B.

Summary of recent studies on knowledge transfer within MNCs (continue)

Exogenous Variables Grouped	***Determinants of the Knowledge Transfer Process Used in the Study***	***Levels***
National economy-wide growth (Appleyard, 1996) Gross National Product (Barkema and Vermeulen, 1998) Relative economic level (Gupta and Govindarajan, 2000) Level of education and access to professional networks for employees (Appleyard, 1996)	Differences in relative economic levels	**Country**
Country of origin (Appleyard, 1996) National cultural distance (Barkema and Vermeulen, 1998) Cultural distance (O'Dell and Grayson, 1998) National cultural characteristics and partner characteristics (Si and Bruton, 1999) National cultural distance (Simonin, 1999) Country of origin (Gupta and Govindarajan, 2000)	Cultural distance	

Industry standard and level of technological change (Appleyard, 1996) Industry globalization (Birkinshaw, Hood, and Jonsson, 1998) Technology used and nature of the industry (Si and Bruton, 1999) Industry resource characteristics (Gupta and Govindarajan, 2000) Product observability and parallel development of a similar product (Zander and Kogut, 1995) Product diversity and interdependence (Barkema and Vermeulen, 1998)	Level of industry globalization	**Industry**
Degree of internationalization of the firm (Downes and Thomas, 2000) Experience (Simonin, 1999) Local experience (Barkema and Vermeulen, 1998)	Presence of previous international experience	**Corporation**
Control systems in MNC (Gupta and Govindarajan, 1994) Communication channels (Appleyard, 1996; Bresman, Birkinshaw, and Nobel, 1999;Gupta and Govindarajan, 2000) Frequency of communication (Inkpen and Beamish, 1997; Bresman, Birkinshaw, and Nobel, 1999; Birkinshaw, Hood, and Jonsson, 1998) Time elapsed (Bresman, Birkinshaw, and Nobel, 1999) Resource contribution of partners (Simonin, 1999) Attachment between partners (Inkpen and Beamish, 1997) Partner protectiveness (Simonin, 1999)	Age of current relations	

Size of acquired unit (Bresman, Birkinshaw, and Nobel, 1999; Barkema and Vermeulen, 1999; Gupta and Govindarajan, 2000) Governance of the firm (Buckley and Carter, 1999) Subsidiary leadership and subsidiary autonomy (Birkinshaw, Hood, and Jonsson, 19998) Organizational structures and organizational distance (O'Dell and Grayson, 1998)	Age of acquired unit	
Effectiveness in acquiring knowledge (Inkpen and Beamish, 1997) Absorptive capacity and motivational disposition of the target unit (Gupta and Govindarajan, 2000) Process participants (Buckley and Carter, 1999)	Subsidiary's activism	**Individuals**
Process participants (Buckley and Carter, 1999) An over-reliance on transmitting "explicit" rather than "tacit" (O'Dell and Crayson, 1998)	HQ' activism	

Note: mentioned variables could be only to certain, but large extent explained by independent determinants. Such simplification was made for clear analytical convenience and better understanding of the choice of determinants in this study. However, since most of mentioned above variables are interdependent, some of them are derivatives or combinative results of others. Such interdependency is not presented in this table, but several examples were given before in the text.

Table 4.

Role of determinants of organizational knowledge transfer process.

Levels of analysis	*Determinants*	*Facilitating role*	*Constraint's role*
Country	Differences in relative economic levels	Small	Big
	Cultural distance	Low	High
Industry	Level of industry's globalization	Global industries	Multi-domestic industries
Corporation	Presence of previous international experience	Presence of previous international experience	Absence of previous international experience
	Age of current relations	Long-lasting relations	Short experience of working together
	Age of acquired unit	Relatively "young"	Mature
Individuals	Subsidiary's activism	High	Low
	HQ's activism	High	Low

3. HRM Practices in MNCs

Now, let's discuss human resource management (HRM) practices role in the process of organizational knowledge transfer in MNCs.

The role of HRM is changing now: the key task facing HRM in MNCs today is about the transformation of the whole system of HRM *to support* the process of organizational learning, knowledge development and transfer. Unfortunately, although this question has got little but still some attention, it still lacks of empirical support and is narrowed to studying experiences of several unrelated domestic organizations. What has been discussed considerable in the strategic international human resource management (SIHRM) literature is the idea of transferring HRM practices themselves to overseas subsidiaries of MNCs. Indeed, there has been a number of studies done by both academicians and practitioners on assessing the transferability of HRM practices from one nation to another (Verburg, Drenth, Koopman, Van Muijen and Wang, 1999; Belanger, Ewards, and Wright, 1999; Ferner and Quintanilla, 1998; Martin and Beaumont, 1998; Ngo, Turban, Lau and Lui, 1998; Tayeb (1998); Ferner, 1997; Kopp, 1994; Rozenzweig and Nohria, 1993). As it was found, transferring HRM practices to different countries can be problematic, and parent companies have often failed to homogenize and transfer home practices overseas, since there are systematic differences in the ways MNCs of different nationalities manage their human resources. Especially with popularity of local based contingency theory and culturally sensitive theories of management (e.g. Hofstede, 1980), such "*one best way*" ideas began to "suffer from a lack of intellectual and fashionable appeal" (Martin and Beaumont, 1998).

However, there is a generally accepted idea that organizations, which are adapting most successfully to the new social and economic environment, tend to be characterized by *a similar set of HR practices*. For the purpose of this study, I accept the existence of similar set of practices, but I do see a danger of adapting simple solutions "that are based on unrepresentative samples of case studies and tell stories of happiness and peace"

(Marshington, 1995). Thus HRM practices are identified in as general as possible domains.

HRM practices represent the policies, procedures, systems, and activities used to shape, monitor, and direct attention of people within the organization. Several frameworks have been developed in the strategic human resource management literature to classify HRM practices, where five major domains may be identified.

- organizational planning
- staffing
- rewards
- developing
- appraisal

Source: Schuler and MacMillan (1984), Ulrich (1987b), Miner and Crane (1995), Gomez-Mejia, Balkin and Cardy (1998)

Often communication with employees is considered as an additional domain. I believe communication – the practices of sharing information with employees – should accompany all five previously mentioned domains. “Good employee relations involves providing fair and consistent treatment to all employees so that they will be committed to the organization” (Gomez-Mejia, Balkin and Cardy, 1998: 396). Employees should be explained not only what needs to be done, but why and how. Effective employee relations require a lot of cooperation between managers and employees throughout different channels: informal communication, employee representatives, information dissemination programs, meetings, employee feedback programs, etc.

Once again, I am not going to look what is the best to transfer and to what extent. Instead, I see HRM practices of MNCs to be transferred to MNCs’ subsidiaries to bring with them new organizational knowledge (mechanisms of transfer) and help in building learning environment(means of transfer).

3.1. HRM practices and organizational knowledge transfer

Since knowledge is embedded in organizational human resources, the process of learning is closely linked to ways the organization manages these resources. "HRM function in firms involved in international alliances must be centered around the process of learning… The transformation of the HR system to support the process of organizational learning is clearly the key strategic task facing the HR function in many multinational firms today" (Pucik, 1988: 91). Following Barlett and Ghoshal (1991), Schuler, Dowling and De Cieri (1993) in their integrative framework of SIHRM named organizational learning and transfer of knowledge as one of five major MNCs' concerns and goals.

> "As MNEs face more competition, their degree of freedom, their slack, tends to be constrained. Consequently, they must encourage new learning and ultimately the development of new products and services. In addition to encouraging new learning, MNEs must encourage and facilitate the transfer and sharing of this new knowledge. It is in this way that the synergies of sharing one company can be seized" (p. 727)

Despite the absence of theoretical and empirical investigations on HRM practices role in the process of knowledge transfer, one should on *a priory* ground assume the importance of HRM practices in bringing knowledge overseas. Obviously, practices themselves do not provide benefit for organizations, but the way of implementation is important and varies significantly. Pre-assumption for above studies is the existence of HRM system, which is defined here as "a set of distinct but interrelated activities, functions, and processes that are directed at attracting, developing and maintaining (or disposing of) a firm's human resources" (Lado and Wilson, 1994: 701). It is very logical to assume that consequences of using one HRM practice will be influenced by at least in part by other HRM practices in use. For example, Ichniowski, Shaw and Prennushi (1997) found consistent support for the conclusion that "groups or clusters of complementarity human resource management practices have large effects on productivity, while changes in individual work practices have little or no effect on productivity" (p. 291). In line with other researchers I would like to emphasize the importance of considering the *complementarity effect in HRM practices* in transferring particular knowledge rather than looking at isolated human resource practices. Indeed, Laursen and Mahnke (2000) empirical study suggested that HRM practices combinations and complementarity support strategic objectives and contribute to firms' competitive advantage, and play an important role in the development of a knowledge-based theory of firm differences (Laursen and Mahnke, 2000: 1). See also Milgrom ad Roberts, 1995; Baron ad Kreps, 1998.

However, it is not enough. Various HRM practices must form part of an integrated system in order to be effective. It is important to recognize that HRM is not only a set of distinctive HR practices, but *a process* "of developing, applying, and evaluating policies, procedures and programs relating to the individual in the organization" (Miner and Crane, 1995: 5). HRM process is a set of *interrelated* HRM practices, which indeed occur simultaneously but still in a certain order. Therefore, complementarity should exist in how, in which order, HR practices are implemented - a process of implementation. One way of looking at HRM as a process is to tie it to the strategic planning process (planning-input-transformation-output) and then show how the different aspects of the subject matter are related to one another. The picture represents the most generally used HRM practices. However, "selection of the most appropriate practices should be appropriate to the strategy and lead to behaviors that are supportive of the strategy… Furthermore, environmental influences are continually impinging on all components of human resource management, forcing adaptations …and development." (Schuler and MacMillan, 1984: 253).

Building a supportive learning environment which "facilitates the learning of its members and continually transforms itself" (Pedler, Burgoyne, and Boydell, 1991:1) is another "mission" of HRM practices. Not all HRM practices are intentionally focused on organizational knowledge transfer; some of them act more as "catalyst" for learning. Moreover, as it was found recently usage of certain innovative (or new) HRM practices positively influence financial performance (Laursen and Foss, 2000). Such positive contribution could be provided by increased knowledge diffusion through team-based job design, job rotation, increased delegation, etc. HR managers should be aware of the importance of building supportive learning environment to create continuous learning opportunities, to promote inquire and dialogue, to encourage collaboration and team learning, to establish systems to capture and share learning, to empower people to have a collective vision, etc. (Watkins and Marsick, 1993). With respect to the last tendencies to label various HRM practices that they were or should have been associated with innovatory and progressive organizations, the outline of the previously defined HRM system might be added by the following items:

- Relatively well-developed internal labor market arrangements: promotion, training and individual career development
- Flexible work organization systems
- Performance-based and/or skill-based compensation practices
- High levels of teamwork and employees participation in task-related decisions
- Extensive internal communication arrangements

Again, as Laursen and Foss (2000) concluded "new HRM practices[13] to be most conducive to innovation performance when adopted, not in isolation, but as a system of mutually reinforcing practices" (p.8).

[13] "New HRM practices is the overall label put on a host of contemporary changes in the organization of the employment relation" (Laursen and Foss, 2000: 7), including interdisciplinary workgroups, quality circles, systems for collection of employee proposals, planned job rotation, delegation of responsibility, integration of functions, performance related pay, firm-internal training and firm-external training.

4. Future Research Directions

This paper is a part of on-going LINK project. The overall purpose of this study is to understand the role of HRM practices in the process of organizational knowledge transfer in MNCs. Theoretical framework is based on four major theoretical streams: knowledge-based perspective of the firm, theory of multinational enterprises, organizational learning theory, and strategic human resource management literature.

I see four major research directions in which major questions and hypothesis could be formulated.

(1) The process of organizational knowledge transfer

As it was said before, acquisitions represent a very different situation from other modes of governance in terms of variations in the types of knowledge being transferred at different stages of acquisition process. “While many of the facilitators of knowledge transfer are likely to be the same (communication, articulability of knowledge, etc.), we can expect their relative importance, and the process itself, to change significantly over time as the integration of the acquisition runs its course"(Bresman, Birkinshaw, and Nobel, 1999: 444). Indeed, in their empirical study previously mentioned authors found that knowledge transfer in early stages “is undertaken in relatively hierarchical manner … And over time the type of knowledge being transferred shifts in emphasis from relatively articulate … to more tacit” (p.457). As one can see from the typology of organizational knowledge, degree of tacitness of organizing knowledge is higher then of functional knowledge, but the degree of explicitness of functional knowledge is lower then of organizing knowledge. This statement could be supported by Nonaka and Takeuchi (1995) argument that tacit and explicit dimensions are mutually dependent, and there will be another strong tacit dimension associated with how to use their interdependency. Since majority of organizational knowledge receivers use functional knowledge more often then organizing (at least during the early stage of acquisition process), the “speed” of transforming explicit knowledge to tacit will be higher for functional knowledge than for organizing one. One cycle of Nonaka's spiral (in SECI model) for functional knowledge will be shorter then for organizing knowledge. See Table 5.

Table 5.

Dynamics of organizational knowledge transfer

	Organizing	***Functional***
Explicit	1	2
Tacit	4	3

Thus,

H1: There are different types of organizational knowledge to be transferred at different stages of acquisition process.

H2: Organizational knowledge is transferred in a "sequential" order: organizing tacit – functional tacit – functional explicit - organizing tacit.

(2) Facilitators and constraints of effective knowledge transfer process

Hypothesis H3-H10 are derived from the theoretical discussions of determinants of organizational knowledge transfer process in Part 2.3. As it was mentioned before knowledge transfer process in Greenfield and acquisitions has not received nearly as much attention as in JVs. However, one can expect many of the determinants of the transfer process to be likely the same (Birkinshaw, Bresman and Nobel, 1999). Thus,

H3: Big difference in relative economic levels is a constraint for effective knowledge transfer process

H4: High cultural distance between host and home countries is a constraint for effective knowledge transfer process

H5: Belonging to a multi-domestic industry is a constraint for effective knowledge transfer process

H6: Absence of previous international experience is a constraint for effective knowledge transfer process

H7: Short experience of working together is a constraint for effective knowledge transfer process

H8: Mature age of acquired unit is a constraint for effective knowledge transfer process

H9: Low subsidiary's activism in absorbing knowledge is a constraint for effective knowledge transfer process

H10: Low HQ's activism in providing knowledge is a constraint for effective knowledge transfer process

As it was several times suggested in implications' parts of recent research publications on knowledge transfer, future research should trace more closely the dynamic process of integration and over time changes in facilitators/constraints roles. Thus,

H11: Relative influence of the constraints changes significantly over time as the integration process runs.

(3) Role of HRM practices as means of the process of effective organizational knowledge transfer

As it was said before, HRM function in MNCs is centered around the process of learning. Unfortunately, this question has got little but still some attention, it still lacks of empirical support. More studies are needed to understand what HRM practices "do" what for effective knowledge transfer. Thus,

Q1: What is the role HRM practices in the process of organizational knowledge transfer from HQs to overseas subsidiaries.

If we assume that a HRM practice is influenced by at least in part by other HRM practices in use and if "doing more of one thing increases the returns to doing (more of) the others" (Milgrom and Roberts, 1995: 181), then

H12: Complementarity among some HRM practices improves the effectiveness of a single knowledge transfer

In addition to that, complementarity in process of implementation HRM practices exists: it is important to apply HRM practices not only as "a system of mutually reinforcing practices" (Laursen and Foss, 2000: 9), but also to follow the process of implementation: planning-input-transformation-output order. Thus,

H13: Process complementarity of HRM practices improves the overall effectiveness of organizational knowledge transfer

(4) Influence of complementarity in organizational knowledge transferred from HQ to a subsidiary on HRM performance of the subsidiary

The notion of complementarity helps to understand links between different organizational variables and organizational performance, in this case between organizational knowledge transferred and HRM performance criteria – employees' turnover. The turnover rate is a measure of the rate at which employees leave the firm. An excessively high turnover rate is often a symptom of problems within the organization. Different researchers concluded that turnover rate might be influenced by perception of job security, compensation level, job satisfaction, organizational tenure, organizational diversity, employees commitment, etc. All these problems might be caused by lack of communication, absence of information, dissatisfaction with knowledge transferred, which in their side create negative attitude and non-supportive behavior among employees, decreases their commitment and as a result could increase employees turnover. High employees' turnover, from the other hand, may have "disastrous consequences" for organizational knowledge body since certain part of knowledge rests in individuals. Thus,

H14: Complementarity in organizational knowledge transferred improves subsidiary's HRM performance

Methodology, which will be applied in the empirical part of the project, combines a pilot case study and main empirical survey of Danish-based MNCs. Collected data from survey will create a basis for evaluation of organizational knowledge transfer from MNCs' HQs to their subsidiaries and provide data for analysis of HRM practices role in such transfer. Other information – subsidiaries' countries, industries, previous international experience, age of subsidiaries - will be taken from MNCs' reports, web pages and existing data bases of the LINK-project.

The study has certain limitations. First of all, it focuses on Danish-based MNCs with more then one foreign subsidiary. Danish MNCs have advantage of being knowledge intensive, technologically up-graded, with highly educated work force and stable social environment. But despite the fact that "the Danish firms have extended their international activities sequentially … it is clear that internationalization is begun in then culturally closed markets …Norway, Sweden, Germany stand out as being the markets where the Danish firms typically set up" (Pedersen, (1999). There is a huge potential for development because "if knowledge, values and ideas will play a much more important part in shaping the future in the twenty-first century than in the redundant twentieth century, then the Nordic contribution (Denmark, Finland, Norway and Sweden) will make a difference"(Fallesen, 2000: 15).

Bresman, Birkinshaw and Nobel (1999) suggested that future research should be directed towards more explicit understanding the ways in which knowledge transfer process is different under different forms of governance. This study focuses on acquisition and Greenfield. Later, some outcomes could be used to analyze the knowledge transfer process in JVs, which is rather complex due to the nature of JVs' cooperation (for example, two or more headquarters, power distribution, control, etc.).

The process of knowledge transfer in MNCs has several directions and occur across multiple dimensions (Gupta and Govindarajan, 2000). This study focuses on individual subsidiaries only and focuses on knowledge inflows from their parent corporations. I am aware of the recent discussions about the necessity to emphasize the contributory role of subsidiaries to firm-specific advantages of MNCs (Birkinshaw, Hood and Jonsson, 1998) and importance of perceiving MNCs as network of knowledge (Kogut, 2000). However, taking into consideration a complexity of the phenomena of organizational knowledge transfer in MNCs and absence of previous empirical research of the role of HRM practices in the process of transfer, in this study the knowledge transfer process is simplified to relations between a MNC's HQ and its subsidiary.

Conclusion.

This paper represents theoretical framework for future empirical study on organizational knowledge transfer from Danish-based MNCs' HQs to their subsidiaries with emphasis of the role of HRM practices in the process.

Building on the synergy of four theoretical streams – knowledge-based perspective, SHRM, theory of MNCs and organizational learning perspective, this study contributes in understanding the process of organizational knowledge transfer and the role of HRM practices in the process. Determinants of knowledge transfer process are grouped under four dimensions: country, industry, corporate, and individuals. Organizational knowledge was viewed as divided into two big concept families: functional and organizing. Moreover, it was assumed that there are different types of organizational knowledge to be transferred at different stages of acquisition process. Organizational knowledge is transferred in a "sequential" order: organizing tacit – functional tacit – functional explicit - organizing tacit.

HRM practices are identified as mechanisms of organizational knowledge transfer and means for building supportive learning environment for the transfer. Furthermore, the study brings more attention to the important issue of complementarity among HRM practices in transferring a single knowledge and process complementarity of HRM practices implementation in achieving the overall effectiveness of organizational knowledge transfer. It also assumes the existing effect of complementarity in organizational knowledge transferred on organizational performance measured by one of the most important HRM performance criteria – organizational turnover rate.

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