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COMPETENCE DEVELOPMENT THROUGH INTER- FIRM COLLABORATION

**A Theoretical Presentation of the Dynamics of Creating New
Organisational Knowledge**

presented by
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This thesis was written as a part of the siviløkonom-degree program. Neither the institution, the advisor, nor the sensors are - through the approval of this thesis - responsible for either the theories and methods used, or results and conclusions drawn in this work.

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INTRODUCTION

The focus of this thesis would be on the creation of knowledge and competences by firms in an alliance context as an alternative strategy for developing organisational knowledge. It will seek to describe how firms through inter-firm collaboration can create and develop new organisational knowledge as well as outlining the various ways by which the acquired organisational knowledge in an alliance context can best be transferred to the parent context. The ability of firms' to create, develop and maintain new organisational skills and capabilities, complementing them with their existing internal competencies and capabilities, have proven to be one of the qualities that distinguishes competing firms from one another in terms of success and failures. According to some organisational scholars the declining performances of many well established global firms, and to some extent, some national firms can, among other things be attributed to these firms inability to create and manage new organisational knowledge as a critical organisational asset. Factors like superior technology, scale and scope economies and easy financial capital accessibility that have traditionally been decisive with regards to global as well as national inter-firm competition, have over the last two decade proven to be inadequate at the global competitive arena. Furthermore, the rapidly changing global and national business environments are frequently not recognised quickly enough by firms, thereby rendering internal knowledge creation ineffective. The apparent increased realization of firms over the fact that competitive arenas have become global rather than national, have to a larger extent created the need for firms to rethink the question of how organisational knowledge is created and managed in order to create a sustainable¹ competitive advantage. A global firm's ability to develop a sustainable competitive advantage through the creation of knowledge is undoubtedly a necessary pre-requisite for a global firm to succeed in the long run.

As firms' competitive environments change, there is the need for firms to assess, and to some extent redefine their strategic core². The success of this strategic core assessment and redefinition will depend on the firm's ability to expand its knowledge base (Reve, 1990). In order to obtain sustainable competitive advantage a firm needs to align its

¹ A firm is said to have a sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors *and* when these other firms are unable to duplicate the benefits of this strategy (Barney; 1991: 102).

² The strategic core of a firm is represented by assets of high specificity which are necessary for the firm to attain its strategic goals (Reve).

strategic core with strategic alliance. According to Reve (1990; pg 154) firms can achieve efficiency gains by utilizing external contracts that define what he termed as *ideal strategic position* of the firm under given external conditions. Consequently, through inter-firm collaboration, participating firms can create or have access to collaborating firm's knowledge that, under normal circumstances would have been difficult to acquire due to the fact that these knowledge exist in the organisational routines and culture, thereby making it difficult to access.

There are several strategic options that firms can choose in order to create new knowledge and competences, among others Mergers and Acquisitions, direct recruitments of external workforce, internal and external competence building courses, cooperative strategies, to mention men but a few.

The objective of this thesis therefore, is to discuss the processes by which firms, through inter-firm collaboration can create new competencies and capabilities that can serve as basis for building sustainable competitive advantages. Taking collaborative strategy as a starting point, an attempt would also be made to outline and discuss mechanisms and conditions that may facilitate (enhance) or impede effective organisational knowledge creation and development as well as a successful transfer of this knowledge from an alliance context to the parent organisation. Based on the fact that it is the collective learning of individuals in organisations that constitute organisational learning, the thesis will also attempt to outline and discuss possible barriers to individual (employee) learning in an alliance context.

1.1 Background

The global business competition has never been tougher. Firms' boundaries have changed dramatically in the last couple of decades. Inter-firm competition has reached a stage where national boundaries and regulations are no longer hindrances for the global firm to compete effectively across international frontiers. The enormity of this global competition is evident both at the international as well as at national levels. Apparently at the bottom of this hard competition is the level of the accumulation of firms' skills and resources, and how these skills and resources are organized internally to create sustainable competitive advantages. This global competition has been known to be

accompanied by all kinds of knowledge proliferation. The migratory³ nature of this global knowledge creates opportunities for firms, all over the globe to secure, improve and exploit this commercialized knowledge. To say that a global firm's ability to manage its knowledge base in such a way as to give it a sustainable competitive advantage is important, will be an understatement of the fact, considering the nature of the present global business competition. This knowledge management ability, to most strategic management scholars, will distinguish the winners from the losers in the future.

According to Badaracco (1991; 35) knowledge-driven forces, by and large have reshaped competition in the global competitive arena, creating new problems and opportunities for firms. To be able to survive the global competition, a firm needs to be flexible and innovative in its knowledge generating activities. This can be achieved, among other things, by filling or plugging the knowledge gap of the firms concerned through new knowledge creation.

Organisational knowledge creation represents a process whereby the knowledge held by individual organisational members is amplified and internalized as part of an organisation's knowledge base (Inkpen, 1996). This knowledge base therefore becomes part of the core skills of the organisation. It has been empirically documented that firms do spend substantial amount of money on different strategic options with the aim of creating new organisational knowledge. In the year 2005 alone, the collective investments by private and public firms in Norway on knowledge development activities like *courses* amounted to 17.7 NOK (Filstad, C; 2008). This goes to prove the importance firms attach to organisational knowledge development.

How can a global firm create new knowledge and improve its existing competencies in order to meet this global competitive challenge? Though, there are different types of co-operative strategies available to competing firms, among others strategic alliances, outsourcing, services and rental contracts, to mention but few, this paper will intentionally be focusing on the use of strategic alliance as the strategic option available to firms in their endeavour to create new knowledge for organisational renewal and sustainable competitive advantage. Traditionally, four reasons have been given as to

³ For details and examples of migratory knowledge, read the "Knowledge Link" by Badaracco, 35-52.

why firms cooperate with other firms (Badaracco, 1991). First, companies through cooperative strategies form cartels as means of reducing competition in order to raise profits or serve other purposes. Secondly, alliances can help firms to share risks with other firms in projects that are characterized by high risks. The third motive is that alliances enable firms to bring complementary resources together, thereby extracting potential synergies between their respective competences. By so doing achieving targets that may be difficult for one independent firm to achieve. Finally, firms do sometimes collaborate to surmount barriers to markets. Firms expanding overseas often find out that they need a local partner because of for example unfamiliarity with local conditions or a host government requires that.

The thesis' focus is on the third motive, namely, the pooling of resources to create new organisational knowledge. The writer is aware of the complex and difficult processes involved in creating a joint venture. However, in order to limit the scope of the thesis, the following assumptions will be made that;

- Partners have gone through all the necessary processes of partner selection as put forward by strategic management literature.
- All the legal implications have been taken care of by the partners.
- The alliance form and the organisational problems that come with it have been taken care of.
- All other difficulties that might accompany the establishment of a joint venture falls under these assumptions

There are some empirical evidences that document the creation of new knowledge through the use of co-operative strategies. According to Badaracco, Sony's alliance with different computer and telecommunication firms, gave Sony Corporation access to a wealth of new knowledge such as how to manage product development cycles that are much faster in the computer industry than in consumer electronics.

1.2 Organisation of the thesis

The structure of this thesis is organized in six chapters. The introduction presents an extensive overview of the thesis' background, clarifying the various terminologies that

are used in the thesis, as well as describing the problem definition. The second chapter discusses various strategic options⁴ available to a global firm with regards to accessing skills and resources and how this is related to the very process of creating new organisational knowledge.

Chapter three discusses the topic of inter-firm learning, touching on determinants of inter-firm learning whilst chapter four focuses on knowledge creation as pertained to alliances. Factors that facilitate organisational knowledge creation in alliances will be outlined. Chapter five will discuss the various organisational barriers that may hinder organisational knowledge creation in an alliance context, having in mind the individual employee learning as the starting point of organisational learning. Consequently, an individually acquired knowledge, if not successfully and explicitly transferred into organisational knowledge, becomes somehow wasted with regards to the creation of new organisational knowledge. Chapter six concludes the thesis through discussions and recommendations.

1.3 Clarification of Terminologies

The need for contextual clarification is necessary and vital in such a paper since any other understandings or definitions of core terminologies besides that of the writer can, to a larger extent affect the way the writer intended the thesis to be understood by the reader.

1.4 Strategic Alliance

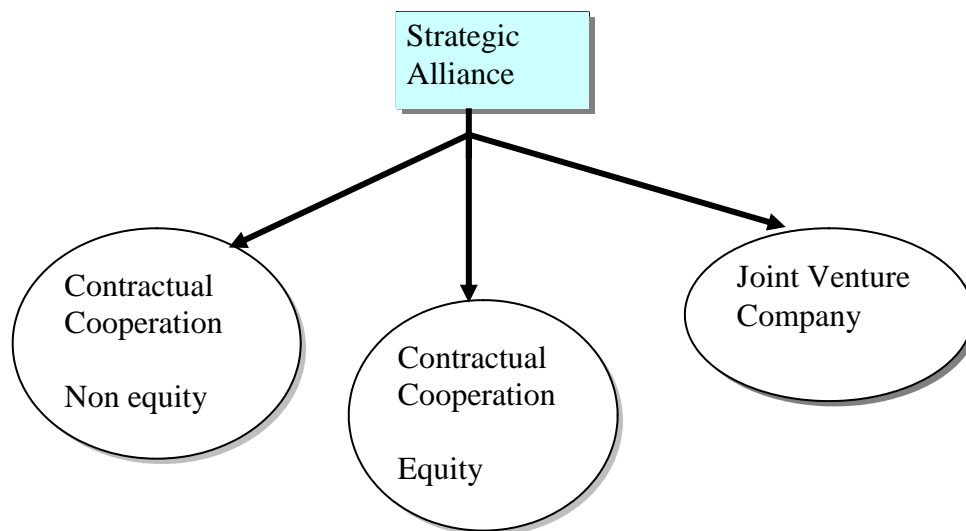
Throughout this thesis the term Strategic Alliances will be used as a synonym to *Joint Venture Company (JV)*. Although several definitions of the term Strategic Alliances have been put forward by organisational scholars, the writer of this thesis will be using Badaracco's definition as a starting point for all the analysis. In the words of Badaracco "alliances are organizational arrangements and operating policies through which separate organizations share administrative authority, form social links, and accept joint ownership, and in which looser, more open-ended contractual arrangements replace highly specific, arms-length contracts." In simple terms alliances refer to cooperation

⁴ Strategic option; the various options available to the international firm with regards to creating or acquiring skills and resources will be explained under the chapter "strategic option".

between two or more organisations, whereby each partner seeks to add to its competences by combining its resources with those of other partners to attain competitive advantage. The objective is to jointly achieve goals that are difficult to achieve independently by complimenting each others resources.

Badaracco's definition, though similar to the definition of cooperation and collaboration above, the writer is aware of the fact that strategic alliances are only one form of inter-firm collaboration.

Below is the graphical presentation of different types of strategic alliances⁵.



1.5 Collaboration/Cooperation

The dictionary definition of the word collaboration describes a situation whereby two or more people work together on a joint project (Collins English Dictionary and Thesaurus). The broad definition embraces all kinds of co-operation, conscious or otherwise, between two or more actors in their effort to achieve pre-defined goal(s) or objective(s). The thesis definition of collaboration, however, will focus on *conscious* activities that are directed by collaborative actors towards a joint target (Gerybadzy).

⁵ Source: Svein Haugland. Lectures in Strategic Alliance, M&A, 1998.

1.6 Problem Definition

Firms have become more knowledge dependent in their day to day activities. Firms have been described by some organisational scholars as "pools of embedded knowledge and capabilities". To be able to survive in the global competitive arena firms need to have sustainable competitive advantage over other competing firms in their competitive environment. One area that a firm can have this sustainable competitive advantage is its ability to create and develop competences faster than its competitors. Sustainable competitive advantage has traditionally been, to a larger extent, dependent on the firm's internal capabilities and industry characteristics (Aadne, Krogh and Roos, 1996).

Consequently, modern firms are preoccupied with other external knowledge developing activities. Inter-firm collaboration has therefore, in recent decades become an important strategic option for many companies in their endeavour to create, develop and maintain new strategic capabilities as well as upgrading existing capabilities. The idea of resource heterogeneity and immobility among firms as posited by Barney suggest that firms could develop needed competences by collaborating with other companies. The resource dependency theory⁶ posits the view that firms cannot be self-sufficient in the modern day knowledge-driven competitive business environments. In other words a firm needs to establish external relationships within its competitive environment in order to obtain or create its needed resources. Child and Faulkner cite ITC Pharmaceuticals joint venture with Sumitomi's Chemicals in 1972 as an example of alliance based on resource dependency. Inter-firm competition therefore, is essentially concerned with acquisition of skills in interaction with other firms. In order to be strategically focused, flexible and innovative, firms need to co-ordinate their activities with the help of some partners in their industry. This can effectively be achieved through inter-firm collaboration.

The idea of creating a sustainable competitive advantage requires firms to maintain an up-to-date improvement of their skills and competencies. An inter-firm collaboration is meant to provide firms with unique opportunities to leverage their strengths with that of their partners. In the words of Inkpen alliances provide firms with "a window on their partners' broad capabilities" (123), which is to say forming of alliances can create the potential for firms to acquire knowledge associated with partner skills and capabilities.

⁶ Resource Dependency Theory (RDT) is defined as organizations maximizing their power (Pfeffer 1981).

Some pertinent questions that the thesis asks are; to what extent have global firms been able to take advantage of the enormous potential that strategic alliances offer in creating much needed competences and skills? What are the necessary prerequisites for firms to succeed in creating and developing knowledge and competences, as well as transferring this knowledge from alliance contexts to parent contexts? Are there any challenges and barriers that firms face in their efforts to create competences through inter-firm collaboration?

2. STRATEGIC OPTION AND LEARNING

2.1 Introduction

The purpose of this chapter is to outline the various strategic options that firms face in creating organisational knowledge that can give them sustainable competitive advantage. A firm's ultimate choice of one strategic option over another will invariably depend on its collaborative intent for entering into a particular cooperative venture.

2.2 Strategic Option

Firms need to diversify their skills and resources in order to enhance their potential in building *distinctive competencies*⁷. Distinctive competences are often part of a firm's strategic core with high asset specificity thereby making it difficult for competing firms to acquire at arm-length.

Although, some knowledge are migratory in nature, like qualities and functionalities which made them easily accessible, in many instances, knowledge that can create distinctive competencies for firms are often embedded primarily in "specialized relationships among individuals or groups and in particular norms, attitudes, information flows, and ways of making decisions that shape their dealings with each other" (Badaracco, 1991:90). This need for diversity of competences and capabilities often requires the mobilization of different, often highly-specific assets that involve very complex processes through which a certain configuration of skills and assets can be achieved over time.

Consequently, according to Gerybadze (1994), there are three alternative ways by which firms can co-ordinate their activities in order to secure access to all specialised inputs required for their smooth and successful operations.

The first strategy involves setting up links with independent market participants who will provide the appropriate skills and resources when needed. Gerybadze describes this

⁷ A firm's distinctive competence is its capability to perform particular tasks more effectively than comparable organizations. It rests not only on hard economic assets like capital, equipment, and machinery, but also on the particular character of an organisation as a human community. (Badaracco, 1991:90)

strategy as market solution⁸. Firms can secure many important resources from other organisations through arm's-length, competitive transactions at the market place. The use of markets can to a large extent communicate some forms of important knowledge to the participants. For example, the price mechanism is an important communication device in the competitive markets that help market participants, among other things, to understand and make judgments about scarcity, need and value, for now and the future respectively. Through the price mechanism, a firm can allocate its resources, in a situation where prices of commodities are rising or falling; as rising prices indicate opportunities and therefore attracting higher investments, and declining prices discouraging investments.

The price mechanism, however, works less effectively for transactions involving information and knowledge, according to the concept of the "paradox of information"⁹. "When a needed knowledge is embedded in an organization, market transactions become inadequate in securing this knowledge. For one organization to secure embedded knowledge from one another, its personnel must have a direct, intimate, and extensive exposure to the social relationships of the other firm" (Badaracco).

The second alternative is for firms to attempt to gain ownership and control over the whole spectrum of specialised skills and resources in order to secure their rapid deployment and potential cost advantages, to reduce risks, or to exclude potential rivals. Gerybadzy describes this as integrated solutions¹⁰. Mergers and Acquisitions¹¹ are examples of this integrated solution. Although mergers and acquisitions have potential advantages, among others, positioning of a firm in a new business environment, and most importantly gaining access to critical resources that might be difficult to imitate or accumulate, there are other equally serious drawbacks

⁸ The market solution requires interaction between autonomous, legally independent agents ("independence") with free choice to select other market participants ("exit").

⁹ "The paradox of information" describes a situation whereby a seller of a piece of information is unwilling to disclose the information to a prospective buyer for fear of the information losing its very value; the buyer, on the other hand, has to access the value of the information in order to agree on the price to pay.

¹⁰ The degree of integration depends on the extent to which a firm relies on ownership and control rights for specific outsets and activities.

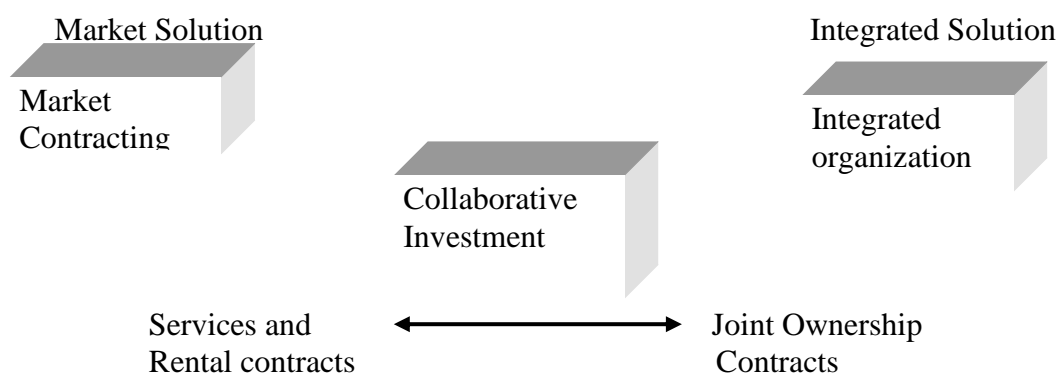
¹¹ Mergers and Acquisitions occur when one firm takes full control over a competitor or a potential competitor (acquisition) or merge together as one company (merger).

that may obstruct or eliminate an acquisition as an option, for example when an acquiring firm refuses to sell its operations; or problems that may undermine the very realization of seemingly inherent advantages of mergers and acquisitions, like cultural inadaptability between the two firms.

In addition to the excessively high prices or premiums that characterize many acquisition cases, many acquiring firms do stumble upon post acquisition integration problems that undermine the advantages of the acquisition. Mergers and acquisition can often threaten to "impair or even destroy the operating practices and the sense of trust, independence, and entrepreneurship on which a firm's special capabilities rests" (Badaracco, 1991:104). The pursuit of synergies and cost control is known to often result in cultural clashes between the merged firms.

The third and final strategy by which firms can secure access to specialised skills and resources, according to Gerybadze, is to indulge in cooperative activities with two or more independent firms. This strategy is known as cooperative strategy. Cooperative strategy is an attempt by organisation to realise the objectives through cooperation with other organisations rather than in competition with them (Child and Faulkner).

Cooperative strategy can be interpreted as a hybrid or intermediate form of the other two strategies. These firms will join forces for specific project(s), but will remain legally independent organisations. Ownership and management of the cooperative firms will not be fully integrated; though separable activities can be jointly owned and managed.



Source: Alexander Gerybadze

Contractor and Lorange (1988) posit a distinction of co-operative strategies by grouping them into two disparate categories. Firstly, co-operative strategies differ with regards to the formula¹² used to compensate each partner; that is to say the legal form of the agreement. Secondly, the strategic impact¹³ of collaborative agreement's on the global operations of each partner's parent organisation.

A fourth viable strategic option that is available to a firm that needs to develop distinctive competences, which Gerybadzy specifically failed to mention, is for a firm to embark on the creation and development of competencies and capabilities through internal development processes. Internal development has the greatest benefit of an easier, although by no means easy way to transfer *intangible* corporate resources into a new business (Collis and Montgomery.)

Despite the above mentioned advantage relating to internal development processes the basic problem with internal development is that independent and autonomous efforts can often be slow and limiting. Collis and Montgomery posits the notion that "internal development of resources is notably a slow process that has the tendency of putting a firm at a risk of being subscale" (1997:94.) It is the belief of the writer of this thesis that the shortening of product life-cycles, increasing time-based competitive environment, and the apparent realization of the need for growing range of specialized capabilities, have all contributed in rendering internal development as a an autonomous strategic option. Firms are increasingly facing competitive situations where the race to the market can be the one and only decisive factor in winning the competition for the customers. Example can be given in a situation whereby a firm succeeds in creating a *de facto* standard in its industry by being the first to introduce a product or service.

Among the diverse strategic options available to global firms as previously mentioned in the thesis, the writer finds none so appealing as that of strategic alliance as a means to create new knowledge for the betterment of a potential global competitive firm.

¹² Compensation formula describes how the co-operation is organized legally; like whether the agreement is a Joint Venture, Supply Agreement, Licensing, Contracting, etc.

¹³ Strategic impact describes the functional areas of concern to the global firm; e.g. technological, operations and logistics, marketing, sales and services, etc.

2.3 Learning and Knowledge Creation

Child and Faulkner (1998) defined learning as “the process of developing the potential to improve actions (behaviour) through better knowledge and understanding (cognition).” This definition incorporates both thought and action.

Although the above definition clearly describes learning as a process, the thesis includes learning outcomes within the scope of the term, thereby serving as a reminder that an organisation does not necessarily benefit from a mere acquisition of knowledge and understanding in an alliance context, unless an acquired knowledge or understanding is applied to actually realize the potential to improve action. The thesis will allow for the definition of learning, to include both at the operational level as well as at the conceptual level.

Operationally, the definition of learning will encompass the acquisition of skills or *know-how*, which implies one’s physical ability to produce an action or an outcome in a practical work situation. When an employee is able to reproduce an action or an outcome, an *imitational learning* is seen to have occurred at an operational level, thereby leading to a certain form of technical know-how regarding that particular task.

Conceptually, however, one focuses on the acquisition of know-why, which implies a performer's ability to articulate a conceptual understanding of an experience. The conceptual definition of learning is important in the sense that an acquired skill at an alliance context subsequently has to be transferred to a partner context before the parent firm can benefit from it. To be able to benefit or utilize acquired skills effectively, the acquirer has to have a thorough understanding of the concept of that knowledge, understanding the context within which that knowledge is used, and also other possible contexts within which the knowledge can be applied.

Learning in alliances can occur in two different situations, namely *collaboratively* or *competitively*. In a collaborative learning situation, partners are committed the idea of mutual learning within the partnership. According to Child and Faulkner collaboration serves as a means in providing access to the partner's knowledge and skills. In their own words “these include product and process technologies, organizational skills, knowledge

about new environments, including an introduction to key relationships between the partners” (1998:228). The possibility of transferring knowledge is given, among others, as one of the important motivations for adopting collaborative strategies. By mutually agreeing to cooperate with each partner, with regards to each partner’s capabilities by giving access to methods of operation, collaborating firms hope to extract potential synergies between their respective capabilities.

In a competitive learning situation, however, one partner’s intension is to learn as much as possible from the other partner, rather than adopting mutual learning as its priority. Collaborating firms are primarily interested in the internalization of partner skills as opposed to mere access to those skills. In this situation, the ultimate objective for a firm is to maximize its appropriation of the joint outcome of the collective learning. This underlying attitude of outcome appropriation often leads to mistrust between the partners. The fear of the possibility of asymmetric learning, can subsequently lead to failure by alliance partners to achieve total integration of their operations, consequently, losing the potential to mutually benefit in the alliance.

3. INTER-FIRM LEARNING

3.1 Introduction

The purpose of this chapter is to outline these determinants that are necessary prerequisite for a successful competence development in an alliance context. Although alliances provide firms with the unique opportunity to leverage their strengths with the help of others, as well as *servicing as a window on partners' broad capabilities* (Inkpen), there are certain requirements that need to be fulfilled before these potential can be realized.

3.2 Determinants of Inter-firm Learning

To be able to reap the benefits of alliances as a means of creating organisational competences, a firm in an alliance set-up needs to fulfil certain requirements. In the view of Child and Faulkner, a firm has to possess the following qualities if it should have any chance of realizing alliances' potential in creating new knowledge. According to the above-mentioned scholars, learning, first and foremost, should be included in partner's intention prior to entering into an alliance and that firms must be able to attach value to the learning opportunities that arise. That is to say, a firm should have a clear corporate strategy that involves core competence building.

Secondly, collaborating firms should have the necessary *capacity* to learn. This capacity to learn is Cohen and Levinthal (1990) described respectively as *organizational receptivity* and *absorptive capacity*.

Thirdly, the question of *transferability* is as essential as the firm's capacity to learn. A firm should be able to transfer acquired capabilities from an alliance context into an organisational context, convert them from individual knowledge into a collective property, thereby making it available to the appropriate people or units within its organisation. The idea of transferability is also tied up to the question of transparency. To what extent are alliance partners' skills and methods of operation open to each other? How embedded is the nature of knowledge or competence that may be accessed, etc. These three combination of factors need to be considered and reflected on if a collaborating firm is to realize the learning potential in an alliance context.

3.3 Receptivity

According to Hamel (1991), a firm's intent in an alliance context establishes its desire to learn, while transparency describes the opportunity that is available for the firm to utilize. Receptivity, however, determines a firm's capacity to learn. The significance of having the necessary capability to understand, assess, manage, and deploy knowledge cannot be overemphasized in an alliance context. The more receptive people are to new knowledge; the more likely they are to learn. This includes attitudes and behaviours of partners towards each other in an alliance context. Hamel (1991) found out in his research of alliances between the Western companies and their Japanese counterparts that the representatives of the Western companies were perceived by their Japanese counterparts as having attitudes of *teachers* and the Japanese having the attitudes of *students*. Things being equal, students are supposed to learn from their teachers and the Japanese did learn from their Western counterparts.

Besides having the learning or student attitude, a firm should have the necessary competence to be able to recognize the value of new information. Badaracco argues that knowledge cannot migrate and become useful to a company unless the company has the appropriate "social software". A firm therefore needs personnel who have training, experience, and equipment that enable it to "unpackage" a particular form of knowledge (Badaracco). To be able to access needed competences and capabilities, a firm's technical and managerial assets must be complementary to the knowledge it wants to secure. This question of having the appropriate social software brings to light the concept of *absorptive capacity*.

A firm has to have a capacity to acquire new and relevant organisational knowledge, transforming as well as disseminating this knowledge for its own benefit. Cohen and Levinthal (1990) argue that a firm's absorptive capacity, in very significant ways will determine its innovative capabilities; and these innovative capabilities can be crucial for learning in an alliance context. Absorptive capacity of a firm is defined as the firm's ability to recognize the value of new external information, assimilate it and apply it to commercial ends (Child and Faulkner). A firm's absorptive capacity will depend on the absorptive capacity of its individual members. According to these writers, absorptive capacity is largely a function of the firm's level of prior related knowledge. This concept becomes important with regards to the staffing of the partnership. Firms need to

address the question of who to send to an alliance context. Organisation's absorptive capacity does not simply and solely depend on the organisation's direct interface with the external environment. It depends also on the transfer of knowledge across and within subunits that may be quite removed from the original point of entry (Cohen and Levinthal). In other words, a firm's absorptive capacity depends on the individuals (*gatekeepers*) who stand at either the interface of the firm and the external environment or at the interface between subunits within the firm. Thus, to understand the sources of a firm's absorptive capacity, one has to focus on the communication structure between the external environment and the organisation as well as among the subunits of the organisation, and also on the character and distribution of expertise within the organisation. Even though a gatekeeper may be important, his or her individual absorptive capacity does not necessarily constitute the absorptive capacity of his or her unit within the firm (Cohen and Levinthal). Therefore, the ease or difficulty of internal communication processes¹⁴, and also the level of organisational absorptive capacity, is not only the function of the gatekeeper's capabilities but also of the expertise of those individuals to whom the gatekeeper is transmitting an acquired knowledge or information. Receptivity of a firm also relates to the question of organisational resources. Does a collaborating firm have the needed resources to embark on capability-building? Hamel argues that learning progresses from knowledge-gathering to capability-building. Understanding how one's partner achieves a certain level of performance can be likened to knowledge-gathering. Capability-building, on the other hand, may need investments such as staff development and new facilities. These investments may not be possible within the confines of a firm's existing resources. Consequently, a firm though may have the receptivity to gather knowledge in an alliance context it may not be able to subsequently develop it to create a sustainable competitive advantage.

The concept of an individual's absorptive capacity stipulates that individual needs prior related knowledge in order to assimilate and use new knowledge. A person's accumulated prior knowledge increases one's ability to put new knowledge into memory, as well as the ability to recall and use the acquired knowledge. The prior possession of relevant knowledge and skill gives rise to creativity, giving rise to other

¹⁴ Internal communication processes in this context also refers to social control mechanisms such as informal communication, information exchange and training, that encourages shared values and norms.

sorts of associations and linkages that may never have been considered (Cohen and Levinthal).

Consequently, knowledge diversity does not only strengthen assimilative powers, but also facilitates an individual's innovative process by enabling the individual to make novel associations and linkages. Cohen and Levinthal make a case that prior possession of related competence gives rise to a firm's capacity to learn because it allows "the sorts of associations and linkages that may have never been considered before. Below is a quotation that describes prior knowledge as a prerequisite to grasping of new knowledge.

"In a setting where there is uncertainty about the knowledge domains from which potentially useful information may emerge, a diverse background provides a more robust basis for learning because it increases the prospect that incoming information will relate to what is already known" (Cohen and Levinthal).

The implication of the above, with regards to organisational knowledge creation in an alliance context is that a firm cannot arbitrarily staff its alliances if it intends to learn effectively in the relationship. Among the factors that play important roles in the staffing context are the diversity and the relatedness of participating employees prior knowledge. Some portion of the prior knowledge should be closely related to the new knowledge in order to facilitate assimilation, and some has to be fairly diverse, though related, to permit effective, creative utilization of the new knowledge.

3.4 Partner Intentions

Firms in alliance contexts have different aims and objectives for collaborating with each other. This is described as a firm's *collaborative intent*. Hamel (1991) defined intent as "a firm's initial propensity to view collaboration as an opportunity to learn" pg; 89-90. Whether or not a firm will succeed in creating organisational knowledge in an alliance context will depend on the organisation's initial collaborative intent. According to Hamel Japanese firms mostly did have a conscious organisational strategy to use alliances as transitional devices with the primary objective of internalizing their partners' skills, whereas several of their Western counterparts can be said to have

entered into alliances with reasons other than internalizing their partners' skills. As Hamel rightly observed in his research involving collaborative investments between Japanese companies and their Western counterparts, the only intent that was consistent across all collaborating partnerships was what he called *investment avoidance*.

According to Hamel's report, five out of the seven Western firms in his study did not possess internalization intent at the time of entering into their alliances with their Asian counterparts. Most of these Western firms possessed what he termed as substitution intent¹⁵, while their Japanese counterparts, on the other hand appeared to have possessed explicit learning intents. This further indicates that the Japanese companies in his study did have clear strategies for building their core competencies whereas their Western counterparts lacked those strategic directions. This apparent lack of symmetry in collaborative objectives between alliance partners will significantly affect each partner's ability to create or acquire new organisational knowledge in an alliance context. Based on the above scenario, the Japanese companies in Hamel's study were better equipped to learn systematically and effectively from their Western counterparts than otherwise, in the collaborative investments between the two groups. The implication is that for effective and systematic learning to occur in an alliance context, firms should approach organisational learning by *design* and not by *default*.

Child and Faulkner (1998) also distinguish between two types of alliance based on the partners' apparent learning intentions. Their effort was meant to capture the essence of consciously giving priority to learning in an alliance context. The two classifications are *scale* alliances and *link* alliances.

Scale alliances call for partners to contribute similar resources pertaining to the same stage or stages in the value chain. These scale alliances have as their objectives, the achievement of scale economies or the reduction of excess capacity through joint efforts in areas such as Research and Development (R&D), production of particular components or sub-assemblies, or even the co-production of an entire product. According to Child and Faulkner (1998), an alliance between Peugeot, Renault and Volvo established in 1971 to develop and manufacture a common V6 engine, is a typical example of scale alliance.

¹⁵ "Substitution intent" describes a situation when a firm in an alliance context substitutes its partner's competitiveness in a particular skill area for its own lack of competitiveness.

Link alliances, on the other hand, are those in which partners contribute different and complementary capabilities relevant to different stages in the value chain.

According to these authors, the alliance that linked General Motors to Isuzu was a typical example of link alliances. In these kinds of alliances, one partner provides market access to products developed initially by the other firm. After studying some scale and link alliance relationships, Child and Faulkner concluded that scale alliances are normally formed between competitors with fairly similar production volumes, whereas link alliances are formed much more frequently between partners from different parts of the world. For the purpose of this thesis, the significance of this dichotomy of alliances is that for alliance partners to realize the learning opportunities offered by an alliance, partners must not only give priority to learning but also be conscious with regards to either choosing scale or link alliances. The asymmetry nature of link alliances, with regards to world wide market shares of alliance partners, coupled with the complementary knowledge possessed by alliance partners, sets up better conditions for learning and knowledge transfers to take place between the partners.

Assuming that partners in an alliance context have as their primary objective to learn and access information from their counterparts, there are two possible learning situations by which firms can create new organisational knowledge. The first is that of learning through collaboration between the partners, the other is through competition between them. In the view of Child and Faulkner (1998), many cooperative alliances are formed between organisational partners with the aim of benefiting from each other's complementarities. By joining forces together, the partners can develop a common interest in learning how to extract the potential synergies between their respective competencies, particularly in a situation where the partners possess somewhat different capabilities. What is best of these two strategies will depend on the nature of competence that is being accessed. The nature of competences involved (tacit versus explicit) will also influence the learning approach (collaborative versus competitive) in the alliance set-up.

3.5 Transparency

Transparency is given as one of the determinants of organisational learning in an alliance context. Hamel (1991) defined transparency as “openness” of partners to each other. Hamel argues that some alliance partners are more open and accessible than others, and this openness determines partners’ potential to learn in an alliance. Hamel stressed that although in almost all the alliance relationships that he examined, there was the need for some degree of openness to be accepted as the price of enticing partners into relationships, many firms expressed their concerns about their firms’ level of openness as compared to their counterparts.

In his extensive research of joint ventures between Japanese companies and their Western counterparts, Hamel (1991) found out that the Japanese were perceived by their Western counterparts as inherently less transparent. Western managers expressed concerns about their firms being transparent by *default* rather than by *design*. The implication is that the Japanese companies accessed certain kinds of valuable information from their Western counterparts without their expressed approval, whereas the Western companies in most cases accessed only the kind of information that the Japanese companies wanted them to acquire.

Hamel claimed that this apparent asymmetry in perceptions of relative opaqueness between the alliance partners largely affected their learning capabilities. The Japanese companies therefore managed to learn systematically and effectively from their Western alliance partners than the Western companies did of the Japanese.

A firm’s level of knowledge or skill transparency often depends to a large extent on whether the knowledge base is context-bound or not (Hamel, 1991). Hamel defines contextuality as the “embeddedness of information in social systems” of a firm. The idea of knowledge *contextuality* affects the rate by which knowledge can be transferred from an alliance context to a parent context. Child and Faulkner (1998) described knowledge transferability as the ease with which knowledge can be transferred from one partner to another. Some explicit knowledge, such as technical product specifications, formulas, designs and blueprints are relatively easy to transfer. These types of knowledge, important though they may be, do rarely create sustainable competitive

advantage. On the other hand tacit knowledge, which is mostly embedded in the social systems and in the minds of individuals and groups, however, does have the potential to create sustainable competitive advantage. The ultimate challenge therefore, is for firms to establish the necessary organisational routines and processes that will facilitate transfer of tacit knowledge from an alliance context to the context of the parent firm.

4. KNOWLEDGE CREATION AND ALLIANCES

4.1 Introduction

The purpose of this chapter is to describe the various factors that can facilitate organisational knowledge creation as well as to describe the various processes by which firms can access and transform knowledge from an alliance context to a parent context. The presumption of this knowledge transfer is that knowledge that is created in an alliance context is useful to the parent firm. According to Child and Faulkner firms may seek access to other firms' knowledge and skills without necessarily wishing to internalise the acquired knowledge in their own operations. In alliance situations whereby collaborating firms set up new units for specific purposes, knowledge acquired at these units may only be embodied in the outputs of that unit. Consequently this acquired knowledge has no value or at best limited value outside the alliance context.

4.2 Facilitating Factors of Organisational Knowledge Creation

Inkpen (1996) pondered over the question of why some alliance firms effectively leverage their alliance knowledge while others do make a minimal use of it. Inkpen described six factors that facilitate effective knowledge management:

(1) Flexible Learning Objectives; a firm should have a learning objective that is based on correct, fair and flexible assessment of their counterpart's competences. A collaborating firm may have the problem of correctly assessing their partner's competences during the pre-alliance period. However, in the course of the alliance, a firm may have to re-evaluate its partner's competences, thereby adjusting its own learning objectives in the alliance context.

(2) Leadership Commitment; Inkpen (1996) argues in favour of the need to at least have one person in a leadership position who will have the responsibility of championing the course of knowledge creation in the alliance context. According to him, the leader's role is especially important in initiating linkages between parent and alliance strategies. Using a joint venture as an example, Inkpen maintains that lack of leadership involvement and commitment very often leads to a deteriorating relation between a joint venture firm and its parent organisation.

(3) A climate of Trust; “Trust is stronger than fear. Parties that trust each other generate greater profits, serve customers better and are more adaptable” (Kumar, 1996:92).

Inkpen (1996) argues that a climate of trust between the both the alliance partners and between the alliance members and their respective parent organisations are a critical and necessary prerequisite for free exchange of information; subsequently making learning possible in an alliance context.

Kumar (1996), on the other hand defines trust as the ability of collaborating parties to make a *leap of faith*. Making a leap of faith, according to Kumar, implies that each party is interested in each other’s welfare and that neither will take any action(s) without first considering the actions impact on the other. Kumar maintains further, that trusting relationships surpasses dependable¹⁶ relationships. He goes further by saying that the ability of parties to make a leap of faith is what distinguishes trusting relationships from distrusting ones. In an alliance context, a firm may have difficulty in correctly assessing its partner’s level of dependability and honesty. This difficulty is very often evident, at least in the pre-alliance negotiating period and also during the early stages of the relationship. In many occasions, a firm’s only means of assessing its partner’s dependability is to rely on the partner’s existing reputation. The awareness of firms over the fact that trust, is rarely all-encompassing, and that a partner’s existing good reputation does not necessarily guarantee honest behaviour in future relationships, makes it important for firms to be able to make this leap of faith in their relationships.

(4) Tolerance for redundancy; Inkpen (1996) defines redundancy as the conscious overlapping of company information, activities, and management responsibilities (p.134). There must be a redundancy of time in order to allow for dialogue, both between the alliance partners and their parent organisations. According to Inkpen, redundancy encourages frequent dialogue; and dialogue is the key element of collective learning. In his words dialogue provides the means through which people at different levels of an organisation can be connected. There should be a redundancy in time to allow for dialogue to take place. As issues are debated and assumptions are questioned, dialogue will lead to some redundancy in information. Without tolerance for

¹⁶ Dependability implies that parties’ believe that their partners are reliable and would honour their word.

redundancy, sharing of ideas and effective dialogue will be difficult. By allowing regular attendance of alliance managers at meetings involving parent division managers, Inkpen maintains that a parent firm can closely integrate the alliance strategy with that of the parent, thereby creating a clear overlapping of roles between the parent and the alliance. This overlapping of roles can effectively exist only in an atmosphere of high tolerance for redundancy.

(5) Creative chaos; Creative chaos is mentioned by Inkpen (1996) as one of the facilitating factors of organisational knowledge creation. According to Inkpen, chaos mostly occurs when an organisation faces crisis. In an alliance context, there is bound to be differences between the alliance partners. These differences may subsequently cause distrust in normal organisational routines, creating tension within the organisation. Inkpen argues that managers in knowledge creating companies have the responsibilities to orient organisational chaos towards knowledge creation. “If chaos is invoked or manipulated *creatively* by top management, it can be a powerful motivator” (Inkpen, 1996:136). Though, the creative management of chaos may help knowledge creation, Inkpen also admits that the impact of crisis-induced chaos on knowledge creation is difficult to assess. Furthermore, the extent to which managers can creatively manage chaos will nonetheless depend on the nature of the chaos in question, and not the least, the time available to a particular manager to manage the crisis. According to Inkpen, many managers appear to lack managerial reflections in crisis of financial nature.

(6) Performance Myopia; Inkpen (1996) suggests that managers who seek to create knowledge, especially in an alliance contexts, must learn to cope with confusing *experiences*. Inkpen argues that one such “experience” for Joint Venture (JV) parent companies is the assessment of joint venture performance. He points out that many American JV parent companies use financial performance indicators to measure its learning in the JV. Poor financial indicators mean therefore, that learning has not effectively taken place. In his words, the attitude of some of the American parent companies, as described above, constitute what he terms myopic *preoccupation* with short-term issues. Learning in alliances, needs to have a long-term perspective. However, a long term learning perspective may contradict a short-term financial objective of a parent firm. Inkpen therefore concludes that for effective learning to take place, there should be an absence of performance myopia.

4.3 Exploiting Collaborative Knowledge in Alliance Context

Inkpen outlines four critical management processes that firms use to access and transform knowledge from an alliance context to a partner context. Based on these four processes collaborating firms are able to create connections through which they can communicate their experiences gained in an alliance context to others, thereby forming the foundation for the integration of knowledge into the parent firms' collective knowledge base. Through the process that has been termed as "spiral" of organisational knowledge creation, the knowledge that starts at the individual level will be able to move to the group level, and finally to the firm level through the interaction of individuals with each other as well as with the organisations.

Conceptually speaking, there are two distinct types of knowledge, namely tacit knowledge and explicit knowledge (Spender 1996; Nonaka 1994). Nonaka describes tacit knowledge as non-verbalizable, intuitive and unarticulated. It is also highly context specific and has a personal quality, which makes it difficult to formalize and communicate to others¹⁷. In the words of Spender (1996), tacit knowledge is knowledge that has been transformed into habit and made traditional in the sense that it becomes *the way things are done around here* (making knowledge the basis of the dynamic theory of the firm" Strategic...management...journal...(special issue) 45-62.)

Explicit knowledge, on the contrary, is knowledge that is specified and codified. It is knowledge that is transmittable in formal, systematic language and may include explicit facts, axiomatic propositions, and symbols (Dinur and Inkpen.)

According to Dinur and Inkpen, the above distinction, though important, does not allow for any gray areas between completely tacit knowledge and completely explicit knowledge. Consequently, knowledge types must be classified on a continuum that ranges from explicit knowledge embodied in specific products and processes to tacit knowledge acquired through experience and use and embodied in individual cognition and organisation routines.

¹⁷ "A dynamic theory of organisational knowledge".....organisational science 5, 14-37)

Based on the study of alliances between American firms and its Japanese counterparts Inkpen describes the four knowledge management processes, the types of knowledge that are associated with them as well as the potential usefulness of knowledge acquired to the parent companies.

Below is the framework for the Knowledge Management Processes and Types of Knowledge:

Knowledge Management Processes	Types of Knowledge	Examples of Knowledge Potentially Useful to American JV Parents
Technology sharing	Explicit	<ul style="list-style-type: none"> - quality control process - product design - scheduling systems
JV-parent Interactions	Explicit	<ul style="list-style-type: none"> - specific human resource practices
Personell Movement	Tacit	<ul style="list-style-type: none"> - expectations of Japanese customers - continuous improvement objectives - commitment to customer satisfaction
Linkages Between Parent And Alliance Strategies	Explicit Tacit	<ul style="list-style-type: none"> - market intelligence - visions for the future - partner's keiretsu relationship

(Inkpen, 127)

The first process is through Technology Sharing. Through joined ventures a parent firm can gain access to manufacturing processes and product technology. At this level a parent firm seeks to acquire and transfer knowledge from the joined venture through research and development meetings and quality control meetings. Access at this level is through direct linkages between collaborative firms. Through explicit agreements, collaborating firms can openly share technologies with each other.

The second management process is through Joint Venture (JV) interactions. A parent firm's relationship with joint venture, place an important role in knowledge management. Interactions between JV and parent firms can create a social context

necessary to bring JV knowledge a wider arena. According to Inkpen (128) these interactions can lead to what he termed “communities of practice.”¹⁸

The third management process that firms can use to access and transform knowledge is through Personnel Movement. This personnel movement can either be formal or informal. Firms can for instance move managers at JV to a staff training position at parent firms. On the other hand managers at parent firms can be transferred to the JV management (Inkpen).

The fourth process focuses on the degree to which the parent and alliance strategies are interlinked. Linkage between the parent firm and JV is only possible if and when the businesses are related to each other. In order to maximize exposure to partner knowledge, parent firms need to perceive JV as more than peripheral to its organisational strategy.

¹⁸ “A community of practice is a group of individuals that are not necessarily recognisable within strict organisational boundaries. The members share community knowledge and may be willing to challenge the organisation’s conventional wisdom” (Inkpen, 128).

5. KNOWLEDGE CREATION AND ORGANISATIONAL BARRIERS

5.1 Introduction

The purpose of this chapter is to discuss the various processes by which firms can create new knowledge. In this knowledge creation process firms do face significant learning barriers that can inhibit their knowledge creating activities. The chapter will therefore outline these learning inhibitors. Based on the assumption that it is the individual entities (employees) in organisations that learn and that the collective accumulation of individual knowledge form the basis of the organisational knowledge creation, individual learning barriers will subsequently affect the organisational learning processes. As a result of the above assumption, the individual learning inhibitors will be the writer's point of departure in discussing these learning barriers. Last, but not the least, the chapter will describe the various levels by which acquired knowledge in an alliance context can be transferred to a parent context.

5.2 Creating Collective Knowledge

One of the key challenges facing firms involved in alliances with the intention of creating or seeking access to knowledge is to incorporate different and diverse pieces of individual knowledge into a wider organisational knowledge base (Dinur and Inkpen). These pieces of individual knowledge may either be tacit or explicit in nature. This calls for the necessity of firms converting tacit knowledge to an explicit knowledge. Tacit knowledge can simply be defined as internalized knowledge that has occurred as a result of experience. As the name implies, this knowledge cannot, under normal circumstances be expressed in terms of a specific language Knowledge that is tacit and highly personal has little value for an organisational knowledge creation until it can be converted into an explicit knowledge that other organisational members can share. Nonaka and Takeuchi (1995) described the creation of knowledge for organisational use as a "continuous and dynamic interaction between tacit and explicit". For this dynamic interactive process of knowledge creation to succeed, there must be possibilities for four different modes of knowledge creation, according to these two. Below is the graphical presentation of the different modes of knowledge creation¹⁹.

¹⁹ **Source:** Bjørne Espedal NHH 1999 (Lectures in Change, Learning and Adaptation)

Methods of Knowledge Creation:

	Explicit	Tacit
Explicit	Combination	Internalization
Tacit	Externalization	Socialization

1. Socialization (tacit knowledge \longrightarrow tacit knowledge):

"a process of sharing experiences and thereby creating tacit knowledge such as shared mental models and technical skills"

2. Externalization (tacit knowledge \longrightarrow explicit knowledge):

"a process of articulating tacit knowledge into explicit concepts". According to Child and Faulkner (1998?), this form of knowledge conversion is typically seen in the creation of concepts that offer wider access to the knowledge and also links it to applications.

3. Combination (explicit knowledge \longrightarrow explicit knowledge):

"a process of systemizing concepts into a knowledge system. This mode of knowledge conversion involves combining different bodies of explicit knowledge.....through media such as documents, meetings, telephone conversations, or computerized communication networks".

4. Internalization (explicit knowledge \longrightarrow tacit knowledge): This process is closely related to "learning by doing" according to Child and Faulkner (1998). It involves the embodiment of explicit knowledge into individuals' tacit knowledge bases, in the form of shared mental models of personal technical know-how (p.299).

5.3 Organisational Learning Barriers

Nordhaug (1994) discusses learning barriers in terms of the organisational levels at which they occur. He makes a distinction between the micro level inhibitors and the macro level inhibitors. The micro level inhibitors focus on individuals' interpersonal relationships as well as group dynamics whilst the macro level inhibitors focus on factors relating to the structure of the organisation.

Micro level learning barriers:

Although there are many learning barriers at the micro level, psychologically and otherwise, in order to limit the scope of the thesis, the writer will focus on those that, in the writer's opinion have direct relevance to learning processes in alliance contexts.

The first of such inhibitors is the employees current competence level (Nordhaug).

Although the thesis has in an earlier chapter discussed the notion of absorptive capacity as a necessary precondition and determinant of acquiring new organisational knowledge, an employee's existing competence, prior to embarking on a learning process may inhibit acquisition of new knowledge and skills. Nordhaug describes four ways by which an employee can be inhibited;

(1) An individual in this situation will in some cases have to undergo the process of unlearning, throwing away existing competence in order to acquire new knowledge. This unlearning process may not be welcomed by the employee in question and consequently leading to lack of learning.

(2) An apparent feeling of satisfaction over existing routine may lead to unwillingness on the part of an employee to accumulate new knowledge and skills.

(3) Lack of reflection over skilful action by the employee may inhibit new learning. This is due to the fact that employee skilful actions at certain points become more internalized, thereby occurring automatically.

(4) An employee's predefined cognitive approach to a problem solving may inhibit learning.

A second potential employee learning inhibitor at the micro level is what Nordhaug termed employee opportunism. The argument here is that an employee may be motivated for work-related learning but may still be unwilling to pursue the learning due to tactical reasons on his part. A tactical consideration, in this context may refer to the

employee's apparent perception that the new learning, in the immediate future will not be beneficial to his own end. This reasoning will therefore serve as an inhibitor for new knowledge acquisition.

A third and final potential inhibitor to employee learning at the micro level, as posited by Nordhaug is associated with interpersonal relationships at the learning environment. In order to promote learning in organisations, an atmosphere of cordial relationships between employees are a necessary precondition. However, under these conditions, learning and knowledge creation are by no means a foregone conclusion as employees may not want to share their knowledge with each other for tactical reasons.

Macro level learning barriers:

As mentioned earlier on the macro level learning inhibitors focus on the organisational design and structures, the work systems, the incentive systems, organisational culture, human resource development (HRD) priority and time perspective (Nordhaug). In order to limit the scope of the thesis, the writer will not address all these macro inhibitors. The inhibitors that in the writers opinion relates directly to knowledge acquisition in the contexts of alliances will be addressed.

(1) The nature of incentive systems of parent organisations can inhibit employee learning at the macro level. The ultimate goal of incentive systems, as defined by Nordhaug is "to influence human behaviour in such a direction that prefixed objectives on the organisational level can be attained, regardless of whether these are profitability, growth, consolidation or just survival" (21). The notion here is that incentives by design are meant to induce appropriate employee behaviour as seen by the employer. The intricate nature of designing incentives systems however, may create disparity between its reward systems and its efforts at knowledge creation (Child and Faulkner). Incentive systems that favour short term performances are potential sources for learning inhibitions. The argument is that employees under these incentive systems will opt for short term performance behaviours rather than long term learning behaviours (Nordhaug). Feedbacks from managers to employees relating to learning behaviours are viewed by Nordhaug as part of organisational incentive systems. As a result lack of feedback on learning behaviour can inhibit individual acquisition of knowledge and skills.

(2) Lack of consistency in a firm's human resource development (HRD) policies can create learning inhibitors at the macro level in the firm. Nordhaug (26) describes three indicators that need to be present in a firm's human resource development policies in order to promote employee learning. Firstly, the monetary and time resources devoted to creation of learning. Secondly, the institutional role and status of HRD work and the extent to which managers pay attention to personnel issues. Thirdly, attention that managers direct to competence development issues should be visible in the organisation.

(3) The nature of organisational culture can create learning inhibitors. An organisational culture as defined by Nordhaug describes "rules of legitimate conduct and behaviour and contains general values which individuals can use as a support when making decisions about how to act under varying circumstances" (27). Consequently, firms that lack open culture whereby new ideas are embraced and discussed can create employee learning inhibition. Child and Faulkner (1998), on the other hand mentions the social identities of the different parties at the collaborative context as a source of learning barrier. The degree to which social identities can hamper organisational knowledge creation will largely depend on the socio-cultural background of the members of the participating firms. Learning or knowledge creation barriers will be comparatively higher in alliances where collaborative members are distinct organisationally, nationally, and in terms of the economic development level of the society from which they come. In the words of Child and Faulkner "the process of transferring practical knowledge between different managerial groups will be interdependent with the degree of social distance that is perceived between the parties involved" (300).

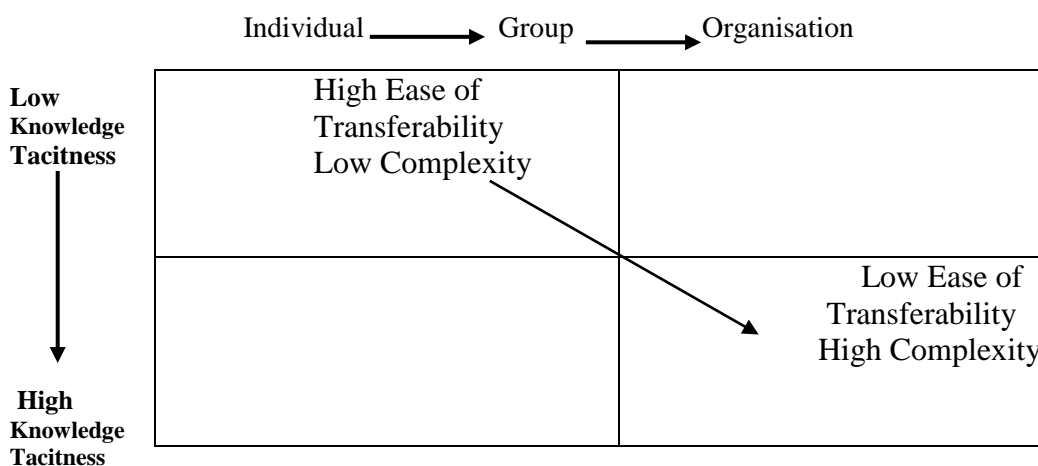
5.4 Organisational Levels and Knowledge Movement

Dinur and Inkpen described three different levels by which knowledge can be transferred from a collaborative set-up to a parent firm. This transformation of knowledge, according to these writers, is a dynamic process that occurs at the individual level, at the group level, and at the organisational level. At the individual level, the process involves interpretation and sense making; at the group level, the process is that of integration, and finally at the organisational level it is integration and institutionalization. Nonaka (1994) theorised a concept, known as the *spiral* of knowledge creation in an attempt to capture this dynamic knowledge movement across

different organisational levels as posited by Dinur and Inkpen. In this spiral, knowledge moves upward in an organisation, starting at the individual level, moving to the group level and finally up to the level of the firm.

Based on the assumption that organisations have a range of knowledge as well as carriers of knowledge, Dinur and Inkpen proposed a framework, positing the organisation as a repository of knowledge types in different organisational locations. The framework is meant to explain how different knowledge types travel between individuals and organisations. Below is a framework depicting the different modes of organisational knowledge transferability.

Knowledge Transfer Classification Framework²⁰:



The vertical dimension refers to knowledge tacitness and the horizontal dimension distinguishes between organisational levels where knowledge resides. In this framework, knowledge tacitness is a continuum in which explicit knowledge has very low tacitness. Consequently, high tacitness implies low complexity and low transferability, likewise low tacitness implies high transferability and high complexity. To ensure high transferability, a firm needs to make as explicit as possible the knowledge that is acquired in an alliance context. Using joint venture partnerships as a point of departure, Dinur and Inkpen stated that in order for firms to increase their store of knowledge in an alliance context a firm’s gatekeepers need to internalize knowledge

²⁰Source: Knowledge Management Processes and International Joint Ventures (Inkpen and Dinur).

not previously available within the organisation. For internalization to occur, the parent firm must first engage in efforts to transfer partner skill-related knowledge from the joint venture to itself. The aim is to create connections through which individuals can share their observations and experiences with other members of the parent organisation.

Inkpen (1996) maintained that knowledge connections are formed both through formal and informal relationships between individuals and groups. A firm's managerial relationship is an important factor in facilitating the sharing and communication of new knowledge, as well as providing a basis for transforming individual knowledge to organisational knowledge. Through member discussions and debates, an individual's or group's acquired knowledge can further be either developed or be possibly discarded. This requires organisational structures being designed to maximize the efficiency of knowledge integration.

6. DISCUSSIONS AND CONCLUSIONS

Firms that operate in the global competitive arena face lots of competition in rapidly changing global environments. The nature of this competition, in the last couple of decades has become more knowledge-driven. Many well established firms' performances in the last couple of decades have declined due to their inability to create knowledge and manage it as a critical organisational asset (Inkpen, 1996). Firms in this situation need to build solid knowledge bases that can give them sustainable competitive advantage at the global competitive arena. The very nature of competences that can give firms sustainable competitive advantage over competing firms makes it difficult to acquire at the open labour market. The apparent realization by many global firms that new organisational knowledge serves as basis of organisational renewal and sustainable competitive advantage have increasingly led to many global firms making knowledge creation a managerial priority. Though important this awareness of new knowledge creation is, to many global firms, many organisational scholars have argued that firms' understanding of the organizational processes surrounding knowledge creation and management is significantly limited. The need to understand these processes of new knowledge creation and management thereof poses therefore, fundamental challenges to the development of all learning organisations. Internal knowledge and competence building activities like at-work training programmes have proven to be inadequate in the modern competitive arena due mostly to the rapid rate at which global as well as national business environments change. The formation of alliances is one strategy that has been put forward by organisational scholars as a viable strategy for knowledge creation and development. However, the mere forming of alliances, by no means whatsoever guarantees organisational knowledge creation (Inkpen 1996).

In order to successfully create organisational knowledge collaborative firms need to understand the dynamics of knowledge creation in alliance contexts. According to Child and Faulkner there are two conditions that need to be met in order to manage alliances successfully. Firstly, the expectations of the alliance partners need to be reconciled and incorporated into the strategy for the alliance (171). Secondly, the partner firms involve in the alliance need to devise measures to promote the alliances internal effectiveness as an ongoing operation. By establishing appropriate organisational arrangements as well as providing the necessary leadership, partners in alliance contexts will be able to

achieve cooperation and motivation among employees, thereby ensuring appropriate flows of information within the alliance (172).

At the micro level firms need to overcome the various employee learning inhibitors in order to create learning. Knowledge creating firms in alliance contexts also need to understand how an individually acquired knowledge, can successfully and explicitly be transferred into organizational knowledge, as lack of this transferability will somehow go to waste with regards to the creation of new organizational knowledge. It is therefore not enough knowing how knowledge is created but also a firm should be in a position to transfer an acquired knowledge to the benefit of the parent organisation. By successfully combining acquired competences combined with internal development activities, a firm can develop knowledge base that can give it sustainable competitive advantage over its competitive environment.

It is the expressed opinion of the writer of this thesis that although alliances present several challenges to participating firms with regards to organisational knowledge creation, alliances are by far the most viable strategic option for building sustainable competitive advantage in the global competitive environment.

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