

Knowledge Creation in the Internationalization Process of a Firm Through Inward – Outward Connections

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Abstract

Even though outward operations such as exports and foreign investment have received most of the attention so far, the internationalization of businesses also includes activities that are inwardly oriented. Inward activities like purchases of machinery, the procurement of raw materials and semi-finished goods provide opportunities for building relations with foreign actors. They also offer interesting opportunities to learn about foreign trade techniques and ways of using various operation modes, and by active use of such knowledge companies should be in a better position to start outward foreign operations. This paper presents a case study of the Norwegian company Moelven Industrier ASA and its operations in the Russian market. It shows that the creation and utilization of knowledge through inward-outward connections face many obstacles. Hence, the full potential of such connections was seldom realized.

Conference theme

3.1. Knowledge creation and transfer in inter-organizational networks

Keywords

Inward-outward connections, knowledge creation and transfer, Russia, Norwegian company

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Introduction

Despite the large and growing number of studies looking into various aspects of firms' internationalization, several gaps curiously remain on our intellectual maps of this phenomenon. That the global context itself is continuously undergoing change has of course some part in this. Processes like liberalization, globalization, and increasingly rapid technological change lead to internationalization constantly taking on new shapes and directions. Firms' internationalization behavior becomes a seemingly ever-changing puzzle. Fresh insights are needed, and these insights call for repeatedly going back to the context. Nevertheless, the dynamism of the subject itself cannot alone explain many of the biases and research gaps that seem to persist in this particular field of research.

In this paper, we have taken on two deficiencies in our accumulated knowledge about firms' internationalization. First, internationalization research has so far had a strong bias towards outward operations, such as export activities and the establishment and management of subsidiaries abroad. The "twins" of these international trade and investment activities – e.g. imports and inward foreign investment – have received considerably less attention. Even less is known about the potential linkages between activities that are outward oriented and those that are inward oriented [Korhonen 1999, Welch and Luostarinen 1993]. Second, even though several well-known models put great emphasis on concepts such as information, learning, and knowledge, there continues to be a lack of scrutiny into how knowledge actually develops and disseminates in organizations [Benito and Welch 1994a]. Research on the development and use of knowledge in connection with internationalization processes has only recently started to appear [Eriksson et al. 2000]. In this paper we attempt to bridge these

two issues in an exploration of knowledge creation and usage in the context of connections between inwardly and outwardly oriented international operations. The main thrust of the argument is that inward, activities by building relations with foreign actors and by providing opportunities to learn about the “nuts and bolts” of foreign activities, may form a superior platform for subsequent outward operations. However, based on a case study of the Norwegian company Moelven Industrier ASA and its operations in Russia, we find that developing, using, and disseminating knowledge through inward-outward connections cannot be taken as an automatic process. The full potential of such connections is, due to a variety of obstacles, seldom achieved.

The Internationalization of Firms

The internationalization process of companies has been the subject of widespread research [Leonidou and Katsikeas 1996]. Swedish and Finnish researchers have been particularly active in developing models explaining the internationalization process [Björkman and Forsgren 2000]. This Nordic research was strongly influenced by the behavioral theory of the firm developed by Cyert and March [1963], the theory of the growth of the firm [Penrose, 1959], and Aharoni’s [1966] detailed study of the foreign investment decision process.

Although their models differ in detail, researchers arrived at similar conclusions when describing the internationalization process as a dynamic, multi-dimensional process with accumulation of knowledge and feedback-loops as central factors. Luostarinen [1970, 1979] pointed out knowledge and organizational learning as the main elements in reducing the lateral rigidity endemic to decision-making regarding international operations. Johanson and Vahlne [1977, 1990] developed another model describing different mechanisms of internationalization, and focused on the evolution of the individual firm over time. Their model was based on empirical research on the international involvement of some Swedish firms [Johanson and Wiedersheim-Paul 1975]. The gradual acquisition, integration, and use

of knowledge about foreign markets and operations was again seen as essential in the internationalization process, leading to an increasing commitment to foreign markets.

Another important contribution came from the Industrial Marketing and Purchasing Group (IMP) in its development of the business interaction model which looks at the relationships and interaction between buying and selling firms [Håkansson 1982]. The IMP program focused on the purchasing and marketing function in industrial firms, on the evolution of buyer-supplier relationships, and finally on industrial networks. These are activity contexts that – at least in advanced, small and open economies – are quite likely to involve the crossing of national borders. It is not surprising that IMP ideas, concepts, and models have inspired some recent work on firms' internationalization [Welch et al. 1996a, 1996b].

Internationalization has been defined as “the process of increasing involvement in international operations” [Welch and Luostarinen, 1988, p. 36]. Even though this definition is quite general and provides a rather broad and inclusive picture of internationalization, most of the attention – from practitioners as well as from researchers – has been on outward operations and their expansion. Relatively few studies exist on import behavior (see e.g. Ghymn, Liesch and Mattson 1999) or other types of inwardly oriented activities.

Inward Operations

Analyzing inward operations in-depth, and over time, has been difficult because inward operations often develop into routine operations by purchasing people and are hence regarded as supporting activities. The long-term strategic decisions of the company are made by top management, perhaps in cooperation with key production and marketing personnel, and valuable information about international opportunities created by inward operations can easily become lost in the process. In the recent years, however, the purchasing function has gone from being viewed as merely a clerical or service function to be seen, sometimes, as a

major strategic resource for the company. New purchasing philosophies involve careful analysis and planning, and require deeper understanding of supplier relationships, product development processes and industrial networks.

Axelsson and Håkansson [1984] and Gadde and Håkansson [1993] describe three strategic roles of the purchasing function that potentially affect the competitive posture of a company. The *rationalization* role comprises activities to reduce costs, e.g. make or buy decisions, rationalization of flows, reduction of inventories and identification of potential suppliers. The *developmental* role describes how purchasing gets involved in the development work of suppliers, to achieve better coordination, increased developmental power and time savings. The *structural* role of purchasing is defined as the way in which companies affect the structure of the supplier markets. Axelsson and Håkansson [1984] suggest several ways in which increased internationalization may influence the purchasing function. Some are related to a company's degree of internationalization. Others are related to the changing supplier structure due to international competition.

Luostarinen and Welch [1990] identify several roles of inward operations. Inward international operations may be a prerequisite for the establishment of the firm, for example when domestic sources of technical, managerial and marketing know-how are insufficient to start up a business. Franchising, licensing or even turnkey projects are all possible solutions to bringing commercial and technical knowledge into a country. Inward operations are often more visible in the early parts of a company's life, especially in the form of raw materials or components/machinery imports. Other forms of inward activities are the creation of joint ventures with foreign firms in order to either get new technology into the home country which is not available through licensing or simply to eliminate potential competitors in the home market.

One potential problem with the development of international interaction processes identified by Axelsson and Håkansson [1984], is the increased handling cost. Developing relationships is costly because of mutual learning costs, and this development normally becomes more expensive due to the international extension of the process. From a purchasing point of view, there is a need to develop both personnel and the organization on how to handle such relationships.

Inward-Outward Connections

The connection between inward and outward activities and how it affects the internationalization process of the firm has received some, albeit limited, attention in the business literature in recent years. The connection has been identified primarily through research on specific business operations such as licensing, subcontracting, and counter trade.

Welch and Luostarinen's [1993] work on the possible connections between inward and outward internationalization processes, stressed that these links are important even at the earliest stages of international development for many companies. Furthermore, they stated that the links are broad, go across operational modes, and may develop from either inward or outward sides at different stages of international development for many companies. Inward activities offer a good opportunity to learn about foreign trade techniques, operation characteristics and ways of using different operation modes. By active use of this knowledge, the firm should be in a better position to start outward operations in a foreign market.

In a study of a large number of Finnish SMEs, Korhonen, Welch and Luostarinen [1996] found that a majority of Finnish companies began international activities on the inward side rather than on the outward side. Typical inward activities were imports of physical products like raw materials, machinery and components, but also imported services, like installation, testing, servicing and maintenance, although at a low level compared to physical products.

Korhonen [1999] identifies inward-outward connections at different stages of the internationalization process, and various contexts where inward-outward connections may emerge and develop. At the beginning of a company's "international life cycle", *unilateral*, or direct inward-to-outward connections play a significant role e.g. through import of machinery and technological know-how as well as raw materials and components in order to start production and international outward operations. *Bilateral* connections between companies exist when companies use foreign suppliers' networks for exporting, and/or use the distribution channels of the company's foreign importers for sourcing. The company gets an opportunity to gain detailed market specific knowledge of marketing conditions, central values held by the market participants, and structural features of the market. Lack of such experiential knowledge is often seen as a reason for failing in a market [Johanson and Vahlne 1977, 1990]. *Multi-lateral* connections are the most advanced form of connections, and interdependence of companies plays a central role, where both the buyer and the supplier play an active role as an initiator of the product development process. This will in turn affect sourcing decisions on the inward side, and sales/marketing decisions on the outward side.

Organizations and networks

A central issue in research about inward and outward internationalization is the development of both formal and informal business networks. The network approach appears to provide a useful framework for understanding the way in which inward-outward connections emerge and develop [Korhonen 1999]. The main assumption is that international business takes place in a network setting with three basic variables: actors, resources and activities. The different business actors are linked to each other through direct and indirect business relationships [Forsgren and Johanson 1992]. Because the parties gradually learn about each other's needs, capabilities and strategies, this process of interaction builds mutual trust and knowledge as well as an increasing commitment of resources to the relationship [Johanson and Vahlne

1990, Forsgren and Johanson 1992]. Networking places a new emphasis on personnel as a resource. Power, expertise, perceived integrity and social integration are often person-specific rather than firm specific [Thorelli 1986]. Survival of the network depends on continuing exchange activities, and such exchange crucially depends on contacts between individuals, even though they are parts of larger exchange networks [Welch and Welch 1993].

While inter-company inward to outward interaction has received some attention lately – especially the importance of early supplier involvement and supplier development – a problem for most companies is the very limited intra-company inward to outward communication between purchasing and marketing functions. For example, very few companies expect the purchasing department to support the company's marketing efforts by suggesting new business opportunities.

Korhonen [1999] identified several constraints to the creation of inward-outward connections, *inter alia* the increasing distance between and within units because of growing size and operations in several different locations, and hierarchical organization structures. Other constraints were the perceived clerical, low-status nature of the purchasing function and the increasing formality of communication between network actors. Several studies have emphasized the importance of personal, informal contact between people as the heart of networking activity [Håkansson 1982, Benito and Welch 1994a, and Marschan et al. 1996]. The same applies to intra-company relations, where cross-functional communication and personal relationships are essential in order to build a strong internal network within which inward-outward connections may develop. Such problems have probably been compounded in recent times due to the increasing complexity of the value chains of international industrial firms, and the need to develop formal procedures in order to capture information throughout the value chain in effective ways has increased accordingly. To operate successfully, it is essential to capture and utilize relevant formal information like customer feedback, demand

forecasting data, and supplier information, as well as informal information throughout the chain. That entails having an overall corporate strategy, management procedures and information systems to capture information flows, both internally and externally.

Creation of Organizational Knowledge

One of the central factors influencing the internationalization process of a firm is organizations' capability to learn. This is particularly important for business development in turbulent markets such as those in East and Central Europe since learning helps in reducing perceived uncertainty [Benito and Welch 1994b, Nieminen and Törnroos 1997]. Organizational learning also relates to specific market knowledge, which is acquired primarily through experience from business activities in the market. This experience is believed to generate new business opportunities, and thus plays an important role in the internationalization process of the firm [Johanson and Vahlne 1977, 1990].

One of the problems with knowledge that is acquired through experience in the market is that it often is, and remains, tacit knowledge closely linked to the person(s) involved in the specific events. In order for the rest of the organization to be able to utilize this information, it is necessary to convert such individual tacit knowledge into organizational tacit knowledge [Nonaka and Takeuchi 1998]. According to Nonaka and Takeuchi [1998] organizational knowledge creation takes place in a knowledge spiral where individual tacit knowledge is converted into explicit knowledge and then into organizational tacit knowledge. Only then can the organization as a whole truly benefit from the knowledge acquired in the market.

The tradition of Western management has been to think of knowledge as being something "explicit", which can be expressed easily in words and numbers and transferred to and shared with other persons. Japanese companies, on the other hand, seem to rely more on the assumption that most knowledge is primarily personal and subjective and therefore hard

to formalize and communicate to others. Such tacit knowledge requires certain conditions and actions in order to be useful to other individuals and the organization as a whole [Nonaka and Takeuchi 1998].

The key to Nonaka's dynamic model of knowledge creation is the social interaction between tacit knowledge and explicit knowledge [Nonaka 1994]. The creation of knowledge takes place in four different modes of knowledge conversion: *socialization*, *externalization*, *combination*, and *internalization*. Socialization is a process whereby the tacit knowledge of one person is shared and becomes tacit knowledge to another person. It can be viewed as the process of "on the job training" (from tacit to tacit). The second mode, externalization, involves the 'transformation' of tacit knowledge into explicit concepts or models. It is a process of conceptualizing our thoughts and images. Combination (explicit to explicit) can be viewed as a process of bringing the explicit knowledge from the individual level to the organizational level. This happens through discussing and combining several and different bodies of explicit knowledge that, in turn, will form new concepts and models that will yield results for the whole organization (such as corporate visions, marketing plans etc). The final mode is the process by which "new" explicit knowledge is internalized into individuals' tacit knowledge in the form of shared mental models or know-how, which again can be put into action. This is called internalization (from explicit to tacit).

The whole idea of Nonaka's knowledge spiral is to demonstrate the potential link between an individual's tacit knowledge and organizational knowledge through the four modes of knowledge conversion. Nonaka and Takeuchi [1998] argue that certain conditions need to be satisfied for the organizational knowledge creation to take place. First of all, an organization must have the intention to create knowledge according to the knowledge spiral. Second, all individuals in an organization must be allowed to act autonomously to motivate themselves to create new knowledge. Third, an organization must allow for "fluctuation and

creative chaos” to take place. Fourth, build redundancy of information into the organization, and fifth, requisite variety.

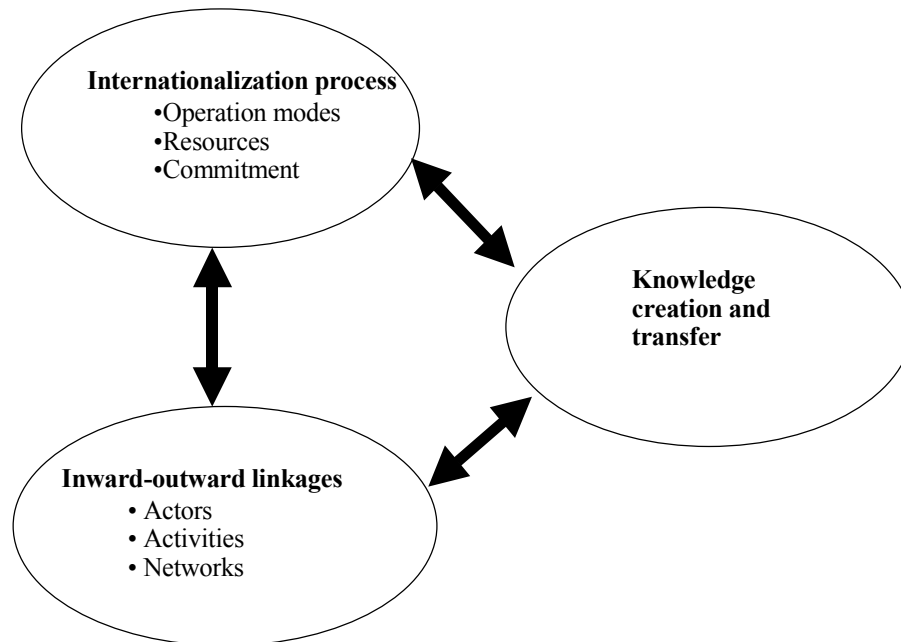
Conceptual Framework

The main objective of this research study is to explore the connections between inward and outward activities in the internationalization process of a firm, how such connections are developed, and how they can be utilized to create competitive advantage. We also seek to uncover the various factors that can hinder and/or encourage the nature and development of inward-outward connections. As presented in the conceptual framework (see figure 1) for the study, our discussion focuses on three main sets of processes: 1) the internationalization process of a firm, 2) inward-outward linkages, and 3) knowledge creation and utilization. As suggested in the figure 1, each of these processes has of course its particular characteristics, features, and sub-elements. Based on the extant literature, we argue that there is an important link between inward-outward connections and knowledge creation in internationalization.

The role of learning, and consequently of knowledge, is a key thread running through much of the literature on the internationalization of the firm. Johanson and Vahlne [1977, 1990] identify different types of knowledge that are important in the process e.g. knowledge about opportunities and threats in the different markets, market specific knowledge (how the market works) and general knowledge about customers and marketing methods. As pointed out by Penrose [1959], knowledge can either be taught (objective knowledge), or acquired through personal experience (experiential knowledge).

The previous discussion shows that the internationalization process of a firm is dependent on the gradual acquisition, integration and use of knowledge about foreign markets and operations.

Figure 1. Conceptual framework



A major challenge for firms involved in international operations is to utilize the existing body knowledge in the firm in the best possible way. Largely, the challenge is to turn individuals' tacit knowledge into firms' knowledge, and that challenge is compounded by the fact that individuals operate within organizational structures that are not necessarily conducive to information development and sharing. Strengthening the connections between a company's inward and outward operations could facilitate the organizational knowledge creation and transfer process since both parties are likely to possess market knowledge that the other might need. It can be seen as a means of letting the information flow internally, thereby increasing the overall organizational knowledge, which in turn would improve the entire internationalization process.

Method

Most studies investigating the internationalization process take macro (country, industry) or meso (corporation) level approaches, and do not really look at internal processes in the firm and how inward-outward connections are utilized. Korhonen et al. [1996] point out that in order to understand the nature and dynamics of inward-outward connections there is a need for in-depth case studies and in-process research. An emphasis on “in-process” investigations appears to be a suitable approach when analyzing decisions about operation methods given the importance of timing of events [Benito and Welch 1994a]. Past research has mainly used cross-sectional methods and static models making it difficult to correctly analyze and understand the complex and dynamic nature of internationalization. There is a call for more longitudinal research on these issues [Korhonen 1999].

The focus of the investigation was the development of operations in Russia by Moelven Industrier ASA, a Norwegian multinational. We decided to conduct an in-depth single case study since case studies explain events and deal with them over a period of time rather than with frequency of events [Yin 1994]. This enables the researcher to become deeply knowledgeable about a firm and thus allowing new insights about the topic to emerge [Chetty 1996]. Since most of the key personnel in Moelven’s Russian operations had been involved since the very beginning, we had a unique opportunity to trace nearly every step of this specific internationalization process with a relatively high degree of accuracy.

Yin [1994] outlines three principles to be followed in the data collection procedure: Use multiple sources of evidence, create a case study database, and maintain a chain of evidence. One of the strengths of case studies is the possibility of using multiple data sources, both qualitative and quantitative. We consistently used multiple sources of evidence (data triangulation), in order to enhance the construct validity of the research [Eisenhardt 1989, Patton 1990, Yin 1994].

The majority of the qualitative data was gathered through semi-structured in-depth interviews that took place in 1998 and 1999 at the company's HQ in Norway. This was also the main data source we relied on in the analysis of the case. All in all, 7 interviews were conducted with 3 persons in the top management of the case company. The key informants were chosen due to their active and important role in the development and management of the Russian operations. The interviews were mainly conducted with a semi-structured interview guide with open ended questions, one of which lasted for three hours and was tape recorded with permission. Two researchers were present in all interviews; one having the responsibility of taking field notes. In addition to the interviews public documents were also used such as annual reports, newspaper articles, press releases, and company magazines, as well as internal documents such as letters of intent, and various strategy documents, thus assisting in data triangulation. Throughout the analysis the authors consistently checked the data obtained from the interviews against these additional data sources. Using different data sources and data collection methods increased the probability that essential information was not left out, and served as a way to cross-check whether the data was correct.

The main data analysis largely followed a “program logic models” approach, which is a combination of pattern-matching and time-series analysis [Yin 1994 p. 118]. The pattern matching approach was used because the researchers wanted to discover the cause and effect pattern between the potential influencing factors. A useful mode for uncovering the different patterns is the use of cause-effect loop diagrams [Miles & Huberman 1994] and these were employed extensively used throughout the analysis. The drawing of cognitive maps (mental maps) of the ongoing process of internationalization based on the interview data, was used also to get a better overview of the connections between inward and outward activities of this firm.

Qualitative data analysis is often criticized by more “quantitatively oriented” researchers: lack of strict guidelines and the possibility of personal biases in interpreting the data are typical criticisms. It is also asserted that there are as many ways to analyze qualitative data as there are researchers [Eisenhardt 1989]. This may indeed cause problems, but it also allows researchers to investigate the data from quite different (and several) angles which might discover significant findings. Also, there are procedures to follow in order to reduce the potential problems outlined above. In addition to the importance of data triangulation, Patton [1990] discusses three other types of triangulation that help improve the quality of the research: Triangulation among different evaluators (investigator triangulation), triangulation of perspectives on the same data set (theory triangulation) and triangulation of methods (methodological triangulation). Considerable effort was made to ensure that the study was conducted according to these four triangulation types.

The Case

Company background

Moelven Industrier ASA is a Norwegian company that has been quoted on the Oslo Stock Exchange since April 1981. It is a quite large international actor in the timber industry. The company is organized into five divisions: Eurotimber, Eurowood, Interior Layout, Laminated Timber and Construction and Engineering. The company had about 2300 employees (1300 in foreign subsidiaries) and annual revenues of NOK 3.3 billion in 1998, at the time of the investigation. The company had subsidiaries in nine different countries, and the timber division alone exported to more than 30 countries in 1998.

Moelven began activities in Russia in 1993. The opening-up of Russia in the early nineties provided a totally new set of opportunities to Western companies like Moelven [Benito and Welch, 1994b]. Despite its considerable international experience, Moelven faced

a new, relatively unknown and turbulent market: it was as if they had to start their internationalization process from scratch.

Moelven's internationalization process in Russia

Moelven's decision to enter Russia was based on a long-term view with regard to both inward and outward activities. The company did, however, start with a limited level of imports before committing itself to heavier investments in its trading (import and export) capacity. As one key informant stated:

"We started to consider importing raw material from Russia back in 1986/87 as part of the continuous evaluation of potential supplier markets long before any outward activities were discussed. We did have a long-term perspective when we first entered Russia both for inward and outward activities. We intentionally started small-scale imports, partially to stabilize in the market and partially to learn and understand the market better before we made any heavy investments"

Another manager stated:

"The idea of starting exporting products to Russia came up before we actually started any import activities. The reason was the sudden fall in the domestic market for housing elements. With long international traditions, we knew that this entry process could be timely and since this was a new market for us, we decided to start slowly and learn."

Through that initial inward activity, Moelven established the first parts of a business network by evaluating potential suppliers and transportation alternatives, as well as developing relations with regional authorities. These relations were further enhanced by a JV in harvesting operations, through which Moelven gained valuable experience of the entire logistics chain as well as about potential Russian business partners.

The first outward move, in the form of a turnkey project, turned out to be an indirect result of their inward activity in Russia. The Norwegian government decided in 1993 to invest 40 million NOK from their Eastern Europe program to build officer's quarters for Russian officers withdrawing from the Baltic countries. After evaluating the tenders,

Moelven was chosen as sole contractor and the company started the project in 1996-1997. The project comprised the design and construction of sixty flats, and it was realized in cooperation with the local Russian contractor Energomastroy, the Military Design Institute, and The Leningrad Military District. On the question of whether he believed that Moelven would have got the contract if the company had not already been established in Russia (inward activity), the manager of Moelven Nor East answered:

“No, I don’t think so. The main reason why Moelven was chosen was that we had established activities in Russia. We had partner relations, and had the special competence in Nor East suited for such a project with the knowledge of logistics, infrastructure, customs and Russian authorities”

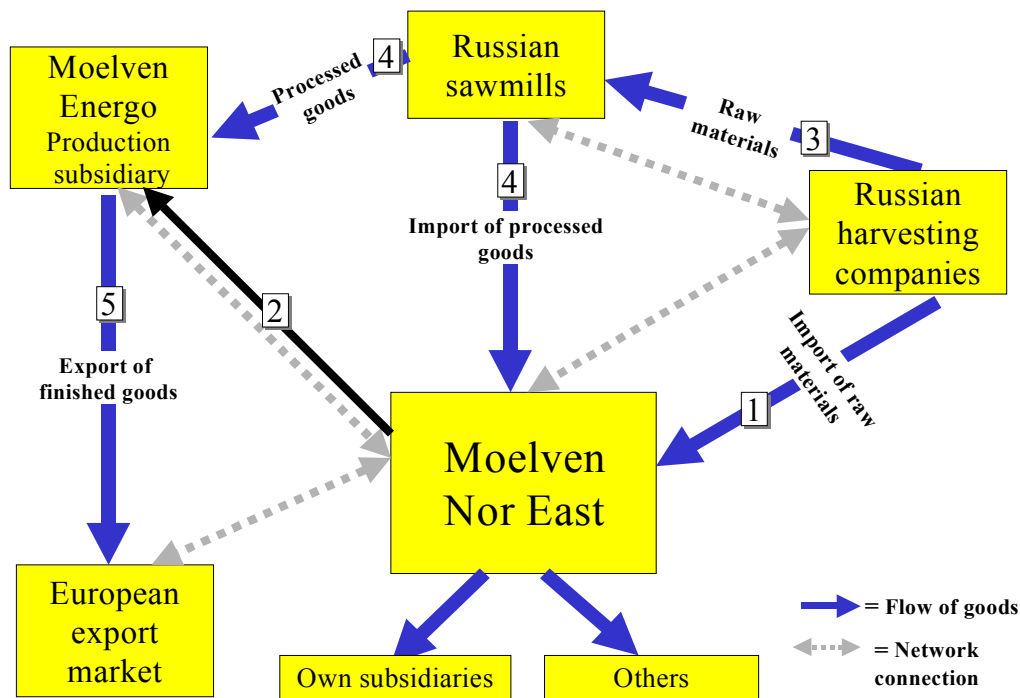
He further stated:

“The reason for choosing us instead of a competitor, was that we had shown that we were establishing in Russia with a long term perspective. Through the experience from import operations, we also had the necessary competence to handle the project in terms of customs, logistics and co-operate with Russian entrepreneurs”

The fact that the company was involved in inward activities seemed to lead the Russian authorities to acknowledge Moelven as a company with long term plans in Russia, rather than one just investing for a quick profit.

After some time, Moelven’s Russian business operations evolved further, starting with the establishment of Moelven Energo in 1997. This production subsidiary was a joint venture between Moelven, Energomastroy and the European Bank for Rebuilding and Development (EBRD), where Moelven had the technical competence, Energomastroy contributed buildings and local knowledge, and EBRD financial resources. The business network expanded, and created new business opportunities, both in terms of inward and outward activities. The gradual development of operations is shown in figure 2. The starting point in the figure is the initial import of raw material from Russian harvesting companies [1].

Figure 2: Inter- and intra-company inward-outward connections



The next step was the establishment of the production subsidiary [2], with the intention of producing for the domestic (Russian) market as well as for export. Moelven used their network connection with Russian harvesting companies to find potential suppliers of processed goods for their new production subsidiary, and got in touch with several capable Russian sawmills [3]. In addition to the supply of processed goods to their production subsidiary, Moelven also began importing processed goods [4] to their own subsidiaries in Norway and Sweden, as well as to other units in those markets. The domestic market for finished goods from the production subsidiary almost disappeared because of the economic conditions in Russia, and the subsidiary had to rely on European export markets for survival. The export contacts [5] were initiated through Moelven's business network and international experience, and saved the Russian subsidiary.

The various stages of the Russian operations described above illustrate an evolution of inward-outward connections. Starting as simple unilateral connections (e.g. imports of machinery and raw materials from independent suppliers), they evolve into bilateral connections (e.g. importation from company-owned foreign units), and then develop into multilateral connections (web of linkages created through interaction with different actors in various parts of the business network). The case also forms a good example of what Korhonen [1999] calls the “snowball effect”: impulses from inward or outward activities by some network actors create opportunities for other network actors, and interdependence between actors or network activities play a central role.

An important organizational aspect is the way Moelven organized its Russian activities. Moelven Nor East is organized as a cross-functional management team, covering all aspects of operations in Russia, including the development of both inward and outward activities. In addition to the cross-functional management team, the Russian business units are organized as subsidiaries of Moelven Nor East. This makes it easier to utilize all accumulated knowledge as well as the different types of information coming into the organization regarding new business opportunities.

Findings

Benefits of inward-outward connections in knowledge creation

Analysis of the Moelven case data revealed several potential benefits from utilizing connections between inward and outward activities in a firm to create company knowledge, namely: more and improved access to market knowledge, expanded business network, more business opportunities, improved quality (performance) of new operations, reduction of time spent on the establishment phase of new operations, and risk reduction.

One particular positive aspect of using inward-outward connections was the improved quality of the outward activity because Moelven made use of available knowledge and information from its international setting. The time needed to establish successful operations would seem to have been reduced, because existing market knowledge helped the company to avoid problems that may not have been visible to less experienced actors. On a direct question about whether the early inward activities helped in reducing the time needed to get first the Russian outward operation under way, the general manager of Moelven Nor East answered as follows:

“Yes, it helped due to the fact that we had an ongoing business in the area...We had made some pre-payment agreements on raw materials through several years, which created trust and they knew we were there with “serious” intentions. This was very important and positive in the process of getting support from the governor in Leningrad when we started the Luga project (Moelven’s first outward move). One might argue that Russia is a “large” country, but it is also very “transparent”. What you do in one situation will come back one way or another. If you make a bad impression you will face problems later, but if you make a good impression it will help you and facilitate the process of future projects”

The manager also argued that the turnkey project would probably not have ended up with Moelven as contractor if the company had not been involved in Russia beforehand. This statement clearly shows some of the benefits of previous inward activities for the particular project. Not only did it help, but the previous inward activity was probably the decisive factor for getting the contract.

It was also mentioned, by another manager, that from experience, Moelven knew that some years of solid inward activity would provide the company with very valuable market information. In addition, the personal network obtained through the inward activities would facilitate the process and reduce the risks involved in outward operations in Russia considerably.

The risks of getting involved in heavy investments in Russia have proven to be considerable. Many Western companies have failed and felt the tough reality of this turbulent

market. Inward international activities, however, usually involve smaller investments and less risk. They can therefore be a good alternative for acquiring market knowledge and information, while at the same time provide valuable inputs to domestic production through sourcing of raw materials, components or technical know-how [Gadde and Håkansson 1993, Welch and Luostarinen 1993]. Such knowledge and information can later become very valuable in the screening process of potential business partners as it reduces the chance of making typical “newcomer mistakes” with respect to legal issues, cultural differences etc.

One aspect that was stressed by the managers was the importance of showing the Russians (both businessmen and government), that the company had serious intentions. The company focused on value creation for the Russians locally (through the sourcing activity), instead of exploiting the market without any contribution. By showing this, Moelven developed valuable goodwill in Russia, with respect to governmental institutions as well as potential business partners.

The case findings indicate that strategic choices regarding location and operation methods change over time due to experiential learning and the expanding business network. The very first operations, both for inward and outward activities were limited due to lack of knowledge. However, after acquiring better knowledge of the market and the market opportunities due to the expanding network, the company reallocated its activities and resources to new and better areas, and operations grew in complexity.

Utilization of Knowledge

Moelven has long international traditions and know how to value and make use of previous international experience when entering new markets. All interviewees acknowledged the fact that previous international experiences were actively used in later internationalization processes.

However, even though inward-outward connections were identified in the study, and the company actively and extensively utilized experience and knowledge from previous operations, there were no guidelines from the HQ on how to formalize or transfer this knowledge. In fact, the connections seemed to be rather spurious in nature and were often created within a network or due to the organizational characteristics of their Russian operations.

The transfer of knowledge was taken care of through a strong internal Moelven network and, because most senior managers had been in the company for many years, they had detailed knowledge of most parts of the business. Thus, much of the international knowledge and experience was tacit, and resided in the employees of the company.

It seems that most of the knowledge creation that had taken place in Moelven's Russian operations can be linked to what Nonaka and Takeuchi [1998] called socialization. That is, a transfer of one individual's tacit knowledge to another individual's tacit knowledge but not to the organization as a whole, thereby limiting organizational knowledge creation. This is best illustrated by describing what happened when one of the other business units of Moelven wanted to set up a subsidiary in the northern parts of Norway, primarily to export products to Russia. The business unit manufactured pre-fabricated housing modules, and wanted to explore the potential market emerging from the oil exploration in the Northern parts of Russia. During the interview, the authors asked the manager of Moelven Nor East whether this subsidiary was part of the overall strategy of developing Moelven's position in Russia. He gave the following answer:

"That was probably the intention, but I was never involved in this process and I was never asked to present my opinions"

That particular subsidiary had weak links to Moelven's other Russian activities (Moelven Nor East), including a lack of formal or informal communication lines. Without any formal guidelines for utilizing potential sources of knowledge, together with a lack of

network connections between the two business units, Moelven Nor East (the Russian “specialist” company) was never asked to give any comments, information or recommendations regarding the establishment of this new subsidiary. This resulted in a loss of important information for the company as a whole, and the subsidiary may therefore have been established based on incomplete information. As it turned out, it was difficult to export to the target region because of import restrictions on. The information was available within the Nor East organization, but never requested.

Information flows

In general, information flows into an organization concerning international business opportunities come through the boundary-spanning functions of the firm. In the case study these functions were identified as drivers of inward-outward connections.

The findings indicate that there is substantial potential for organizational knowledge creation by connecting a firm’s inward and outward activities. The process is, however, too often stopped by the lack of company guidelines to fully exploit an existing potential. As a result, knowledge transfer frequently takes place purely by coincidence. Such guidelines could be to have routines that seek to transfer individual’s tacit knowledge into organizational knowledge.

It seems evident that knowledge creation is likely to occur when a company’s marketing function and its purchasing function are effectively linked. One example could be for marketing to use the company’s foreign supplier networks for export of products, or for purchasing to use the company’s marketing network to identify potential suppliers; similar to what Korhonen [1999] identified as bilateral inward-outward connections. Another example is through reciprocity in buyer-supplier relationships, where the organization starts buying

from a supplier that is also a customer, or starts selling finished products to a supplier [Ellram and Birou 1995].

Knowledge Creation through Inward-Outward Connections: A Framework

As shown in the case analysis, communication and information flows between different units within the firm, as well as externally, are believed to be decisive in the creation and application of inward-outward connections within the company. It is logical that information and knowledge obtained during any activity in the company's value chain need to be transferred to the right people in order to be utilized in subsequent activities. Creation of knowledge from inward-outward connections is therefore generally believed to take place within a network setting [Korhonen 1999]. The question is how a firm goes about gaining maximum value from the knowledge it controls within its network, and what factors facilitate and/or hinder such value creation.

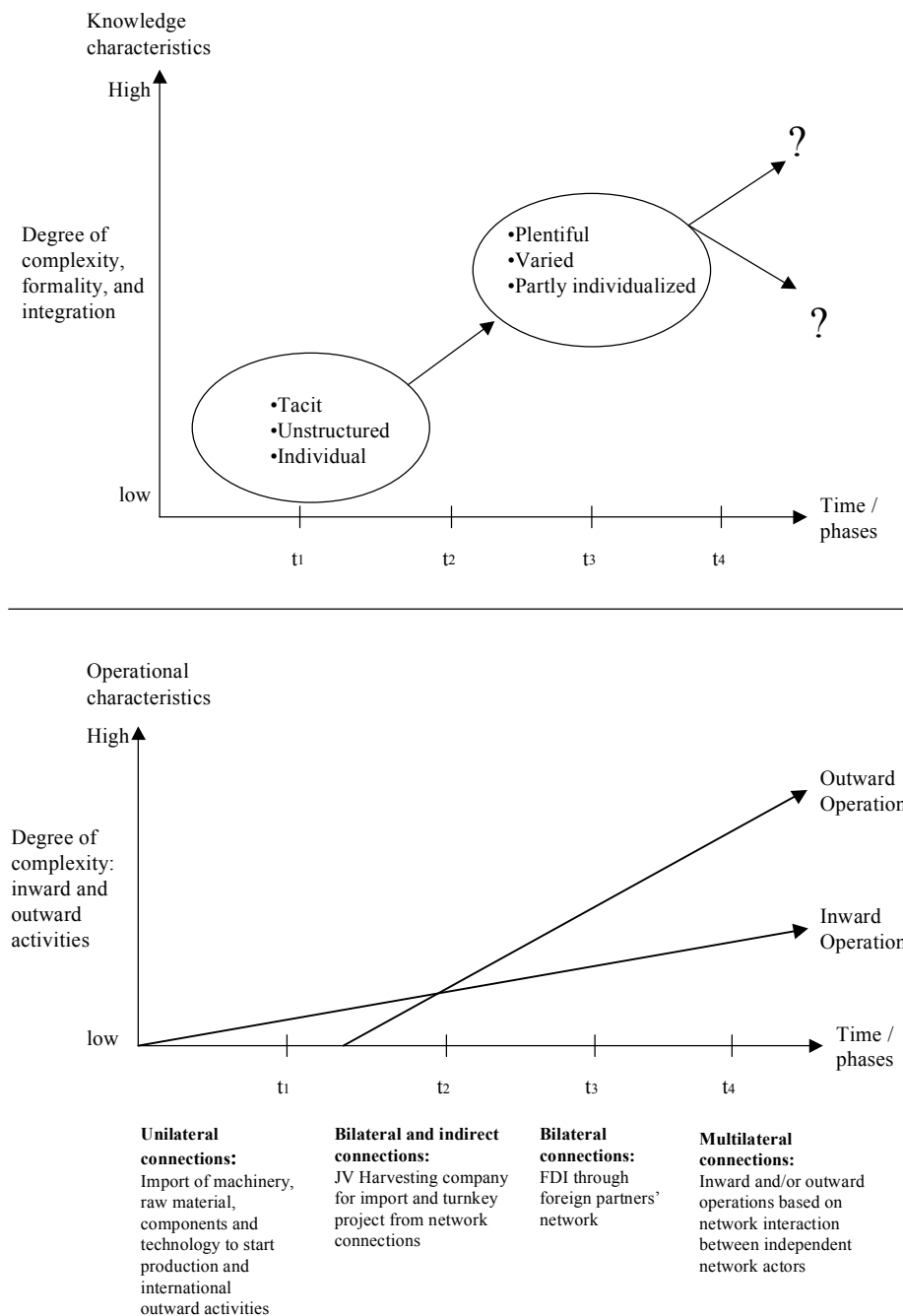
A company can create knowledge in different ways. Much can perhaps be learned by studying the way Japanese companies design organizations and define managerial roles. One fundamental principle is to build organizational redundancy, through a conscious overlapping of information, business activities, and managerial responsibilities [Nonaka 1991, 1994]. Redundancy is important because it encourages frequent communication and dialogue. Nonaka [1991] suggests that one way of building organizational redundancy could be through free access to company information, or through strategic rotation between different areas of technology and different functions such as R&D and marketing. Rotation between different functions helps employees to understand the business from a multiplicity of perspectives. Nonaka [1991] further states that creation of new knowledge is the product of dynamic interaction between frontline employees engaged in particular technologies, products, or markets. Also important is that organizational knowledge creation takes place through four

modes of knowledge conversion [Nonaka and Takeuchi 1998]. Therefore, it is important that companies have guidelines and are organized in such a way that the process does not stop at the first mode (socialization) which may be the case for most Western companies. Figure 3 gives an overview of knowledge creation through inward-outward connections in the internationalization process.

Conclusions and Future Research

The purpose of this study has been to generate in-depth knowledge on the phenomenon of knowledge creation, with an emphasis on the potential role played by inward-outward connections in the internationalization process of a firm. Research on the internationalization of firms has been criticized for its neglect of inward operations, and hence of the underdeveloped understanding of the complexity and dynamic nature of internationalization. Inward-outward connections in a company can explain movements from one stage in the internationalization process to another, but also phenomena such as deviations from expected patterns which are not easily explained by traditional internationalization models [Johanson and Vahlne 1990]. Several studies show that the inward and outward sides of a company's international activities are largely intertwined [Axelsson and Håkansson 1984, Ford 1990, Hallén 1982, Korhonen 1999, Welch and Luostarinen 1993]. Focusing on only one aspect will thus make it difficult to understand the complexity of the internationalization process. Given the identified importance of inward-outward connections in the internationalization process of the firm, future research should focus on learning more about organizations in which these connections develop and how companies can avoid the identified constraints. One contribution from this study is the identification of factors that can influence the creation and utilization of inward-outward connections. However, little research has been conducted on this issue and it is important for future research to investigate whether the findings are generalizable beyond this case.

Figure 3. Inward-outward connections



This study has furthermore pointed out the importance of formal and informal business networks for utilizing knowledge created from inward-outward connections. Future research could look into the driving forces behind knowledge creation in successful person

and organization centered networks and how inward-outward connections are identified and taken advantage of within the network setting.

Finally, to obtain a better understanding of how inward-outward connections function and evolve, it appears particularly important to investigate the development of the purchasing function throughout the internationalization process, and how that development contributes to the competitiveness of companies. Much evidence is found regarding the importance of inward-outward connections at the early stages of the internationalization process, but the connections seem to become muddled, or even disappear, as organizations grow. It would be interesting to see whether the recent attempts at upgrading the purchasing organization from being a clerical function to becoming an activity of strategic importance has had an impact on the identified constraints to inward-outward connections.

Managerial Implications

This study has shown that a firm can benefit from the knowledge created through connecting its inward and outward activities in the internationalization process. Such connections may result in increased foreign market knowledge, reduced risk and uncertainty, an expanded business network and reduction in the time required to establish new international operations – in general, assisting in the development of international operations. As a result companies should include inward internationalization as part of their overall internationalization strategy to fully exploit the international potential that lies within the company.

One important reason why so many connections between inward and outward activities were identified in this company case, was the perceived strategic importance of Moelven's purchasing function. Traditionally, however, the purchasing function has been viewed as a clerical function, which Korhonen [1999] found to be a constraint on the creation of inward and outward activities. The framework presented here emphasizes the need for the purchasing and marketing departments to communicate effectively if knowledge from

inward-outward connections is to be successfully created and transferred. This implies that the purchasing function must become strategically more important in the firm. This is, however, easier said than done, and might involve a range of organizational changes – for example, in personnel, training and structure. Further, our research suggests that other units in a company, such as R and D and production also may play an important role in knowledge creation through inward-outward connections. In order to fully utilize the potential benefits, it is important that all contributing actors are included in the process. The case findings indicate that much of the information and knowledge gained from inward-outward connection is retained by individuals in tacit form, and not properly documented. As a result, the threat of losing important knowledge and information should one (or several) of the key employees leave the company is considerable. In such circumstances, companies need to take action to secure their information and network base, through such measures as information debriefing and related database development to store important information, and strategic staff transfers to broaden network and information links.

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