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- Cluster as a facilitator -

“The case of the Maritime cluster in Møre og Romsdal”

- BI Norwegian Business School – Thesis-

Hand-in date:

03.09.12

Campus:

BI Norwegian School of Management, Oslo

Exam code and name:

GRA 1902: Thesis Report

Programme:

MSc International Management

Supervisor:

Prof. Rolv Petter Amdam

“This thesis is a part of the MSc programme at BI Norwegian Business School. The school takes no responsibility for the methods used, results found and conclusions drawn.”

Acknowledgements

This paper is written as a part of the Master of Science degree within International Management at the Norwegian Business School, BI. The study is a subproject of the MarCO project "new modes of collaboration in the Maritime industry" where Rolv Petter Amdam and Jon Erland Lervik serve as project managers.

The work related to this study has been very interesting and informative. It's reasonable to state that it has provided the authors with great insights both within the literature and the certain industry.

There are many involved, we would like to thank for ongoing support throughout the process of writing this master thesis. Firstly, we would like to thank our supervisor Rolv Petter Amdam, for his support, interesting views, patience, and for always being able to answer our questions. We would also like to thank Jon Erland Lervik for interesting thoughts and ideas related to this study.

We would also like to use this opportunity to thank the MarCO project and all the associated institutions and organizations for being a part of this exciting and interesting project. We are grateful for all the companies which participated in this paper, which were open and generous throughout the project. They provided all a lot of experiences and reflected views related to the current matter which gave us a great understanding of how a well-known cluster facilitates and support firms through and during their internationalization process.

Finally, we would like to thank all of those who have helped us, giving us advice, insights and comments, and made it possible to write this master thesis.

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1. Introduction to the research topic:

The Norwegian Maritime sector is one of two milieus, alongside the Oil & Energy sector in Stavanger, where Norway has a strong and complete national cluster that is globally competitive. We find reasons to believe that the cluster acts as an important factor that enables the firms within the clusters to conduct a successful foreign market entry. Our thesis will be focused on the integration of Norwegian maritime firms in local clusters where we emphasize on the cluster's role when clustering firms explores the opportunity of going into foreign markets.

The aim of the project is to «develop knowledge around key strategic challenges for industry actors in how to manage value creation and knowledge sharing in geographically dispersed industrial networks». The maritime industry is rapidly internationalizing, and as the Norwegian Maritime Cluster is globally competitive, we see that more firms need input from other regions, and other types of firms in order to remain globally competitive. The objective is therefore to develop knowledge, as well as methodologies, in order to improve Norwegian maritime firms' competitiveness in the international marketplace.

Another objective of this paper will be to develop knowledge on how the maritime cluster can absorb knowledge, learning and a higher degree of commitment from the various customers through the internationalization process. The strategic side of the internationalization process, on how firms should enter foreign markets in order to successfully absorb and acquire knowledge, will be examined.

1.1 The field of study

This study aims to reveal how a well-reputed cluster can function as a facilitator for clustering firms in the process of internationalization. We will determine some of the most important constraints firms are facing when entering foreign markets. The main purpose of the thesis is to examine how the clustering firms can benefit from being a part of a cluster, and how the cluster could act as a facilitator for firms within the cluster. We have for the purpose of this research chosen to conduct a case study of the maritime cluster of Møre og Romsdal. This cluster is

highly interesting, as the cluster consist of several companies that have established subsidiaries and agents throughout the whole world. We find reason to believe that the cluster act as a very important factor that enables these firms to conduct successful market entries.

1.2 Clusters

This section will present a brief introduction on the concept of clusters. The economic map of the world today is dominated by what Porter calls clusters; “critical masses – in one place of unusual competitive success in particular fields” (Porter M. , 1998).

What happens inside companies is still important, but the theory reveals that the immediate business environment outside these companies, namely the cluster, plays a vital role. In order to explain the phenomenon with words, Porter (1998) argues that clusters are “geographic concentrations of interconnected companies and institutions in a particular field” (Porter M. , 1998). They are also described as geographically integrated companies and associated organizations that share technological know-who, knowledge, skills, competencies and resources (Navickas.V, 2009). Navickas (2009) argues that specialization is an exceptional feature of cluster companies: they operate in vertically integrated fields in order to achieve economies of scale and improve their profitability.

It is reasonable to state that much of the work related to clusters is based upon Porter`s (1998a) studies. Rivals compete intensively to win and retain customers. Porter (1998a) further states that without vigorous competition, a cluster will fail. Yet there is also cooperation, much of it vertical, involving companies in related industries and local institutions. Competition can coexist with cooperation because they occur on different dimensions and among different players (Porter M. E., 1998a). Universities, standard agencies, research institutions and trade associations are a few examples in fields that compete, but also cooperate with each other. This statement is supported by Companiaris et al (2011) which argues that clusters can be characterized as groups of independent companies and institutions which cooperate and compete, are geographically concentrated, and are specialized in a specific industry. However, Porter (2000) argues that most cluster participants do not compete directly, but serve different industry segments.

Clusters share many common needs and opportunities and encounter many common constraints and obstacles to productivity. A common understanding among various researchers are that clusters are geographically integrated companies and associated organizations that share technological know-how, knowledge, skills, competencies and resources (Navickas, 2009) (Porter M. E., 1998a) (Enright, 2005).

1.2.1 NCE Maritime

The industry of interest is the Norwegian Maritime Cluster, located at Møre og Romsdal, Norway. The regional Maritime Cluster in Møre og Romsdal “fosters innovations in the design, engineering and construction of offshore and specialized vessels, creating a global niche through a focus on product innovation and management of complex projects” (Maritime Collaboration, 2012).

The regional maritime clusters in Norway may be seen as dynamically changing over time. One of these changes is gradual globalization containing increasing interaction with firms from other clusters. Central actors in the maritime industry are increasing their international presence. Jets have approximately 94% of revenues outside Norway. STX Europe (Former Aker Yards) owns shipyards in France, Romania, Ukraine and Vietnam. Ulstein Group ASA has subsidiaries in Brazil, Slovakia, Poland, Netherlands, Turkey and China. The focus has shifted towards design and engineering, whereas ship building is increasingly outsourced to partner yards in e.g. in Poland, Ukraine, Dubai, Brazil, Spain and China. The industry also observes increasing inward foreign direct investment as foreign firms acquire or merge with local firms. (Maritime Collaboration, 2012)

1.2.1.1 MarCO - "New modes of collaboration in the Maritime industry"

MarCO can be described as a collaboration-oriented project within the cluster, established to create a better foundation for companies within the cluster. The project is completely funded by the MarOFF Program, and under the supervision of the Norwegian Research Council.

The aim of the project is to develop research-based knowledge and alternative modes of operations which in the future can contribute to increased knowledge

and information sharing among the represented companies within the cluster. Another objective of the research project is to find out whether increased sharing and synergies among the companies contribute to creation of further development of the clusters competitiveness both domestic and internationally (Maritime Collaboration, 2012). The organizations behind the project are Molde University College, Norwegian Business School BI, and Møre Research, Molde. There are also three participating firms included in this research, all part of the NCE Maritime Cluster of Møre og Romsdal. These three are Jets, Tingstad, and Ulstein Group.

2. Research question

Based on the above information, we have proposed the following research question:

To what extent can a well-known cluster act as a facilitator for firms, when exploring the opportunities of expanding internationally?

3. Literature review

3.1 Cluster theory

As a consequence of changing environments with globalized competition and increasingly complex economies, it is reasonable to believe that the area of clustering theory and the possibilities lying in this phenomenon is increasingly important for firms operating in the market today.

A cluster is by various researchers characterized as an innovative and unique phenomenon. Svetina et al (2005) argues that a cluster is markedly different and much more complex than the traditional organization. Profit and non-profit organizations, companies that are competitors, as well as companies that are engaged in buyer-supplier relationships are brought together by clusters. As a result of increased interest in microeconomic conditions for generating growth

and prosperity, clusters has been recognized as an important instrument for promoting industrial development, innovation, competitiveness and growth (Svetina. Cotic, 2005). Porter (1998a) and Navickas et al (2009) build on this statement and argues that clusters include a much wider range of organizations, such as academic, financial and government institutions. Those elements lead in some ways to specialized training, education, information, research and technical support (Porter M. E., 1998a) (Navickas, 2009). The geographic scope of a cluster can range from a single city or state, to a country or even a group of neighboring countries (Porter E. M., 2000). Further, Porter (2000) states that many clusters also include trade associations and other collective private sector bodies that support cluster members (Porter E. M., 2000).

Sølvell et al (2003) states that for a cluster to successfully develop it is not enough to determine a good strategy, it is also important to follow and fulfill the strategic goals, believe in them and be competent enough to realize them. Edelman et al (2004) argues that specialization is an exceptional feature of cluster companies. According to Svetina et al (2005) organizations within a cluster have their own corporate cultures and follow their own strategies. All of this demonstrates that there may be some differences in a cluster as opposed to a traditional organization. Clusters are considered to increase the productivity with which companies can compete, nationally and globally. Menzel et al (2009) states that companies within a cluster experience stronger growth and faster innovation than those outside clusters.

According to Navickas (2009) companies within a cluster can take advantage of various resources. In order to highlight some of the advantages Navickas (2009) focuses on the following factors: Cost economy, a factor which concerns the process cluster companies undergoes when struggling to minimize their costs through specialization, as they make use of their key competencies and choose only the cheapest and most efficient production alternatives. Another advantage highlighted by Navickas (2009) is the increased focus on shared knowledge and learning. Thus, they can advance in technical, financial, R&D, marketing and other fields of competence and increased specialization. This specialization increases the clusters ability to enable smaller companies to specialize, and promotes cooperation among the clustering firms (Navickas.V, 2009).

According to Porter (2000) what has been missing, both in theory and in practice, is an understanding of the tight relationship that exists between clusters and competitive strategy at the firm level. Porter (2000) argues that “forging this relationship can shed new light on the influence of locations as well as the role of government in economic development.” Furthermore, Porter (2000) argues that the configuration and the role of clusters seem to be taking on a new character as competition globalizes and economies become increasingly complex, knowledge-based, and dynamic. The presence of clusters suggests that much of competitive advantage lies outside a given company or even outside its industry, residing instead in the locations of its business units. Svetina et al (2005) state that the main characteristic of a cluster is that it brings together firms, R&D institutions, universities and organizations within the public sector. This enables them to gain several competitive advantages which are not available for firms not located in geographical concentrations.

3.2 Cluster effects

Competitive advantage is a commonly used phrase in the business field of research, and thus becoming crucially important for firms operating in today’s globalized market environment (Lin, Tung, & Huang, 2006). These competitive advantages can derive from a number of sources, like superior service products, lower costs, or tacit knowledge. The main issue for firms is to create a competitive advantage, and then make them sustainable. Being a part of a well-known cluster could facilitate this process, making it easier for firms to create and develop a competitive advantage.

The theory of economic development based on industry clusters hypothesizes that the co-location of firms or industries that complement each other, compete against each others, or share common resources leads to increasing return to scale (Hill & Brennan, 2000). This is called *cluster effect* which can be characterized as one of the most important elements a company can derive from being a part of a well-known cluster.

Porter (1990, 1998, 2000) argues that a cluster could facilitate and increase the competitiveness of the actors within a cluster on the basis of four main interacting

factors. These four are “firm strategy, structure, and rivalry; demand conditions; related and supporting industries; and factor conditions (Porter E. M., 2000)”. However, according to Lin et al (2006) the cluster effect can derive from four different factors; manpower flows, technology flows, money flows and market flows. Based on these four factors the competitive advantage could contribute to higher competitiveness both within a certain firm but also, more importantly, to the cluster as a whole.

Furthermore, Lin et al (2006) claims that productivity, innovation capability, and new enterprise formation are competitive advantages achieved by industrial clusters mainly due to the abovementioned cluster effects. Other researchers have also explored different competitive advantages that stem from cluster effects. Cluster effects could lead to “an increased human resource quality, technological knowledge, capital, faultless infrastructure and foundation of technique (Porter M. E., 1998), university and R&D center (Olson, 1998), and entrepreneurial spirit (Bahrmi, 1995)”.

Dayasindhu (2002) confirms that technology transfer and building strong relationships between complementary organizations facilitates the formation of industrial cluster and improves competitiveness. Furthermore, Dayasindhu (2002) claims that the goal of an industrial cluster is to make their constituent organizations globally competitive (Dayasindhu, 2002). This is also in line with Porter (1998), and Brennan and Hill (2000) who argues that competitiveness could be achieved in three ways, all which a cluster could help facilitate, namely increasing organization productivity, driving the direction and pace of the innovation, and stimulate new organizational institutional growth through approaching internationally related markets.

Over the next pages we will examine the cluster effects that we find the most important for a clustering firm when internationalizing.

3.2.1 Cluster reputation

A cluster reputation refers to the esteem in which a particular cluster is held by various constituents for its expertise in the specific field practiced by the interconnected firms and institutions of a specific locality (DeMartino R. E., 2006), and is considered as one of the most strategically significant resources of a

firm (Fombrun, 1996). When a firm lacks corporate reputation, which is one of the most valuable intangible assets of a firm, in some circumstances they can lean on the reputation of the cluster they are part of.

Porter (1998) builds upon this and argues that one of the ways in which cluster membership can assist a firm in its internationalization efforts is through cluster reputation (Porter M. , 1998) (Porter E. M., 2000). DeMartino et al (2006) presents two different ways through which a solid cluster reputation can assist firms, particularly small and medium-sized enterprises (SMEs), in their internationalization efforts. First, a solid cluster reputation can directly assist SMEs in dealing with the resource constraints they face, while going international, such as lack of capital, and lack of international business experience. DeMartino (2006) further argues that cluster reputation has a direct positive impact on the internationalization process of firms reducing their managerial, financial, and competitiveness constraints. Second, a solid cluster reputation can indirectly assist the internationalization of cluster firms by enabling the cluster to attract valuable resources that sooner or later local firms can draw on (DeMartino, 2006).

The reputation of a cluster has a historical aspect, therefore, the reputation of a cluster at a given point in time impacts the future accumulation of other factors in the cluster, such as specialized personnel and technological infrastructure (DeMartino, 2006). Members of a cluster can then share the advantage of being considered experts in a specialized field. Clustering firms gain this reputation not necessarily because they have used resources to build it over time on their own, but because the cluster they operate in hold this reputation in the domestic and international market. Suchman (1995) argues that from the perspective of legitimizing the firm in the customer's eyes, cluster reputation can save the firm the expenses involved in building a reputation of its own (Suchman, 1995). According to De Martino (2006) information availability is another way in which the cluster has an impact throughout the internationalization of cluster firms (DeMartino R. E., 2006). In a sense, cluster reputation attracts information to the cluster, regardless of which firm receives it or where it ends up. This occurs because international firms on the lookout for purchases or alliances will start their search in areas that is known for their expertise within a specific field (DeMartino R. E., 2006).

The theory asserts that being a part of a well-known cluster contributes to be beneficial both for small and large companies throughout their internationalization process. This mainly as several international companies have some sort of assurance that they are established and doing business within a scientific strongly anchored cluster. Additionally researchers point out that a company with a well-known reputation may gain some competitive advantage, for example being able to set higher prices on their products, services, attract qualified employees, and generate greater customer loyalty (Rose, 2004). However, the literature are two folded in this case, as some literature asserts that corporate reputation also seems critically important for an organization regardless of company size (Rindova, 2005), while other researchers express that a cluster reputation could be seen as more beneficial for small, medium sized companies (Peteraf, 1993). Peteraf (1993) further considers small companies as more dependent on the cluster reputation and states that a cluster reputation can be considered as a strategic organizational resource that is capable of generating a sustainable competitive advantage for small medium sized companies.

3.2.2 Cluster knowledge

By various researchers knowledge is described as facts, information, and skills acquired through experience or education. According to Nonaka and Takeuchi (1994) researchers often distinguish between two types of knowledge; explicit and tacit, in order to understand organizational knowledge. Explicit knowledge is knowledge that has been or can be articulated, codified, and stored in certain media. A practical example of this could be data bases which contain a lot of information, but need tacit knowledge to be understood and analyzed. Tacit knowledge is the opposite of explicit knowledge, and could be defined as “practical knowledge, that cannot be expressed or declared openly, but is implied or simply understood, and is often associated with intuition (Wagner & Sternberg, 1985). Tacit knowledge is learned through collaborative experience and is difficult to articulate, formalize, and communicate (Nonaka & Takeuchi, 1994).

Cluster knowledge is the ability the cluster has to develop and share the knowledge among the participant in the given cluster. Cluster knowledge is by various researchers characterized as one of the most important features of being a part of a well-known cluster (Porter E. M., 2000). Learning and innovation is a

result of an interactive processes in which different actors come together to collaborate in solving particular problems (Bathelt, 2004). According to Lorenz (1996) a given cluster need to develop sustainable shared knowledge. Additionally they need both to have a productive system which allows individuals to co-ordinate their actions and to share thoughts in order to overcome the technological and/or organizational problems that may arise. This is called a regional collective learning, which could be seen as the cluster's ability to develop, learn, and share knowledge among its members (Lorenz, 1996).

According to Eriksson et al (1997) is one of the major concerns with the internationalization process to obtain sufficient access to market knowledge (Eriksson, 1997). One of the problems with knowledge is that it is often a concept of learning by doing, and therefore difficult to acquire in advance (Karlsen, 2003). Coviello (1999) argues that there are network relations between firms, which they might take advantage of when internationalizing. This information exchange might lead to companies coming across particular pieces of information which is needed in their own internationalization process (Coviello, 1999).

3.3 Knowledge development

This section contains information about two important features of cluster knowledge, namely knowledge development and shared knowledge. There are reasons to believe that information about how a given cluster develops knowledge and how knowledge and information is being shared among the various actors is highly important when focusing on a firms internationalization process.

According to Grant (1996), knowledge ranks first in the hierarchy of strategically relevant resources (Grant, 1996). The importance of the knowledge for a given firm is a matter of how sustainable and easy it is to imitate the knowledge by rivaling companies. It is reasonable to state that the more difficult it is for rival firms to imitate the knowledge, the greater is the competitive advantage related to the knowledge (Lippman & Rumelt, 1982). Tacit knowledge is of great importance since the key personnel have acquired the needed skills and competences to apply the tacit knowledge among the co-workers. This gives the company a great opportunity to keep the knowledge within the organization or eventually within the cluster.

Knowledge is often developed within the firm and most often related to the ongoing activities aimed to extend the existing internal knowledge pool (Clark & Tracey, 2004). This knowledge pool act as an important source for further knowledge development since it makes the process of sharing valuable knowledge and experiences among the other clustering firms less complicated. Researchers have conducted studies related to the link between knowledge sharing and the size of a given firm. The fact is that proportional to the size of the company, the sharing of information and knowledge across sections and employees decreases. This mainly as a consequence of increased need for expertise within the various operating markets (Bathelt, 2004). According to Menzel et al (2009) localized learning, meaning knowledge creation and exchange, happens due to two factors. The first is that knowledge creation and exchange is rooted in the cultural, institutional, and social structures of particular places, namely within the cluster (Menzel & Fornahl, 2009). The second one is monitoring, observation, and assessing the behavior of other firms, and social contacts through labor mobility (Menzel & Fornahl, 2009).

According to Young (1928) a group of firms can develop knowledge more rapidly than of any single member of that group. This leads to a growth of knowledge, and further economic development for the group, in this case a cluster (Young, 1928). A solid and efficient system for both developing and sharing knowledge within the firm could in other words be a competitive advantage for the cluster as a whole, making it easier and less costly for clustering firms to acquire information from both formal and informal networks (DeMartino R. E., 2006). Additionally could this provide clustering firms with a great advantage in terms of going abroad, as the cluster could provide insights and experiences about the given markets.

3.3.1 Knowledge sharing

Knowledge sharing is by some scholars referred to as knowledge exchange. Knowledge exchange takes place in various ways within the cluster. The most common ones, according to Tallman et al (2004), are technology spillovers which consist of informal exchange and movement of people (Tallman, Jenkins, Henry,

& Pinch, 2004). This shared knowledge basis enables cluster firms to continuously combine and re-combine similar and non-similar resources to produce new knowledge and innovations (Bathelt, 2004). Malmberg et al (1999) argues that this stimulates economic specialization within the cluster and result in the development of localized capabilities which are available to cluster firms (Malmberg, 1999).

As a result of geographical proximity, communication between cluster members is strengthened and the exchange of knowledge is intensified. Codified knowledge is easily transferred through different communication media, which often results in exchange of informal – tacit knowledge. The senders (and receivers) might not be aware of the relevance of this information (Bergman, 1999). This randomized information flow is transformed into a meaningful context through tacit knowledge. As it constitutes part of the assets of cluster companies, tacit knowledge is bound to geographic locations. Tacit knowledge enhances trust between cluster members and together with trust it represents the intangible assets of the cluster. Locating within a cluster brings further advantages that are not available to firms situated elsewhere (Bathelt, 2004).

In order to explain the advantages firms derive from locating within a cluster, Bathelt et al (2004) distinguish between the horizontal and vertical dimensions of a cluster and identify the advantages of local or regional, as opposed to extra-local or interregional interaction between firms. Furthermore, Bathelt et al (2004) argues that the horizontal dimensions of clusters consist of those firms that produce similar goods and compete with each other. These firms do not necessarily have close contacts to one another or intensive input-output relations. Rather, the respective firms benefit from their co-location through which they are well informed about the characteristics of their competitors, and about the quality and cost of the production factors that they use (Bathelt, 2004). Porter (1990; 1998) demonstrated that competing firms within a cluster actually can play an important role, especially in the early stages of cluster formation and specialization. The reasons for this are that strong rivalry and fierce competition act as an incentive for innovation and product differentiation (Porter M. E., 1998).

On the other hand the vertical cluster dimension consists of those firms which are complementary and are interlinked through a network of supplier, service and customer relations (Morosini, 2004). According to Marshall (1920) a variety at

the horizontal level stimulates growth in the vertical dimension. “If one man innovate a new idea, it is taken up by others and combined with suggestions of their own, and thus it becomes the source of further ideas” (Marshall, 1920: 225). A good example of this vertical integration in a specialized and well-known cluster is that the suppliers tend to be in proximity to the specialized firms within the cluster since they are important customers. By being close to these customers they can experience economies of scale, knowledge sharing, innovation, and lowering the transaction and transportation costs (Morosini, 2004). Based on these characteristics clusters tends to develop inter-firm networks that enables the clustering firms to innovate and develop tailor-made products and solutions for the firms within the cluster.

Furthermore, Porter (2000) argues that seeing a group of companies and institutions as a cluster highlights opportunities for coordination and mutual improvement in areas of common concerns without threatening or distorting competition or limiting the intensity of rivalry. The cluster can offer a constructive and efficient forum for dialogue among related companies and their suppliers, government, and other salient institutions (Porter E. M., 2000). On the other hand, Lawson et al (1999) argues that co-location within a cluster stimulates the development of a particular institutional structure shared by the participating companies. The fact is that clustering firms develop similar language, technology attitudes and interpretative schemes (Lawson, 1999).

Given the contribution of network relations to the internationalization of firms, networking firms within a highly reputable cluster will have a greater chance of coming across particular information they might need in their internationalization efforts (Coviello, 1999). In effect by having a pool of information available within their own cluster it becomes easier and less costly for clustering firms to get information through their own informal and formal networks of acquaintances and contacts (DeMartino R. E., 2006).

This way of sharing of information is among various researchers called “buzz” or “noise”. A “buzz” is referred to as face-to-face contacts, co-presence and co-location of people and ecology created by the same industry within a given place or region (Bathelt, 2004). This shared buzz could for example be new knowledge and technologies, cultural traditions and habits within a certain field. Gertler

(1995) points out the importance of continuously contribute and benefit from this diffusion of information, simply by “being there” (Gertler, 1995).

However, according to Morosini (2004) participants within a given cluster can feel a need and duty to exchange knowledge with other actors due to the “common glue” or “organizational glue” (Morosini, 2004). This “glue” helps the actors integrate key knowledge across cultural, organizational and functional boundaries (Morosini, 2002). Porter (1998), on the other hand, presents a somewhat similar phenomenon, called social glue. Porter (1998) argues that this social glue facilitates access to important resources and information, since the participants receiving this information is viewed as a valuable asset for the cluster, and that they share a common interest of developing the cluster further, also known as an “insider” status (Porter M. E., 1998).

4. Methodology and data collection

As this paper concerns an exploratory problem, this study will be conducted by applying a case study approach, even though it could be argued to be difficult to generalize our findings due to a small sample. We find the most appropriated research instrument to be in-depth interviews which we conduct with managers of companies within the cluster, but it could also be of interest to interview managers in companies outside the cluster in order to analyze the differences of the internationalization process and the integration in local clusters. It could also be of interest to interview business managers in foreign companies within maritime clusters in order to highlight the differences in doing business abroad in comparison to Norway. Also experts within the field of cluster and internationalization processes could be of great interest to be in touch with. The interview process will be conducted through a semi-structured interview guide.

4.1 *Research Design*

When conducting research it is important to make the right decision about what kind of research design to choose, and how to organize the research activity. According to Easterby et al (2008) the research design should explain and justify what data that is to be gathered, how, and from where. It is also of importance to

be able to achieve the research aims through the chosen design, method and instrument (Easterby-Smith, 2008). The focus of the research is based on one cluster, and therefore the most appropriate research design is a case study.

Eisenhardt et al (2007) argues that the main idea behind the case study phenomenon is to look at different cases in order to develop theory inductively (Eisenhardt & Graebner, 2007). The underlying philosophy of this method has been studied by various researchers the last decades. As a consequence there are still differences of opinion among researchers regarding the correct way of performing a case study.

For this study, the constructionist research design is deemed appropriate, as it assumes that there is no absolute truth, and the job of the researcher should be to establish how various claims for trust and reality become constructed in everyday life (Easterby-Smith, 2008). The most appropriated way of conducting such research should be based on direct observations or personal contacts, take place within a single organization, and then involve sampling from numbers of individuals. As mentioned above, the research instrument will be to conduct in-depth interviews with managers in companies that are a part of the Møre og Romsdal Maritime Cluster. As the authors want to conduct in-depth interviews to collect the data we find it appropriate to have a qualitative method, meaning that the data collected is mainly in form of words (Easterby-Smith, 2008).

The cluster in Møre og Romsdal is chosen due to its uniqueness as one of two industrial milieus, alongside the Oil & Energy sector in Stavanger, where Norway has a strong and complete national cluster that is globally competitive. It can be characterized as an expressive design, as the case involved is chosen due to its unique features (Easterby-Smith, 2008). As a consequence of choosing an expressive study we ought to know that the results of the study may not be generally applicable, but as we do not aim to test theories, but rather develop theories based on our research question it is seen as justifiable. Theoretical sampling which is not random or stratified is therefore deemed appropriate for this purpose.

4.2 *The Scope of the Study*

The focus in of the study is how the cluster acts as a facilitator for firms in their internationalizing process, and to what extent this effect is positive or negative. The objective is to use existing literature and thereby try to map the different factors that play a role as a cluster effect. Based on these cluster effects, there will be conducted interviews with actors within the cluster to examine whether these effects really are playing a role or not for the clustering firms in their internationalizing process.

4.3 *Research Question*

The research question was developed on the basis of the literature review. However, this process has been ongoing since we first started up with the master thesis. As various changes were made, we also had to adjust the literature, methodology, and interview guide. Literature asserts that a researcher could get insights during a project who then again could contribute to developing the research question further (Thagaard, 2003). This was the case for the research, and resulted in a number of changes being made to the research question.

4.4 *Participants*

As this paper is a qualitative study based on the MarCO project, samples were chosen among various companies within the maritime cluster of Møre og Romsdal. In order to achieve a broad understanding on how the cluster act as a facilitator we choose our respondents based on a selective approach, which means that we did not chose the respondent randomly. Thereby, we picked both SMEs and MNEs from different locations in the value chain. When approaching the respondents represented within each company we aimed to get in touch with managers who had international experience and/or persons with responsibility for their company`s international operations.

4.5 *Research Instrument: The interview guide*

The interview guide were developed and based on the literature review. The main objective is to collect sufficient data mainly in order to be able to answer the research question. As Michael Porter can be described as one of the pioneers

within the field of cluster, elements of the interview guide is based upon his work. Additionally, Porter among others identifies different cluster effects which are highly relevant for our research question.

The main purpose of the interviews is to get an understanding of the manager's views on the situation in their own companies, their perceptions concerned advantages and disadvantages drawn from the cluster, and how this can support them both through their internationalization process.

4.6 The interview guide: Structure and practice

Easterby et al (2008) stress that one of the most important aspects when conducting an interview is the level of structure, which throughout a interview situation can range from highly structured to unstructured and free-ranging conversations (Easterby-Smith, 2008). This paper will, as mentioned earlier, use a semi-structured interview approach in order to collect data. This will hopefully give us enough information whether the cluster facilitates the clustering firms throughout their internationalizing.

A semi-structured interview approach does not have a fixed questionnaire, but focuses on certain aspects and topics that need to be covered throughout the interview. A topic guide for the interviewers is often used in order to make sure that all topics are covered. This was done in order to create a natural structure of the interview guide, making it easier to go back and forth between the different topics. For each question we developed certain follow-up question, making it easier to gather information from the respondents.

4.7 The Interview

An interview guide was used in order to have an overview of the topics of interest, and questions related to each topic. As the interviews were conducted, the topics often switched due to the respondent often answering multiple questions in one statement. In a semi-structured interview this freedom of speech makes it sometimes difficult to relate each answer to the questions asked.

However, by using a tape recorder we did not need to type anything while conducting the interview. This made it easier to grasp and understand the answers,

ask follow-up questions, and move back and forth between topics. As for the interview itself, one person was in charge, with the main responsibility to conduct the interview based on the interview guide. While the other one had the responsibility of ask follow-up questions if something was unclear, or the topic needed more elaboration from the respondent side. The interviews were conducted in specified meeting rooms either at BI Norwegian Business School or at the given firms location.

4.8 The Interview: Transcribing

After the interviews were conducted, the normal procedure was to transcribe them. As the interviews were held in Norwegian we decided to transcribe them in the current language as this seemed most appropriate. However, the most important parts of each interview were translated into English, as this language is applied throughout the paper.

4.9 The Interview: Analyzing the interviews

After the transcribing and coding of each interview, the interviews were analyzed in order to gather the relevant information. It was decided to use a within case and cross-case analysis, which seemed most suitable for the purpose of the paper.

4.10 Methodological implications

In order to shortly describe the terms of validity and reliability, Kvale's (2007) research seemed appropriate. It defines validity as the language associated with the truth and how correct and strong the statements are, while reliability is the trustworthiness and consistency of the research findings (Kvale, 2007). A number of researcher claims that qualitative studies often could be weak with regards to reliability, since it is often more difficult to generalize the results. This is something that we experienced. Although the companies often had the same view on a given topic, the differences in their body language and tone of the conversations often made it unclear if the respondents had the same opinions regarding a subject. Since qualitative studies always will be biased by the researchers and respondents interpretations and preferences, the focus of the next

paragraphs will be on transferability, confirmability, and credibility (Thagaard, 2003).

Transferability is whether the research conducted could be used in a similar case (Johannesen, Kristoffersen, & Tufte, 2008). If the transferability in our research is high, then this research could be used for different clusters when estimating whether a cluster can act as a facilitator for clustering firms going abroad. Credibility is whether the researcher's positions, status et cetera made a difference when conducting the interviews (Johannesen, Kristoffersen, & Tufte, 2008). Since neither of the authors are researchers, but master degree students, this could have caused some credibility questions due to the fact that we are inexperienced in this situation, and that the respondents could use this as a barrier to communicate more directly and openly to us. However, the respondents interviewed were open and friendly, not withholding any vital information.

Confirmability refers to the degree which results could be confirmed or corroborated by others (Johannesen, Kristoffersen, & Tufte, 2008). In order to increase the confirmability it is important to be critical to the research done. This could be achieved by not taking any information or results as given. By having an open and critical mind, the research will be easier to confirm by other researchers in the future.

5. Introducing the firms of interest

This section will present the four companies that we have chosen to include in our paper. As this paper is written as collaboration with the MarCO project the three member companies; Jets, Ulstein and Tingstad are all included. In addition to these companies we have also included Brunvoll. So the companies included are two large firms that are centrally located in production value chains; Brunvoll and Ulstein, and two major suppliers of equipment and various solutions, Jets and Tingstad.

5.1 Ulstein Group:

Ulstein Group can be characterized as a family owned company. Ulstein started their activities within the ship-building industry as early as 1917. Ulstein is an internationally renowned provider of ship designs, shipbuilding and system

solutions for ships. Over the years the Ulstein Group has evolved into a trendsetter in ship design, shipbuilding and solutions within systems & services. Today, Ulstein possesses a very strong brand and is associated worldwide as a strong and trustworthy company. The experience they have gained since their inception has led them to deliver high quality and possessing a strong foundation for meeting future challenges. Their vision is characterized by meeting challenges in the market by embracing change and identifying opportunities. Ulstein combines enthusiasm, skills, knowledge and creativity in order to come up with new concepts, solutions and products.

Throughout their internationalization process Ulstein rode on a strong and well-known brand name, whether they are in South America or in Asia. The company has grown generically as well through mergers and acquisitions throughout the years, becoming a leading actor within the industry. Ulstein develops ship designs for any specific purpose and can build the most sophisticated vessels for demanding marine operations. It is reasonable to state that Ulstein meets customer needs in the areas of navigation, integrated communication and power & control systems worldwide. The company strives to always be updated within their industry by continually improving their products in order to provide greater capability, higher productivity and enhanced quality.

Vision: To create tomorrow's solutions for sustainable marine operations.

(Ulstein Group, 2012).

5.2 Brunvoll:

Brunvoll can also be characterized as a family owned company as three brothers established the company in 1912. The company is in fact still today privately owned by the family Brunvoll. Brunvoll's operations is dedicated to thrusters, they supply and service complete thruster packages from A to Z. Brunvoll's mission is to maintain being an organization which is completely responsive to their customers' specific needs – and to design, develop and manufacture thruster systems for maneuverings and propulsion of ships. Brunvoll possesses the position as a world leader within their niche; Thruster Systems. The company is located in approximately 25 different countries and numbers stating that more

than 2000 ships worldwide are equipped with Brunvoll Thrusters system. Brunvoll has no divisions/subsidiaries, but only use agents abroad.

Brunvoll offers a complete technological environment with in-house expertise in hydraulics, hydrodynamics, electronics, mechanical and electrical engineering, and production. The company is capable of tailoring systems to various customers' specific propulsion and maneuvering requirements, cutting installation time and life cycle costs.

(Brunvoll Thrusters, 2012).

5.3 Jets

Jets was founded in 1986, and have since its inception had an enormous and steady growth. Today Jets is a worldwide innovator within sanitary systems both at land and sea. The company offer advanced sanitary solutions with extremely low water consumptions for use in land-based, as well as offshore and ship sanitary systems. The robust Jets solution has proved to be highly practical for merchant and offshore vessels of any size or type. Jets sanitary systems are backed up by the reassurance of their long experience. The company does extensive amounts of work in R&D of innovative, new and improved solutions for vacuum sanitary systems, sustainability, and various wastewater treatment technologies. Jets deliver a system which is very environmental beneficial in terms of delivery of real-world solutions to pressing real-world challenges: water, sewage and energy.

The company has built a strong brand name and achieved a unique position as one of the main players within their industry. The company has no competitors established in or from Norway.

(Jets, 2012).

5.4 Tingstad

Tingstad is a part of the Koppernæs Group which consist of three divisions; Tingstad, Brude Safety and Vedde As. The Koppernæs group has operations in

Norway, China, Chile and Singapore. The group has more than 300 employees and a turnover of 900 Million Norwegian kroner.

Tingstad possesses a leading position in the Nordic countries within their core business, which is; fasteners, tools, bits & pieces and supply chain systems. The company is systematically focusing on maintaining this position. Tingstad deliver a system which is called “Tingstad Geography Independent Solution” a system which allows them to serve customers worldwide without being physically present. The main goal of the company is optimization of the value chain. The company continuously develops and improves their solution to make sure that they are ahead of competitors represented worldwide and to add substantial value to their customers business. The company`s wide product range and commitment to customer-oriented product supply solutions makes them a preferred supplier and partner

(Tingstad, 2012).

6. **With-in case analysis**

For simplicity the various respondents will be coded according to the company they are representing. This will make it easier than using a lot of different names throughout the analysis. In interview situations where two or more representatives are represented from the same company we will just refer to the company as a whole.

Ulstein Group	UG
Brunvoll Thrusters	BT
Jets	JE
Tingstad	TI

6.1 **Ulstein group**

Ulstein is a multinational enterprise with several fields of operations. The company consists of three different divisions; Ulstein Shipbuilding, Ulstein Design & Solutions and Ulstein Power & Control. This study is only related to Ulstein Design & Solutions as we find this part of the company as more relevant

for our paper. A representative from this division was interviewed through an in-depth interview.

6.1.1 Cluster theory

Unique capabilities and competencies within the cluster

It is reasonable to state that the cluster in Møre og Romsdal can be characterized as unique, as it stands as one of two industrial milieus, alongside the Oil & Energy sector in Stavanger, where Norway has a strong and complete national cluster that is globally competitive. This statement is supported by UG which explains that the region of Møre og Romsdal is characterized as having an environment where the shipping companies appear to be strong, while the cluster at the same time appears to contain a strong and professional shipbuilding environment. It is clear that a strong shipbuilding environment contributes to a tremendous amount of relevant expertise within the field, which again results in making the region a very attractive area. This statement is supported by Porter (1998a) which states that what happens inside companies is important, but clusters reveal that the immediate business environment outside companies plays a vital role as well (Porter M. E., 1998a). Within the cluster you can find world leading products from Brunvoll, Jets, Rolls Royce, etc. UG argues that these products are recognized as of high quality, and there is a high international demand for them in the market.

As previously mentioned, the cluster in Møre og Romsdal appears to be very strong. However, companies such as Rolls Royce would probably remain strong without the cluster. On the other side there are smaller businesses taking advantage of being part of a cluster, for instance by referring to the cluster when approaching foreign markets. The entire cluster in Møre og Romsdal is based on experience and expertise. An advantage worth mentioning is the work a lot of companies put into describing how they operate and which routines they have while creating a pool of information. DeMartino (2006) argues that by having a pool of information like this available within a cluster will provide the companies with an easier and less costly way to acquire information through their own informal and formal networks of acquaintances and contacts (De Martino, 2006).

UG further argues that they are struggling by coding the procedures. The problem today is that most of the knowledge is tacit, making it difficult to transfer among employees, divisions and companies. In the long term this will create future challenges in terms of changes in the organization and replacements. Porter (1998a) argues that by having a common interest of developing the cluster further add enormous value within a cluster (Porter M. , 1998). UG points out that the situation today is that various employees in different divisions and departments around the world perform various tasks that are not described and recorded for the future.

Negative effects of being a part of a well-known cluster

UG states that being a part of a cluster is almost exclusively positive. But as they are one of the locomotives within the cluster it could be reasonable to state that they provide more information, knowledge, and resources than they receive. The smaller players have the biggest advantages of being a part of a well-known cluster. The SMEs in this region are incredibly talented and aggressive in developing good relationships with the major players in the cluster. This gives them opportunities to engage in partnerships, supplier-buyer relations and knowledge exchanges.

6.1.2 Cluster effects when internationalizing

Motivating factors for internationalization

According to UG there are several motivating reasons for going abroad. UG focus on the enormous potential abroad as Ulstein appears to be a truly competitive organization that can handle the competitive pressure. In order to use some practical examples UG point on the establishment in the Brazilian market. Their reasons for entering this market could be explained by the emerging oil industry in the country. Another reason for establishing operations in Brazil can be explained by the industry and the environment in the market which is similar to Ulstein's domestic market, in the North Sea, where Ulstein has its strengths. Finally UG also focuses on the strong established relations they already possess with multiple Norwegian companies that are already established in the market as an important factor for establishment.

The cluster's position throughout the internationalization process

UG argues that the cluster in Møre og Romsdal appears to be very strong. The fact that a number of firms represented in the cluster were established abroad argues to being very helpful for Ulstein when they decided to establish their operations internationally. The agent that Ulstein use in Brazil also represents other subcontractors that are represented in the Maritime Cluster in Møre og Romsdal. UG states that the cluster has been involved in their internationalization process, but points out the market opportunities were far more important when deciding to internationalize.

Being established in a well-known cluster

UG stress that they take advantage of being part of the cluster by using a lot of the Norwegian subcontractors as Brunvoll and Jets in their design/equipment packages worldwide. The general impression is that a lot of the Norwegian companies have experienced that if another firm within the cluster is represented in a market abroad, there are also opportunities for them. This is especially true if this company is a multinational well-established company as Ulstein or Rolls Royce, as these companies can be helpful for small companies when approaching foreign markets.

UG stress that they are the locomotive in the cluster. The representatives from UG further argue that they are focusing on the community and the region as a whole when working against maintaining the extent of the cluster. UG states that Ulstein is willing to invest in new solutions that are not guaranteed to provide a positive return on investment, but does it to provide the region with new investments which increases the competitiveness of the cluster.

6.1.2.1 Cluster reputation

Cluster reputation and the internationalization process

DeMartino (2006) refers to cluster reputation as the esteem in which a particular cluster is held by various constituents for its expertise in the specific field practiced by the interconnected firm and institutions of a specific locality (De Martino, 2006).

UG points out that the maritime cluster in Møre og Romsdal possesses a very strong position internationally. UG refers to an annual trade show that takes place in Brazil where Innovation Norway establishes a joint stand at the exhibition for Norwegian maritime oriented companies represented in the market. This give especially smaller companies a unique chance to create relations and experiences which can be needed when operating in a different market compared to the domestic market. This view is supported by Porter (2000) who argues that when smaller firms lack corporate reputation, which is one of the most valuable intangible assets of a firm, they can lean on the reputation of the cluster they are part of (Porter E. M., 2000).

Further Porter (1998) argues that one of the ways in which the cluster membership can assist a firm in its internationalization efforts is through cluster reputation (Porter M. , 1998). DeMartino et al (2006) presents two different ways through which a solid cluster reputation can assist firms, particularly small and medium-sized enterprises (SMEs), in their internationalization efforts. First, a solid cluster reputation can directly assist SMEs in dealing with the resource constraints they face while going international, such as lack of capital, and lack of international business experience. Second, a solid cluster reputation can indirectly assist the internationalization of cluster firms by enabling the cluster to attract valuable resources that sooner or later local firms can draw on (DeMartino, 2006)

UG further argues that the importance of being a part of a well-known cluster with a strong reputation can be very beneficial for a lot of companies represented in the cluster. But UG states that they already has a strong domestic and international name and reputation, so they are not in the same degree as smaller companies dependent on the cluster's reputation. DeMartino argues that clustering firms as Ulstein gain this reputation not necessarily because they have used resources to build it over time on their own, but because the cluster they operate in hold this reputation in the international market. (De Martino, 2006)

6.1.2.2 Knowledge development

Ulstein delivers design packages where they include some of the Norwegian subcontractors represented in the cluster. The companies which are being included in this various packages are very dependent on getting direct exchange of information. *UG states that one of the main reasons for operating with packages*

like this is to have direct knowledge sharing between themselves and the suppliers. Lippman & Rumelt (1982) argues that the importance of knowledge for a given firm is a matter of how sustainable and easy it is to imitate the knowledge by rivaling firms. *According to UG these packages provides Ulstein with the possibility of protecting their know-how directly.* This statement is supported by Lippman & Rumelt (1982) as they stress that the more difficult it is for rival firms to imitate the knowledge, the greater is the competitive advantage related to the knowledge (Lippman & Rumelt, 1982).

6.1.2.2.1 Knowledge sharing **Knowledge sharing within the cluster**

Knowledge sharing is the ability the cluster has to develop and share the knowledge among the participants in the given cluster at Møre og Romsdal. *UG states that Ulstein share as much information as possible with their collaboration partner, but as some of the firms also are their competitors, sensitive product information is being kept away from them.* A lot of the firms represented in the cluster in Møre og Romsdal follows the principle of “cooperate when you can, and compete when you have to”. This is due to various companies represented in the cluster are working towards the same people, customers, suppliers etc. This point is further explained by Bathelt et al (2004) which argues that the horizontal dimensions of clusters consist of those firms that produce similar goods and compete with each other. These firms do not necessarily have close contacts to one another or intensive input-output relations. Rather, the respective firms benefit from their co-location through which they are well informed about the characteristics of their competitors and about the quality and cost of the production factors that they use (Bathelt, 2004). Porter (1990; 1998) demonstrated that competing firms within a cluster actually can play an important role, especially in the early stages of cluster formation and specialization. The reasons for this are that strong rivalry and fierce competition act as an incentive for innovation and product differentiation (Porter M. E., 1998).

UG states that the highest degree of knowledge sharing occurs between the companies which are represented in their various packages. These firms are by Morosini (2004) explained as the vertical cluster dimension, which consists of those firms which are complementary and are interlinked through a network of

supplier, service and customer relations (Morosini, 2004). A good example of this vertical integration in a specialized and well-known cluster is that the suppliers tend to be in proximity to the specialized firms within the cluster since they are important customers. By being close to these customers they can experience economies of scale, knowledge sharing and innovation, and lowering the transaction and transportation costs (Morosini, 2004).

According to *UG* there are no formal system for knowledge and information sharing across the cluster. *UG* states that *Ulstein* to a high extent share knowledge and various experiences at a personal level. According to Porter (2000) clusters can offer a constructive and efficient forum for dialogue among related companies and their suppliers, government, and other salient institutions (Porter E. M., 2000). It seems as *Ulstein* are focusing on a more the personal approach when sharing information and knowledge. The region is geographically very small, making it easy to meet each other in informal and personal settings, such as when picking up children in the kinder garden or on football sessions in the region.

UG states that they are generally not sharing any kind of information with their competitors represented in the cluster. *Ulstein* is interested in keeping their knowledge and experience for themselves, but *UG* states that the key is to find a balance. *UG* refers to *Idar Ulsteins* statement; *Collaborate when you can, and compete when you have to. It is important to remember the “give-and-take mentality”*. Meaning that in order to get information from others, you need to give them something back. Further *UG* states that they have no interest of learning for example *STX* how they do things. Formally speaking, this means that they have limited knowledge transfer among other actors within the cluster.

Obligation to share knowledge and experience among the cluster actors

UG states that they have never felt obligated to share any kind of information with other actors in the cluster. For a cluster to function optimally, all participants have to contribute to the clusters interests. The general impression is that member firms are not interested in free riders. *UG* further stress that it is incredibly important to find the right balance between give and take. According to Morosini (2004), participants within a cluster often feel a need and duty to exchange

knowledge with other actors due to the “common glue” or “organizational glue” they have between each other (Morosini, 2004). This “glue” helps the actors integrate key knowledge across cultural, organizational and functional boundaries (Morosini, 2002). Porter (1998) argues that this social glue facilitates access to important resources and information, since the participants receiving this information is viewed as a valuable asset for the cluster, and that they share a common interest of developing the cluster further, also known as an “insider” status (Porter M. E., 1998).

Channels for information and knowledge sharing

UG points out three major organizations as important channels for knowledge and information sharing within the cluster; NCE, NorVest forum, and the Maritime Association. UG explains NorVest Forum *as a system that builds on the experience and network sharing within the cluster*. The NorVest Forum is built up by inviting approximately 20 different managers from different companies in the cluster. These managers are working together in groups with various projects. Within these groups all managers need to balance what they can share and not share with each other. At the present date (2012) more than 600 leaders from the cluster has been through this program. Coviello (1999) argues that this kind of information exchange might lead to companies coming across particular pieces of information which is needed in their own internationalization process.

In effect by having a pool of information available within their own cluster, it becomes easier and less costly for cluster firms to get information through their own informal and formal networks. *UG argues that by having organizations as NorVest forum represented within the cluster, many managers represented from various firms within the cluster have a great opportunity of building up a common technical platform and a common local area network*. This statement is supported by Lawson et al (1999) which argues that co-location within a cluster stimulates the development of a particular institutional structure shared by those who participate. Further Lawson et al (1999) points out that clustering firm develops similar language, technology, attitudes and interpretative schemes.

6.2 Brunvoll

Brunvoll were established in 1912 by three brothers with the family name Brunvoll. Brunvoll delivers a world leading thruster production system worldwide. When approaching this company we mainly focus on the strategic side, the cluster effects and their internationalization efforts.

6.2.1 Cluster theory

Unique capabilities and competencies within the cluster

Being a part of a well-known cluster could facilitate and help to achieve the need for having a competitive advantage. The cluster of Møre og Romsdal is very strong, and many players are gathered in a small geographic area. *BT argues that this provides great opportunities in terms of collaboration among the various actors represented within the cluster.* Porter (1998) builds on this further and states that the economic map of today's world is dominated by critical masses – in one place- of unusual competitive success in particular fields. Hill and Brennan (2000) argues that the theory of economic development based on industry clusters, hypothesizes that the co-location of firms or industries that complement each other, compete against each other or share common resources leads to increasing return to scale (Hill & Brennan, 2000).

BT points out that it could be argued that the cluster attracts many customers that easily can be recommended to "neighboring" companies. They further argue that the cluster possesses abilities to adapt to market changes, and at the same time having a great expertise within the maritime industry. Navickas (2009) built on this and states that specialization is an exceptional feature of cluster companies as they operate in vertically integrated fields in order to achieve economies of scale and improve their profitability. Edelman (2004) further argues that specialization is an exceptional feature of cluster companies.

According to BT it is reasonable to state that the cluster have a clear advantage in terms of knowledge and expertise within the field. This view is supported by Porter (1998) which describes clusters as geographic concentrations of informally

linked/ interconnected companies and associated institutions in particular fields that compete but also cooperate with each other.

Negative effects of being a part of a well-known cluster

BT argues cannibalism in recruitment of new employees could be a problem for the various actors within the cluster. Various acquisitions due to good earnings could also be mentioned as a negative consequence of the close collaboration within the cluster. *BT further points out that another area of particular interest could be firm's desire to protect their own customers.* Various researchers has contributed to this area, the common understanding is that clusters promotes both competition and cooperation. Rivals compete intensively to win and retain customers (Porter M. , 1998) (Campaniaris, 2011) (Navickas, 2009). However, Porter (1998a) adds that without vigorous competition, a cluster will fail (Porter M. , 1998).

6.2.2 Cluster effects when internationalizing

Motivating factors for internationalization

Brunvoll follows Norwegian ship owners out in the international market. *BT points out that it could be reasonable to state that the company uses a "follow-the-customer" approach.* Another element for internationalization was a declining home market. *BT argues that the great opportunities are located abroad and the efforts related to internationalization were essential for further growth.* Finally, the demand from foreign shipyards and ship-owners were also an important factor contributing to the company's decision to internationalize.

The cluster's position throughout the internationalization process?

When Brunvoll started its internationalization process it was with broad support from the Norwegian maritime cluster in Møre og Romsdal, and with good help from the Norwegian Export Council. *BT argues that the Norwegian maritime cluster has been important to Brunvoll.* They have established joint agents and exchanged experiences on a broad basis. According to Lin et al (2006) these results of being in a cluster came from four different factors; manpower flows,

technology flows, money flows and market flows. Based on these four factors the competitive could contribute to higher competitiveness both within the certain firm but also, more importantly, to the whole cluster (Lin, Tung, & Huang, 2006).

BT argue that without support in terms of experience and market knowledge of the Norwegian cluster the internationalization process would probably has been much more difficult and resource intensive. Throughout Brunvoll's internationalization process they have contacted already international oriented companies represented in the cluster. This has been very fruitful in terms of knowledge, experiences and contacts in various markets. This is in line with Porter (1998) and Brennan and Hill (2000) research within the field. They argue that competitiveness through the cluster could be achieved in three ways, increase the organization's productivity, driving the direction and pace of the innovation, and stimulate new organizational institutional growth, all of which a cluster could help facilitate.

Being established in a well-known cluster

BT stress that *being part of a well-known cluster helps fostering innovation and development.* However, BT stress that they individually stand very strong both domestic and internationally as they are recognized as a well-established company which possesses a strong reputation both domestically and internationally. BT further argues that they are not fully dependent upon the cluster, but states that being a part of a cluster recognized as one of Norway's most respected industry could be seen as highly beneficial.

6.2.2.1 Cluster reputation

Cluster reputation and the internationalization process

A cluster reputation can be defined as “the overall estimation in which a particular company or cluster is held by various constituents” (Fombrun, 1996), and is considered as one of the most strategically significant resources of a firm (Fombrun, 1996). When a firm lacks corporate reputation, which is one of the most valuable intangible assets of a firm, they can lean on the reputation of the cluster they are a part of. This statement is supported by Porter (1998) which

argues that one of the possible ways in which a cluster membership can assist a firm in its internationalization efforts is through cluster reputation.

BT argues that the cluster's reputation internationally has been very helpful for Brunvoll throughout their internationalization process. Several international companies have some sort of assurance that they are established and doing business within a scientific strongly anchored cluster. In a sense, cluster reputation attracts information to the cluster; regardless of which firm receive it or where it ends up. This occurs because international firms on the lookout for purchase or alliances will start their search in areas that is known for their expertise within a specific field (DeMartino, 2006).

BT further argues that it is no doubt that Brunvoll can lean on the cluster reputation. DeMartino (2006) points out that when a firm can rely on the cluster they are part of, they can use their resources on continuously developing their competitive advantage instead of putting a lot of time and resources into building their own corporate brand and reputation abroad. *BT argues that this has from the beginning been a competitive advantage, especially when approaching international related relations.* Suchman (1995) build upon this and argues that from the perspective of legitimizing the firm in the customer's eyes, cluster reputation can save the firm the expenses involved in building reputation of its own (Suchman, 1995). Finally BT argues that it is of great importance to mention that Brunvoll individually stands very strong abroad as they have operated internationally for decades.

6.2.2.2 Knowledge development

6.2.2.2.1 Knowledge sharing

Knowledge sharing within the cluster

Cluster knowledge is by various researchers characterized as one of the most important features of being a part of a well-known cluster. The most common ways of knowledge sharing in general is by Tallman et al (2004) technology spillovers, informal exchange and movement of people (Tallman, Jenkins, Henry, & Pinch, 2004). *BT argues that to a great extent within the cluster the various firms share a lot of knowledge and information, especially through industrial and*

commercial arenas such as development/research projects, joint trade show participation, and other joint marketing efforts under the direction of the NCE or small groups of cooperating firms. This kind of shared knowledge basis enables the various cluster firms to continuously combine and re-combine similar and non-similar resources to produce new knowledge and innovations (Bathelt, 2004). Malmberg et al (1999) argues that this stimulates economic specialization within the cluster and result in the development of localized capabilities which are available to cluster firms.

According to BT it is very important to achieve good cooperation between the companies within the cluster. This could be difficult to achieve if there are competing firms in a cluster. According to Bathelt (2004) this statement does not necessarily seems to be true. Bathelt (2004) argue that the horizontal dimensions of cluster consist of those firms that produce similar goods and compete with each other. These firms do not necessarily have close contacts to one another or intensive input-output relations. Rather these firms' benefits from their co-location through which they are well informed about the characteristics of their competitors and about the quality and cost of the production factors that they use (Bathelt, 2004). Porter (1990; 1998) demonstrated that competing firms within a cluster actually can play an important role, especially in the early stages of cluster formation and specialization. The reasons for this are that strong rivalry and fierce competition act as an incentive for innovation and product differentiation.

Obligation to share knowledge and experience among the cluster actors

Brunvoll has always been open and generous in their way of sharing information and experience among the cooperating cluster actors. The major importance is to find a balance between the two elements; give and take. This view is not supported by literature as Morosini (2004) argues that participants within the cluster feel a need and duty to exchange knowledge with other actors due to the "common glue" or "organizational glue". This "glue" helps the actors integrate key knowledge across cultural, organizational ad functional boundaries (Morosini, 2002).

Channels for information and knowledge sharing

BT argues that the major channels for information and knowledge sharing appear to be two-folded. On one hand you have the organizations such as NCE and NorVest forum which stands out as unique organs adapted to the cluster. BT argues further that NorVest forum is unique as it gathers actors represented within the cluster together, while NCE struggles to support the companies in terms of funds, training, research, expertise and knowledge sharing. However, BT further argues that NCE could be more responsive in terms of various requests fronted by clustering firms.

On the other hand you have the personal level of collaboration. Møre og Romsdal appears to be a relatively small geographic area, this provides the companies with a clear advantage in terms of the possibilities of meeting each other in different contexts.

6.3 Jets

Jets was established in 1986 and have grown into what is now a worldwide leader within sanitary solutions. Jets offer advanced sanitation solutions with extremely low water consumption for systems for use in ships and on land. The company can be divided into two different fields of operations; Ship & Offshore and Land & Transport. Our paper will mainly contain information and analysis of the Ship & Offshore operations as this division appears to be most relevant to our research.

6.3.1 Cluster theory

Unique capabilities and competencies within the cluster

JE states that the cluster in Møre og Romsdal contains a strong cooperation between the member firms, while at the same time it possesses a strong competitive environment among the participating firms. Svetina et al (2005) argue that a cluster is markedly different and much more complex than the traditional organization. As clusters bring profit and non-profit organizations, companies that are competitors, as well as companies that are engaged in buyer-supplier relationships together. This statement is supported by Porter (1998a) and

Navickas et al (2009) which argue that clusters include a much wider range of organizations, such as academic, financial, and government institutions.

JE argues that within the cluster in Møre og Romsdal you can find various contributors which shape a foundation for a unique collaboration of the maritime environment. An example of this could be the NorVest Forum, which is an organization working exclusively to improve the cooperation between the various companies represented in the cluster. In order to understand this mechanism a practical example that illustrates the importance of NorVest Forum could be of relevance. They split up the different phases of the value chain in various committees that mainly focus on sharing practices among member firms. One of the latest projects were last fall when NorVest forum took initiative to a common competence and recruitment project, instead of each organization to carry out these processes individually. A common goal throughout this collaboration has been to continue efforts to educate engineers. And this starts already at an early phase by facilitate young people to choose education within science and engineering. This takes place mainly in the form of summer schools, collaboration with schools, etc. The main reason for this focus is a pressure on engineers, managers and highly skilled employees in the region.

At the same time NorVest Forum are working closely together with clustering firms to keep the TAF-technical almennfag (a three-year combined education, with teaching at the school and practice in a modern industrial industry) which the government wants to close down due to lack of gym. *JE argues that the most important partnership is the recruitment and development of competence already from childhood.* Finally Sølvell et al (2003) states that for a cluster to successfully develop it is not enough to determine a good strategy, it is also of importance to follow and fulfill the strategic goals, believe in them and be competent enough to realize them (Sølvell, 2003).

Negative effects of being a part of a well-known cluster

JE argues that it must be said that *Jets as company has drawn many benefits of being a part of a well-known cluster at Møre og Romsdal.* But when focusing on negative aspect it must be mentioned that the Jets currently have no competing

businesses in the cluster. Other companies that compete with each other may have had to address some negative aspects.

JE point out that *free riding could be a problem within the cluster. As far as Jets know this is not present to a large extent within the cluster.* It will probably be players in a cluster that is looking to just gain, and not give. But since the cluster is highly transparent these companies normally tend to be excluded from the cluster.

6.3.2 Cluster effects when internationalizing

Motivating factors for internationalization

Jets have in many ways used a “follow-the-customer” approach. When Jets started their operations in Brazil, cluster effects in the establishment were an important factor for internationalization. The demand for design from Norwegian companies represented in the cluster is high among the Brazilian shipyards. Their first plant in Brazil came as a direct request from Brazilian shipyards. Farstad Shipping was already established in the market and recommended Jets’ products to the Brazilian shipyards, and functioned as a door-opener for them. Jets are also takes advantages from being present in the packages delivered by Ulstein Design and Rolls Royce.

The cluster`s position throughout the internationalization process?

Without support from the cluster Jets would not have existed. Jets make use of several local contractors in the Norwegian Maritime Cluster in their production, especially in areas such as painting, steel works, and printing. According to JE the communication between the clustering firms was stronger and more present earlier compared to now. Today they are communicating more on the basis of reaching agreements among each other in form of various offers, orders, solutions etc.

In order to describe why the companies within the cluster have faced increased distance among each other JE used a comparison with *the grown-up of a human being. When you reach a certain age then you would like to be an adult and be independent. This is in contrast when you are young and eager to learn.* But it is

important to mention that small companies, like Jets, most likely are benefitting of being a part of a cluster compared to larger companies as Ulstein and Rolls Royce.

Being established in a well-known cluster

Throughout the collaboration within the cluster Jets goes together with other firms and work towards new solutions for new or existing customers. They meet regularly at trade shows and on various fairs. A very important contribution for Jets is being present in the Ulstein packages, where they as a company get the chance to be promoted abroad. Ulstein has involved them in packages not only in Brazil, but also in China. An important note here is that Ulstein Design sells their designs all over the world, meaning that Jets could in fact be present in a lot more markets than it appears to be today.

As an internal rule when Jets are traveling abroad they are always trying to travel together with other companies. This makes it easier for the common agent to set up appointments if there are several companies that are traveling together. In many parts of the world they have the same representatives. DeMartino (2006) argues that this could to be a direct consequence of being a part of a well-known cluster, as he states that cluster reputation has a direct positive impact on the internationalization process of firms reducing their managerial, financial, and competitiveness constraints (DeMartino, 2006).

It is reasonable to state that Jets are dependent on other cluster actors throughout their internationalization process. JE argues that the company find themselves in a very favorable situation internationally, especially in Brazil. This mainly because a large part of Jets` packages are mostly purchased from and through Ulstein Design. The payment comes from Ulstein Design, and they take care of shipping, customs etc. The same applies to Rolls Royce. JE argues that the main reasons for establishment in Brazil are a result of their position in the cluster, where both Ulstein and Rolls Royce use Jets in their different design packages. They have also emphasized focus on Brazil in recent years, the same as the rest of the cluster and Norway in general.

6.3.2.1 Cluster reputation

Cluster reputation and the internationalization

The reputation of a cluster has a historical aspect, therefore, the reputation of a cluster at a given point in time impacts the future accumulation of other factors in the cluster, such as specialized personnel and technological infrastructure (DeMartino, 2006). JE argues that the *cluster's good international reputation could be seen as an advantage for the firms located within the cluster*. Further JE argues that *Jets nearly always has gone international together with other actors represented by the cluster*. This approach is supported by DeMartino (2006) which argues that when a firm lacks corporate reputation, which is one of the most valuable intangible assets of a firm, they can lean on the reputation of the cluster they are a part of.

JE further argues that *they in most markets are represented, along with other cluster actors*. Some practical examples: In South America Jets are working together with Libra and Brunvoll. In Saldus, Latvia, they are established with Sunnmøre Libelfabrikk, John Gjerdsвика and Libra. Jets have also invested in another company in Vietnam, along with Libra and another company from the South Coast. NCE and IN has been quite helpful in these processes in terms of support funds, expertise and knowledge transfer. For example, in Vietnam is the NORAD program helping with an educational program for welders.

According to JE *the cooperation is very important to them, and states that they are distinctly co-operative*. Further JE argues that *collaboration makes things easier* while the company achieves synergies based on it. DeMartino (2006) argues that cluster reputation has a direct positive impact on the internationalization process of firms reducing their managerial, financial, and competitiveness constraints. When relying on the reputation of the cluster, firms can use their resources on continuing to develop their competitive advantage instead of putting a lot of time and effort into building their own corporate brand and reputation abroad.

6.3.2.2 Knowledge development

6.3.2.2.1 *Knowledge sharing*

Knowledge sharing within the cluster

By various researchers knowledge is described as fact, information, and skills acquired through experience or education. Researchers distinguish between two types of knowledge; explicit and tacit (Wagner & Sternberg, 1985). According to Grant (1996), knowledge ranks first in the hierarchy of strategically relevant resources. The importance of the knowledge for a given firm is a matter of how sustainable and easy it is to imitate the knowledge by rivaling firms.

JE argues that the cluster in Møre og Romsdal is *known for having a very strong culture for cooperation. Geography, it is clear that physical presence makes you meet in many different contexts, and provide the various companies with the opportunity to transfer skills and knowledge with each other.* Another important factor related to the geography proximity is the relationship building and relationship transfer. Lawson et al (1999) argues that co-location (geography proximity) within a cluster stimulates the development of a particular institutional structure shared by those who participate. Firms develop similar language, technology attitudes and interpretative schemes (Lawson, 1999). Bergman (1998) argues that as a result of geographical proximity, communication between cluster members is strengthened and the exchange of knowledge is intensified. Codified knowledge is easily transferred through different communication media, which often results in exchange of informal – tacit knowledge. The senders (and receivers) might not be aware of the relevance of this information (Bergman, 1999).

When it comes to knowledge sharing, it would also be of importance to focus on movement of employees within the cluster. According to *JE this can be seen as both an advantage and a disadvantage for the cluster.* The employees move between the various companies within the cluster. The advantage with this is that knowledge and expertise is shared among the clustering firms, but the negative aspect is that there no or little expertise gathered from human resources outside the cluster. A practical example could be the competition among the automation

mechanics in the industry. The situation can be characterized as a "little war" in which several of the companies in Møre og Romsdal are searching for the same people with a set of skills and knowledge. *JE argues that a lot of the employees have been in other clustering firms, this give the companies advantages since the new employees knows the maritime industry.* JE particularly stress that Jets are very aware that they *do not go out to head hunt people from other companies represented in the cluster as this could shape disagreements.*

Obligation to share knowledge and experience among the cluster actors

According to JE the mentality in the cluster focuses on that companies within the cluster should cooperate when they can. *JE impression is that none of the companies feel obligated to share information with other cluster actors within the industry.* This is not supported by Morosini (2004) which states that; participants within a cluster feel a need and a duty to exchange knowledge with other actors due to the common glue or organizational glue (Morosini, Industrial Clusters, Knowledge Integration and Performance, 2004). Porter (1998) argues that this social glue facilitates access to important resources and information, since the participants receiving this information is viewed as a valuable asset for the cluster, and that they share a common interest of developing the cluster further, also known as an "insider" status.

JE argues that a many companies are putting a lot of effort on strategic considerations regarding "collaboration versus competition". But as JE states, Jets do not have any competitors in the region. Companies are interested in sharing information and experiences with them as they are not considered as threats for other firms both domestically and internationally. JE points out that *the most common sort of sharing is focused on information about the market, competitors and the demand.* According to Coviello (1999) clustering firms will have a greater chance of coming across the particular piece of information they might need in their internationalization efforts. In effect by having a pool of information available within their own cluster it becomes easier and less costly for cluster firms to get information through their own informal and formal networks of acquaintances and contacts (De Martino, 2006).

Channels for information and knowledge sharing

JE points out three key players when talking about channels for information and knowledge sharing, namely, NCE, NorVest forum, and the Maritime Association. JE especially focus on the importance of NorVest forum which is a system created on the basis of being a experience- and network-sharing platform for the companies within the cluster. There are more than 600 leaders from the cluster that have been through this program, making it very likely that leaders from different companies within the cluster have been through the same program.

6.4 Tingstad

Mr. Ingar Tingstad, founded the company Tingstad AS in Oslo in 1935. Soon Tingstad AS developed to become the leading company of fasteners in Norway. With his pioneering spirit and expertise, Ingar Tingstad traced new sources and manufacturers for his customers all over Norway. In September 2000 Tingstad AS was bought by Koppenæs AS and the two cultures were united. The outcome of this merger is a clear marked leader in Norway which their customers greatly benefit from. In our paper we are only focusing on Tingstad as an independent organization. We will not include the Koppennæs Group as a whole in this paper.

6.4.1 Cluster theory

Unique capabilities and competencies within the cluster

According to TI the maritime cluster in Møre og Romsdal can *be characterized as far more collaborative than competitive focused*. It is a vital part of building up a well-functioned cluster. Further TI argues that *the MarCO project is a great example of this. He states that there are no conflict with Ulstein and Tingstad talking together. The general impression is that the local companies through collaborations as the MarCO project or for instance the NorVest Forum are able to share knowledge with each other*. Within the Norwegian Maritime Cluster they are working together against the international competition.

The great challenge lies in being competitive. TI points out that *they put a lot of effort into making each other better; this can be done through something as simple as third party logistics*. Edelman et al (2004) argues that specialization is

an exceptional feature of cluster companies. According to Svetina et al (2005) organizations within a cluster have their own corporate cultures and follow their own strategies. All of this means that there may be some differences in a cluster as opposed to a traditional organization. Clusters are considered to increase the productivity with which companies can compete, nationally and globally. Menzel et al (2009) states that companies within a cluster experience stronger growth and faster innovation than those outside clusters.

The cluster idea in Møre og Romsdal are focusing on sharing knowledge and information. For example TI states that representatives from their company know a lot of the sellers and owners in the industry, mainly as a consequence of geographical proximity, and because they travel around and showing face. *Further he argues that the companies located in this region meet at various fairs and such.* TI points out that *it is clear that the various companies are competitors, but he states that during the evening they are taking a beer together. We know that we are stronger together. We are situated in a high cost country, and therefore must find alternative ways to develop together.* Due to this the cluster need to come up with new cost efficient solutions, which is easier done by collaboration than competition.

Further on TI explains that organization such as NorVest Forum is crucial important for further growth and prosperity. NorVest Forum is engaged in a management development program. They have been working with this in more than 30 years. Each management groups follows a program with duration of 1.5 years. According to TI there are a lot of important advantages achieved throughout programs like this. TI points out *the academic part, the personal part, and the strategic part, but perhaps the most important part of this is networking. There are 20 managers that follow each group, you organize yourself in under groups, we from Tingstad is sitting in a under group with five others. In fact some of these are customers of our suppliers.*

Negative effects of being a part of a well-known cluster

The challenges of being a part of a cluster located in Møre og Romsdal could be explained by that you are constantly searching for a more efficient and productive way of working. The biggest obstacle having operations in Norway is the price

level. You have high wages, transport costs, and rents. *As a consequence of this, Tingstad are every day working towards becoming more efficient and productive.*

Another challenge of being located in Møre og Romsdal could be the stereotyping of different areas. TI argues that everyday approach is *those in Ålesund, those in Molde and those in Ulsteinvik. He further states that earlier there was a hate relation among these regions; still today you find differences between the areas.*

6.4.2 Cluster effects when internationalizing

Motivating factors for internationalization

Tingstad uses a “follow-the-customer” approach. If the customer is vital enough and requests their services in China, Brazil or Sweden they will follow the customer to the markets, and try to join forces through the internationalization process. TI argues that *their agent in China came from a request by a subcontractor represented by the cluster.*

The cluster`s position throughout the internationalization process?

A number of Tingstad’s customers are internationally focused, and they need to be able to serve them either they are operating in China, Brazil or Singapore. TI describes *that Tingstad can be characterized as having an "internationalization light" approach.* Tingstad have not established themselves internationally with new customers.

Being established in a well-known cluster

According to TI *the cluster is the facilitators, and TI would not be where we are today without the support from the cluster. It is reasonable to state that the cluster is vital for our survival.* According to Navickas (2009) companies within a cluster can take advantage of various resources; cost economy: cluster companies tend to minimize their costs through specialization, as they make use of their key competencies and choose only the cheapest and most efficient production alternatives. Another advantage is knowledge and learning: companies form a cluster in order to learn from their partner’s experience. Thus, they can advance in

technical, financial, R&D, marketing and other fields of competence and increased specialization: a cluster enables smaller companies to get specialized and promotes their cooperation.

6.4.2.1 Cluster reputation

Cluster reputation and the internationalization process

A firm's corporate reputation is one of the most valuable intangible assets of a firm. If clustering firms has not been able to build up a strong corporate reputation they can lean on the reputation of the cluster they are part of. TI argues that a solid cluster reputation directly can assist a company while going international. The impression is that the cluster does not take full advantage of the possibilities within the competitive and collaborative cluster. According to TI the cluster could have been more focused on branding the cluster as a whole. Further he states that *in order to be a cluster, it is of great relevance that you are considered as a cluster*. They have certain expectations that the cluster will be more conscious of how the cluster appear, as this will increase the value of the services clustering firms offer.

The various clusters that are successful in Norway; oil and gas, marine, and furniture are all characterized as having the willingness to share knowledge, information and experience, something that is essential for survival. It is no doubt that the cluster in Møre og Romsdal evolve together. The representatives from Tingstad argues that for further growth the focus should be primarily on delivering niche products based on the cluster's reputation.

6.4.2.2 Knowledge development

6.4.2.2.1 Knowledge sharing

Knowledge sharing within the cluster

Knowledge exchange take place in various ways within the cluster. The most common ones, according to Tallman et al (2004) are spillovers, informal exchange and movement of people. (Tallman, Jenkins, Henry, & Pinch, 2004). TI argues that the knowledge and information sharing within the cluster is present. According to TI *virtually almost all companies represented in the cluster are focused on sharing general knowledge between the various actors within the*

cluster. As a part of this knowledge and information sharing TI highlights the importance of relocation and flow of employees throughout the cluster.

TI argues that products specific details are kept by each company, so that kind of information is not being shared among the clustering firms. According to TI many manufacturers collect this information through a third party; in such cases are the information and the agreement made as a "confidentiality agreements". Furthermore, In order to explain the advantages firms have when locating within a cluster, Bathelt et al (2004) distinguish between the horizontal and vertical dimensions of a cluster and identify the advantages of local or regional, as opposed to extra-local or interregional interaction between firms.

Furthermore, Bathelt et al (2004) argues that the horizontal dimensions of clusters consist of those firms that produce similar goods and compete with each other. These firms do not necessarily have close contacts to one another or intensive input-output relations. Rather, the respective firms benefit from their co-location through which they are well informed about the characteristics of their competitors and about the quality and cost of the production factors that they use (Bathelt, 2004). Porter (1990; 1998) demonstrated that competing firms within a cluster actually can play an important role, especially in the early stages of cluster formation and specialization. The reasons for this are that strong rivalry and fierce competition act as an incentive for innovation and product differentiation.

On the other hand the vertical cluster dimension consists of those firms which are complementary and are interlinked through a network of supplier, service and customer relations (Morosini, 2004). According to Marshall (1920) a variety at the horizontal level stimulates growth in the vertical dimension. "If one man innovate a new idea, it is taken up by others and combined with suggestions of their own, and thus it becomes the source of further ideas" (Marshall, 1920: 225). TI argues that there are several contexts for sharing of information among the actors within the cluster. TI refers to the ongoing project between themselves, Jets and Ulstein (MarCO project). According to TI a lot of firms including themselves also go into collaboration in common projects with suppliers and subcontractors within the cluster to develop new and more efficient solutions etc.

TI states that flow of potential new employees through the cluster is of high importance when talking about sharing within the cluster. Further TI argues that

the situation in the cluster in Møre og Romsdal to some extent consists of a flow of employees from company to company. Generally in the Norwegian maritime cluster, there is great competition for the best employees, but this competition higher in some areas of the region. According to the representatives from Tingstad is this cannibalism may be more present in Ulsteinvik and Fosnavågen, than in Ålesund. TI states that the clustering firms in Møre og Romsdal focus a lot on finding the right balance between collaboration and competition. Further TI argues that companies do not share sensitive knowledge with other firms; each company has its own company culture.

Obligation to share knowledge and experience among the cluster actors

According to TI the company does not feel an obligation to share information or knowledge among the other clustering firms. However, they share a lot of information with different firms in order to further develop their systems for handling and take care of the distribution of their products. As Tingstad does not have any direct competitors within the cluster, it is easier for them to have an open culture for knowledge sharing. TI states that *the culture within the cluster is open, where all the participants share their knowledge and information in order to contribute for further growth and prosperity.*

Channels for information and knowledge sharing

According to TI it is a lot of social happenings where information and experiences are being shared. TI use examples as the annual yard exhibition in Ålesund, business seminars conducted by local banks located in the region, oil conference in Stavanger, NorVest forum and NCE. TI also explains that a lot of sharing happens on personal level. TI states that people know each and meet each other through various social arenas like through their hobbies or children.

Tingstad argues that there is little knowledge to gain internationally, as the region of Møre og Romsdal is world leader within their field. However, what they can learn abroad is cultural competence from the given market. TI states that innovation is one of the major elements that drive the cluster idea forward. Almost all the R&D is being developed in the region and their systems cannot be

compared to systems established in China for instance. They have more than 100 years experience within this field, and it would not be natural for them to seek knowledge and information in for example China.

7. Cross-Case Analysis

This section of the paper aims to look at the various data findings conducted from in-depth interviews from various business managers represented in four different companies from the cluster in Møre og Romsdal. The overall objective of this chapter is to illustrate the similarities and differences between the various corporations.

7.1 Cluster theory

Clusters are geographic concentrations of interconnected companies and institutions in a particular field (Porter M. , 1998). Navickas (2009) support this statement and argues that the companies also share technological know-how, knowledge skills, competencies and resources (Navickas, 2009). Clusters have also been recognized among researchers as an important instrument for promoting industrial development, innovation, competitiveness and growth (Svetina. Cotic, 2005).

7.1.1 Unique capabilities and competencies within the cluster

A common understanding among the companies represented in this study demonstrates the Norwegian maritime cluster as a unique cluster which is highly competitive, and possesses a philosophy that is more focused on collaboration rather than competition. UG state that the cluster can be characterized as unique, being one of two industrial milieus, alongside the Oil & Energy sector in Stavanger, where Norway holds a globally competitive cluster.

Furthermore, UG highlights the ability the cluster has to share their experiences and competence among its members as one of their major advantages. That this collaboration among the clustering members provides them with great opportunities for further development and innovation statement is supported by BT. This statement is also backed by TI, who maintains that the cluster have a

stronger focus on collaboration than competition. As an example of this they points out the MarCO project where companies and institutions work together and share knowledge. JE state that there is a strong competitive focus among the clustering firms, while they also cooperate on different projects and products. Jets stress the importance of finding the right balance between cooperation and competition, and state that this is well handled by the actors within the cluster.

Another capability mentioned by UG is the pool of information which the cluster holds. This pool, which is based on experience and expertise, make it is easier and less costly for the clustering firms to share their knowledge, and to develop further. BT support this, by stating that the cluster has clear advantages based on their knowledge and expertise within the field. BT argues that the cluster as a whole benefits from being close both in proximity and by sharing knowledge and information. Finally, BT states that the cluster attracts many customers that easily can be recommended by “neighboring” companies

TI builds upon this, stating that the companies within the region meet regularly at fairs, trade shows and such. They acknowledge that the companies within the cluster are stronger together than alone. Furthermore, TI argues that organizations such as NorVest Forum is important for the further growth and prosperity of the cluster, as this ties the cluster even closer together. JE supports this statement, arguing that organizations as NorVest Forum exclusively works to improve the cooperation between the firms within the cluster.

7.1.2 Negative effects of being a part of a well-known cluster

Overall the companies included in this paper have mostly benefitted from being a part of the NCE Maritime Cluster. However, the companies points out different challenges and problems that may arise from being part of a highly competitive and innovation driven cluster. UG argues that they, being a large firm within the cluster, provide more information, knowledge, and resources than they receive. Furthermore, the representatives from Ulstein argue that the SMEs within the region receive more benefits from being a part of a well-known cluster.

BT points out cannibalism in the recruitment process of new employees as a problem for the cluster. This leads to a negatively driven cycle in terms of higher salaries and rivalry between the various firms represented within the cluster. The

representative from Tingstad, on the other hand, points out that stereotyping of the different regions in the area that could lead to increased rivalry and competition between the firms, stating that there are *those in Ålesund, those in Molde, and those in Ulsteinvik*.

Jets, who finds themselves in the position as monopolists within the cluster argues that they have drawn numerous advantages from being a part of a well-known cluster. *Free riding* could be a problem within the cluster, but Jets maintains that this is not happening to a large extent due to the transparency of the cluster as a whole.

All the companies have a positive view on the cluster as a facilitator for clustering firms. They highlight some of the uniqueness of the cluster, claiming that these factors make up for being a cluster in a high cost country like Norway. The collaboration between the different actors seems to be strong and well-developed in the cultural and *administrative* characteristics of the firms and the cluster as a whole. All though being a part of a well-known cluster seems to be a greater advantage for the smaller firm than for the larger ones, as these smaller firms do not necessarily have the required capabilities to expand abroad without the support of a cluster.

Based on the interviews, the firms have different views on the challenges and negative effects of being a part of a well-known cluster. This mainly in terms of the fact that the companies are different with regards to size, fields of expertise, competition, and location. But when the companies sum up the advantages versus the disadvantages from being part of a well-known cluster, it seems clear that the positive aspects outweigh the negative ones.

7.2 Cluster effects when internationalizing

The theory of economic development based on industry clusters hypothesizes that the co-location of firms or industries that complement each other, compete against each others, or share common resources leads to increasing return to scale (Hill & Brennan, 2000). This is called *cluster effect* which can be characterized as one of the most important elements a company can derive from being a part of a well-known cluster.

7.2.1 Motivating factors for internationalizing

The motivation factors for internationalization could be argued to be two-folded: as the represented companies included in this study points out both an enormous market potential and a follow-the-customer approach. Theory asserts that the main issue for firms in their internationalization process is to create a competitive advantage that is globally demanded, and then afterwards made highly sustainable (Lin, Tung, & Huang, 2006). Being a part of a well-known cluster, as the maritime industry in Møre og Romsdal, could facilitate this process, making it easier for firms to create and develop a competitive advantage. Literature points out that companies established in a well-known cluster, in many ways, are able to conduct a different path to internationalization. This mainly as they have several large internationally known cluster companies that support them through and during their internationalization process.

According to UG, there are several motivating reasons for going abroad. This view is also supported by Brunvoll, Jets and Tingstad. However, the represented companies have different viewpoints. UG emphasizes both the enormous potential and their strong established internationally oriented relations as major reasons for going abroad. BT on the other hand stresses both a declining home market and their “follow-the-customer” approach as important elements for internationalization. BT further argued that great opportunities are located abroad, and the efforts related to internationalization were essential for further growth. Finally, the demand from foreign shipyards and ship-owners is also an important factor contributing to the company’s decision to focus more on operations located abroad.

When Jets started their operations abroad the cluster effects in the establishment were crucial factors for further internationalization. The representative from Jets explained that the design and products from Norwegian cluster companies was high among the foreign actors. Furthermore, JE explains that their first plant abroad came as a consequence of a direct request through a Møre og Romsdal located company, Farstad Shipping. JE emphasizes the importance of being represented through the various design packages delivered by Ulstein and Rolls Royce. Tingstad describes a similar point of view, as they also possess a “follow-the-customer” approach. Additionally, the representatives from Tingstad argue that their internationalization process to a great extent has been affected by other

cluster participants. They point out common suppliers, agents and customers as the most important collaboration elements.

This viewpoint provides the authors with a understanding of that the SME's represented in the study is far more dependent on the cluster while going international compared to the MNE's.

7.2.2 The cluster position throughout the internationalization process

A common understanding among the various companies represented within this study is that the cluster appears to be very strong internationally. The representative from Ulstein emphasizes the fact that a number of firms represented in the cluster were established abroad as very beneficial in their decision of focus internationally. UG further argues that the cluster to a great extent has been involved in their internationalization process, but also puts emphasis on ensuring that the market opportunities were far more important when deciding to go abroad.

BT on the other hand stresses that their internationalization process was conducted with broad support from both Norwegian clustering companies and the Norwegian Export Council. The representative from Brunvoll highlights examples as joint agents, exchanged experiences and common suppliers as important elements for international success. They further argue that without support in terms of experience and market knowledge from the cluster the internationalization process would likely have been more difficult and resource intensive. This is supported by literature within the field. Both Porter (1998) and Brennan and Hill (2000) argue that competitiveness through the cluster could be achieved in three ways, all which a cluster could help facilitate, namely increasing organization productivity, driving the direction and pace of the innovation, and stimulate new organizational institutional growth.

The representative from Jets considers the clustering effects so important that they claim that without the support they would probably not have existed. This statement is explained by the fact that Jets make use of several local contractors in the Norwegian maritime cluster in their production, especially in areas such as painting, steel works and printing. However, the representative from Jets argued that the companies within the cluster have faced increased distance over the last

years. Tingstad, on the other hand, can be characterized of having a “international light” approach as they primarily focus on following their customers internationally. They have a philosophy which possess that they should be able to serve their customers regardless of where they are operating. The representatives from Tingstad also highlights major advantages of being established in a well-known cluster as many of their customers are represented within the cluster.

7.2.3 Being established in a well-known cluster

A common feature that pervades through the cluster considers, if another company within the cluster is represented in a market abroad, there are also opportunities for them. This is especially true if a MNE represented within the cluster is established, as these companies tends to be very helpful for SME`s when approaching foreign markets. This mainly in terms of the possibility to operate and learn from a new culture/market, opportunity of building a direct network with domestic customers, opportunity to create a unique source of learning, opportunity to acquire internationally experienced workforce through spillovers from other companies in the cluster, exploit each other`s competences to reduce costs and finally provide the company with great experience and knowledge.

Activities supported by MNE`s could through the principal of “learning by doing” provide SME`s with a unique chance of acquiring new knowledge and experience. DeMartino (2006) argues that this could be a direct consequence of being a part of a well-known cluster, as he states that cluster reputation has a direct positive impact on the internationalization process of firms reducing their managerial, financial, and competitiveness constraints.

The empirical and imperial findings from the conducted interviews and the literature mentioned above provides us with insights with regards to how the cluster may act as a facilitator for operating firms within the cluster. Our impression is that the maritime cluster in Møre og Romsdal functions as a tool to overcome the various constraints a company face while going international.

7.3 Cluster reputation

A cluster reputation refers to the esteem in which a particular cluster is held by various constituents for its expertise in the specific field practiced by the interconnected firms and institutions of a specific locality (De Martino, 2006). Literature assert that one of the possible ways in which cluster membership can assist a firm in its internationalization efforts is through cluster reputation (Porter M. , 1998) (Porter E. M., 2000). This statement is supported by Carameli (2004) which considers intangible resources to be one of the drivers of achieving the most influential strategic resources for the firm`s performance. Among these intangible assets, reputation is one of the most influential strategic resources when it comes to a firm`s performance (Carameli, 2004).

7.3.1 Cluster reputation and the internationalization process

A mutual observation among the firms represented in this study is that the possibility of relying on the reputation of the cluster could be seen as very beneficial. The companies have the ability to use their resources on continuing to develop their competitive advantages instead of putting a lot of time and effort into building their own corporate brand and reputation abroad. All the representatives included in this study agree upon that the cluster comprises a strong reputation internationally.

UG builds on this and from experience argues that the maritime cluster in Møre og Romsdal possesses a strong position internationally. The representatives from Ulstein further argue that being a part of a cluster with a well-known reputation can be beneficial for a lot of the companies represented in the cluster, especially the small ones. This statement is supported by Brunvoll, Jets and Tingstad representatives as well. The theory asserts that being a part of a well-known cluster contributes to be beneficial both for small and large companies throughout their internationalization process. This mainly as several international companies have some sort of assurance that they are established and doing business within a scientific strongly anchored cluster. Additionally researchers point outs that a company with a well-known reputation may gain some competitive advantage, for example being able to set higher prices on their products, services, attract qualified employees, and generate greater customer loyalty (Rose, 2004).

However, the MNE's represented in this study elaborate on the fact that they are both capable of operating on their own when approaching domestic and international markets. UG points out that they already has a strong domestic and international name and reputation, making them less dependent of cluster reputation compared to smaller firms. The representatives from Brunvoll argue that they can lean on the cluster reputation. But states at the same time that it is of great importance to mention that their company individually appears to be very strong abroad as they have operated internationally for decades.

Jets on the other hand, who can be characterized as a smaller company, states that the cluster's good international reputation could be seen as a clear advantage for the firms located within the cluster. Further, JE argues that they almost always have expanded internationally together with other actors represented within the cluster. TI argues that a solid cluster reputation directly can assist a company when going international. Representatives from Tingstad mentioned some interesting observations during the interview. They state that the cluster is not taking full advantage of the possibilities lying within a competitive and collaborative cluster as the one in Møre og Romsdal. According to TI the cluster could have been more focused on branding the cluster as a whole, in order to build a strong cluster reputation. They have certain expectations that the cluster will be more conscious of how the cluster appear, as this will increase the value of the services clustering firms offer.

It is obvious that the cluster in Møre og Romsdal evolve together. By branding themselves as one unified cluster, the various companies represented in the cluster achieves a greater opportunity to increase the competitive power as well as the knowledge about Møre og Romsdal as a milestone within the maritime industry. According to representatives from Tingstad the further focus should primarily be on delivering niche products based on the cluster's reputation.

Overall, it seems apparent that the cluster reputation is a great advantage for clustering firms when going internationally. But the response given from all four firms indicates that cluster reputation is viewed differently in terms of size and experience in relation to the individual company. The literature are two folded in this case, as some literature asserts that corporate reputation also seems critically important for an organization regardless of company size (Rindova, 2005), while other researchers express that a cluster reputation could be seen as more beneficial

for small, medium sized companies. Peteraf (1993) considers small companies as more dependent on the cluster reputation and states that a cluster reputation can be considered as a strategic organizational resource that is capable of generating a sustainable competitive advantage for small medium sized companies (Peteraf, 1993).

Both UG and BT states that they can see a great advantage of being part of a recognized cluster, but simultaneous provides clear signals that they manage the process of going internationally individually. Based on the above mentioned factors we find it reasonable to state that fairly unknown companies in new markets will gain more attention from stakeholders and customers if associated with a strong cluster reputation. Members of the cluster in Møre og Romsdal will share the advantage of being considered as experts within their field. Literature asserts that a number of the companies which gain this reputation not necessarily because they have used resources to build it over time on their own, but because the cluster they operate in hold this reputation in the international market. (De Martino, 2006)

7.4 Knowledge development

7.4.1 Knowledge sharing

Cluster knowledge is the ability the cluster has to develop and share the knowledge among the participant in the given cluster. Various researchers characterize cluster knowledge as one of the most important features of being a part of a well-known cluster. A common understanding is that the Norwegian maritime cluster should strive towards maintaining and develop the interaction between the members of the cluster. The fact is that shared knowledge basis enables cluster firms to continuously combine and re-combine similar and non-similar resources to produce new knowledge and innovations (Bathelt, 2004). According to Eriksson et al (1997) is one of the major concerns with the internationalization process to obtain sufficient access to market knowledge (Eriksson, 1997). One of the problems with knowledge is that it is often a concept of learning by doing, and therefore difficult to acquire in advance (Karlsen, 2003).

7.4.1.1 Knowledge sharing within the cluster

All companies represented in this study experience that there is a large degree of knowledge and information sharing among the various companies represented within the clusters. This is in line with the literature, which argues that extensive market-, technical-, and competitive information accumulates within a cluster, and members have preferred access to it (Porter M. , 1998). The fact is that the cluster in Møre og Romsdal is known for having a very strong culture for cooperation.

However, the degree of sharing is perceived differently among the respondents. Ulstein and Brunvoll, which are more strategic oriented, keeps more of the sensitive information to themselves. This mainly as some of the companies represented within the cluster stands as their competitors both domestically and internationally. However, this is in contrast with Ulstein`s philosophy of sharing as much information as possible with their collaboration partners.

UG argues that one of the main reasons for operating with design packages, where they include various companies represented in the cluster, is to have direct knowledge sharing between themselves and the sub-suppliers located within the cluster. UG describes that they are dependent on high quality and secured conditions among their suppliers in order to ensure quality delivery to the end-users. This example illustrates one of the advantages of being a part of a well known cluster, as it is reasonable to state that all elements in the value chain promotes the cluster`s development.

Tingstad and Jets have another view on the degree of sharing among the members of the cluster. They have no or limited direct competition within the established cluster. Due to this fact, these two companies share as much or all information that might be helpful for other companies within the cluster. The reasoning for this is that the more knowledge and information that is being shared among the various firms represented in the cluster, the more competitive the cluster will appear to be both domestically and internationally. Their perception on sharing is quite different compared to the MNE`s, throughout the interview the representatives from the SME`s argues that almost all companies represented in the cluster are focused on sharing general knowledge.

7.4.2 Obligation to share knowledge and experience among the cluster actors

It seems like the respondents has a common understanding of the obligation to share knowledge and experience among the cluster members. The general impression is that the various companies included in this study have a mutual objective, which is to develop the cluster further in order to be globally competitive. UG for instance, states that they never have felt obligated to share any kind of information with other actors in the cluster. BT argues that they has always been open and generous in their way of sharing information and experience among the cooperating cluster actors, and that they never has felt a obligation to share anything among other members. According to JE the mentality in the cluster is focused on cooperation for developing the cluster further. TI argues that the sharing falls naturally, and further stress that this is how the culture is. The various companies represented have no hidden agendas of strategic considerations.

The fact is that for a cluster to function optimally, all participants have to contribute to the clusters interests. However, an interesting observation throughout the interviews is that the two major companies represented in this study; Ulstein and Brunvoll, stress the importance of eliminating free riders.

7.4.3 Channels for information and knowledge sharing

The respondents points out the geography situation in the area as a great platform for sharing knowledge and experience among the various actors represented within the cluster. Jets argue that the physical presence provides the member firms with a great opportunity to meet in many different contexts. Literature asserts that geographical proximity facilitates for strengthened communication between cluster members and intensified exchange of knowledge (Bergman, 1999).

BG points out that the various firms within the cluster share a lot of knowledge and information. This is mainly done through industrial and commercial arenas, such as, development/research projects, joint trade show participation, and other joint marketing efforts under the direction of the NCE or small groups of cooperating firms. Events like these also provide the cluster with external ideas and reflections as both domestic and internationally actors are represented. Projects and fairs, as mentioned above, have a positive outcome for all

participants, as their accumulation of knowledge, most likely will increase, which thereby strengthen their ability to internationalize.

TI argues that the flow of potential new employees is an important channel for knowledge sharing. Further TI states that a lot of firms including themselves also go into collaboration in projects with suppliers and subcontractors within the cluster to develop new and more efficient solutions. This statement is supported by literature which asserts that within a cluster, there are network relations between firms, which they might take advantage of when internationalizing. This information exchange might lead to companies coming across particular pieces of information which is needed in their own internationalization process (Coviello, 1999).

UG on the other hand argues that there is no formal system for knowledge and information sharing across the cluster. It seems as Ulstein have a more personal approach when sharing information and knowledge. Ulstein`s approach builds on Porter (1998) study which reviews personal relationships, and states that the ties foster trust, facilitate the flow of information, and make the information much more transferable. UG explains this by arguing that the region is geographically very small, making it easy to meet each other in informal and personal settings. The other companies also see a clear advantage of sharing information on the personal level. JE states that when you are located in such a small geographic area the possibility to meet business partners or potential new partners is present in several different contexts. TI support this statement and explains that a lot of sharing happens on personal level. They stress that people know each on a personal level and meet each other through various social arenas.

The maritime cluster in Møre og Romsdal consists of several world leading companies within the maritime industry. Indications from the previously mentioned information above gives us the impression of that the MNE`s located within the cluster often use the specialized services provided by the SME`s represented in the cluster when operating abroad. This process substantiates the assertion that the cluster is collaborative oriented, which means that all involved parties have a unique opportunity to get access to knowledge about international players, markets and new relations.

This is supported by all the participants involved in this study. The indicators from the respondents indicate a high degree of knowledge and information sharing between the clustering firms. It is indicated that this exchange increases the level of knowledge and skills acquired by the various companies. Additionally, it seems like the firms represented, regardless of size and experience, gains a lot of being a part of a well-known cluster. However, as previously mentioned the impression is that the small and medium sized companies are gaining marginally more than the multinational enterprises. Our understanding is that both the within-case and cross-case analysis provides support for the literature.

8. Main findings

This section will draw conclusions on the basis of the analysis and the literature review conducted throughout this study. Based on the analysis the main findings will be presented in relation to their implications for the participated firms and the cluster as a whole. Further we would like to present some considerations with regards to the limitations of the study, among others, choices of methodology, sample size and the extent of generalizability. Finally, some possible areas for further research will be highlighted.

The RQ was as follows:

“To what extent can a well-known cluster act as a facilitator for firms, when exploring the opportunities of expanding internationally?”

8.1 Conclusion

The objective of this paper was to develop knowledge, as well as methodologies, in order to improve Norwegian maritime firms' competitiveness in the international marketplace. The strategic side of the internationalization process and the role the cluster has as a facilitator, on how firms should enter foreign markets in order to successfully absorb and acquires knowledge, has been examined throughout the paper. The impact of different cluster effects related to a clustering firm`s internationalization process has also been highly emphasized.

Based on our research question and literature review, we availed ourselves with an analytical model that formed the basis for the analysis. The model is primarily two folded were the first part (within-case) of the analysis presents each company's experiences, views and reflections based on pre-set theoretical areas. The other part of the analysis (cross-case) compares the findings from the first part. This was done in order to compare differences and similarities of the respondents view. On the basis of the reviewed literature, we came up with two main cluster effects, namely cluster knowledge and cluster reputation.

This study has to some extent explored how a well-known cluster act as a facilitator for firms when exploring the opportunities of expanding internationally. The literature review has given insights on how the cluster effects are affecting the firms when approaching international markets. We find it reasonable to argue that the two major cluster effects taken into account, namely; cluster reputation and cluster knowledge is well covered and rooted in the reviewed literature. The areas have additionally been examined through in-depth interviews which have provided the authors with insights on how these effects are giving clustering firms a competitive advantage. The authors find it appropriate to argue that the these effects stands as highly relevant for clustering firms while internationalizing.

Based on the literature review and the interviews conducted it seems to us that the cluster act as an important facilitator for the clustering firms. The empirical findings from the participating firms gave us practical insights stating that the cluster have contributed the firms directly through their international presence. However, it seems like the SME's have benefitted more from the cluster compared to the MNE's represented in this study. Cluster reputation seems to be more important for the SME's. This probably as a consequence of reduced availability on resources related to internationalization. Literature assert that when a firm can rely on the cluster they are part of, they can us their resources on continuously developing their competitive advantage instead of putting a lot of time and resources into building their own corporate brand and reputation abroad (De Martino, 2006).

The cluster's ability to develop and share knowledge within the cluster is highlighted by all the participants. A common understanding is that the cluster seems to have an open culture for knowledge and information sharing. This

especially accounts for firms not having any competitors in the cluster. It is obvious that the cluster in Møre og Romsdal evolve together. The authors find reason to believe that by branding themselves as one unified cluster, the various companies represented in the cluster will achieve a greater opportunity to increase the competitive power as well as the knowledge about Møre og Romsdal as a milestone within the maritime industry.

A common view confirmed by the representatives is that institutions and organizations serve as drivers for the open culture which is present within the cluster. Organizations such as NorVest Forum and the MarCO project which can be characterized as facilitators that fosters knowledge and bring companies within the cluster together can be characterized as these types of organizations which serves as drivers for an open culture among the companies represented within the cluster.

Furthermore, since the proximity of the clustering firms is geographically very close the culture enhances a need for an efficient and open culture for sharing knowledge. The companies, especially the SME's, are dependent on the other actors for further development and growth. Overall, it seems apparent that the cluster reputation is a great advantage for clustering firms when going internationally. However, this is by the represented companies viewed differently in terms of size and experience in relation to the individual company. The literature are two folded in this case, as some literature asserts that corporate reputation also seems critically important for an organization regardless of company size (Rindova, 2005), while Peteraf (1993) considers small companies as more dependent on the cluster reputation and states that a cluster reputation can be considered as a strategic organizational resource that is capable of generating a sustainable competitive advantage for small medium sized companies (Peteraf, 1993).

The maritime cluster in Møre og Romsdal consists of several world leading companies within the maritime industry. We find it reasonable to state that MNE's located within the cluster often utilizes and taking advantage of specialized services provided by the SME's represented in the cluster when operating abroad. This process substantiates the assertion that the cluster is collaborative oriented, which means that all involved parties have a unique

opportunity to get access to knowledge about international players, markets and new relations.

It seems like the firms represented, regardless of size and experience, gains a lot of being a part of a well-known cluster. However, as mentioned earlier the impression is that the SME's gaining marginally more than the MNE's.

We find support for our initial view, stating that a cluster membership becoming increasingly important for a firm's internationalization process. Additionally, the authors recognize that the focus have somewhat shifted from the organizations own capabilities and how they can internationalize on their own, to another approach focusing on taking incremental steps and "learning by doing". The findings presented in this case study further enhance the paper to be of high relevance, as it emphasizes on interesting elements for future research. However, the findings presented throughout this study cannot be generalized as the paper appears as a qualitative study.

8.2 Limitations of the paper

The research conducted throughout this paper could be argued to have some limitations. For example, would it be appropriate to mention that the paper only relies on a few selected companies within the cluster. This means that the external validity is relatively low, while it at the same time would be difficult to obtain generalized findings as we are not able to compare our findings with other cluster's within other industries. By comparing our findings in the analysis with existing theoretical literature, we are more than capable of illustrate some interesting observations related to a cluster's position throughout a company's internationalization process. However, by having larger sample we could increased the generalizability and gained greater basis for drawing valid conclusions. The respondents were picked based upon a non-random sample, something which decreased the validity of the paper further

Additionally is it appropriate to criticize that we did not have external views included in the analysis. An external perspective could be conducted from various participants outside the cluster both domestic and internationally or from experts within the field.

As mentioned in the methodology there are several limitations associated with the use of a qualitative research method, both in the collection, processing and within the analysis of the data. It is apparent that validity and transferability could be decreased while using a qualitative study.

Another element that appears to be worth criticizing is the fact that we are not researchers and nor have specialized knowledge within the field. There is definitely no doubt about that this could affect the way we interpret and analyze the answers. It is also worth mentioning that the various respondents we have conducted information from have developed extensive knowledge within the field during their time within the industry. This technical gap could in some situations lead to misinterpretations.

The cluster effects examined and presented in this paper; cluster reputation and cluster knowledge, are not the only cluster effects which a well-known cluster holds. However, in order to narrow the paper we choose to pick these two effects as they seemed the most relevant for our study. This could, of course, have lead to us to miss out important effects, and thereby decreased the validity of the paper.

8.3 Future research

Based on the findings, the author's assertion indicates it appropriate to argue that this paper illustrates how a well-known cluster can contribute companies throughout their internationalization process.

Based on the results of our analysis, we make suggestions for further research within the following. An interesting point for future research could be to conduct interviews both within and outside the cluster as this would provide the researchers with interesting aspects for comparison between the Norwegian and the internationally oriented market. This element has not been taken into account in this paper. Another interesting approach could be to conduct interviews among experts within the field in order to get first hand information to build upon. Experts within the field might provide different views according to how the cluster stands, their competitive advantages, and how the cluster facilitates the firm's throughout their internationalization process.

Furthermore, it could be of high interest to conduct a study through a quantitative approach since you then could manage to generalize the findings for the

population and the industry as a whole. This study has only focused on some few selected cluster effects related to a firm`s internationalization process. In further research, it could be relevant and interesting to examine and include several other effects in the study which could lead to an even more comprehensive and explanatory analysis.

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10. Attachments

10.1 Interview guide

Interview Guide

Date:

Administrators: Even Aamodt & Vegard Frøshaug

Respondent:

RQ:

“To what extent can a well-known cluster act as a facilitator for firms, when exploring the opportunities of expanding internationally?”

Background information about the firms:

- Short about the company – position in the market, competitiveness in relation to other actors, divisions or agents abroad?
- How is the company engaged abroad?
- How was the international network before the internationalization process?
- How would you characterize the global demand for the company’s products and/or services?

The process before internationalization – the background for foreign operations

- Motivating factors for internationalization?
- To which degree will you say that the Maritime cluster of Møre og Romsdal with related actors have been of help in your internationalization process?
 - o Was it important that some of the companies from the cluster already were established/ represented abroad?
- Which actors influenced the decision of expanding abroad?
 - o Was the cluster an important part of this?

- Does it exist established systems within the company in order to secure information and knowledge about relevant and interesting new markets?
 - o If so, how is this knowledge shared among other clustering firms?
- Did the company experience any advantages of being established in a well-known cluster with several big international companies?
 - o If so, could you elaborate on the most important ones?
 - o What perceptions do foreign actors have regarding the cluster's reputation?
 - o Access to financial resources – does this attract possible investors and collaboration partner?
- What is the general impression other actors (suppliers, customers, possible new employees) have about the company?
- How would you characterize the competitiveness of the Maritime cluster of Møre og Romsdal?
- Is this competitiveness affected by the cluster's international focus?

Knowledge sharing between headquarters (HQ) and subsidiary:

- How does the HQ control the processes the subsidiaries perform? Degree of control?
- To what extent is knowledge transferred from HQ to the subsidiary?
- To what extent is knowledge transferred from subsidiary to HQ?
- Through which channels is this information and knowledge transferred?

Knowledge sharing within the Norwegian maritime cluster in Møre og Romsdal

- To what extent is information and knowledge communicated among firms within the maritime cluster of Møre og Romsdal?
- How is information and knowledge communicated among firms within the maritime cluster of Møre og Romsdal?
- How often are experiences, information and knowledge shared among firms within the maritime cluster of Møre og Romsdal?
- To what extent is the company dependent on other cluster actors represented in the cluster?
 - o Related to; marketing, strategy, product development, innovation etc.

- To what extent is employees recruited through existing cluster channels?
 - o Have the company experienced that potential new employees have been “stolen” by other clustering firms?
- What separated the maritime cluster of Møre and Romsdal from other clusters?
- Does the cluster have any competencies or skills that point out as competitive?
- Does the company collaborate with Norwegian firms outside the cluster?
- What negative effects have/could occur as a consequence of being a part of the Maritime cluster of Møre og Romsdal?
- Is information and experiences being withheld from other clustering firms?
- Does the company feel obliged to share information and experiences among other cluster actors?
- Through what channels is this type of information shared?
- Does the subsidiary have any contact with other Norwegian firms in their internationalization process?
- To what extent is these type of relations an advantage for the subsidiary, and for the company as a whole?

The implementation process

- Did the company experience any challenges or barriers in their internationalization process?
- If yes, how was this handled? Were possible challenges discussed with other clustering firms who been through the same process earlier?
- How did the cluster contribute during the foreign establishment? (information, knowledge, experiences, networks)
- Would the establishment been any different without the help from the maritime cluster in Møre og Romsdal?
- Were there any other important factors related to the establishment of a foreign subsidiary/division?

10.2 Preliminary report

Even Aamodt 0856650

Vegard Frøshaug 0836320

Preliminary Thesis Report

- The Norwegian maritime sector – NCE Maritime -

Hand-in date:

16.01.12

Campus:

BI Norwegian School of Management, Oslo

Exam code and name:

GRA 1902 Preliminary Thesis Report

Supervisor:

Prof. Rolf Petter Amdam

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The Norwegian maritime sector –NCE Maritime

1. Introduction to the research topic:

The Norwegian maritime sector is one of two milieus, alongside the Oil & Energy sector in Stavanger, where Norway has a strong and complete national cluster that is globally competitive. We find reasons to believe that the cluster act as an important factor that enables the firms within the clusters to conduct a successful foreign market entry. Our thesis will be focused on the integration of Norwegian maritime firms in local clusters or knowledge networks in Brazil, where we emphasize on *firms' strategic considerations when exploring opportunities in Brazilian clusters*.

The aim of the project, in general, is to «develop knowledge around key strategic challenges for industry actors in how to manage value creation and knowledge sharing in geographically dispersed industrial networks». The maritime industry is rapidly internationalizing, and as the Norwegian national cluster is globally competitive, we see that more firms need input from other regions, and other types of firms in order to be globally competitive. The objective is therefore to develop knowledge, as well as methodologies, in order to improve Norwegian maritime firms' competitiveness in the international marketplace.

Another objective of the paper will be to develop knowledge on how the maritime cluster can absorb knowledge, learning and a higher degree of commitment above the various customers through the internationalization process. We will look at the strategic side of such an internationalization process, on how firms properly should enter Brazilian clusters in order to successfully absorb and acquire knowledge. Further in the paper, we will look at the strategic decision-making and implementation at the firm level, but also see how a firm's strategies will influence the knowledge flow back to the cluster (cluster level).

1.1 The field of study

The industry of interest is the Norwegian maritime cluster, located at Møre og Romsdal, Norway. The regional maritime cluster in Møre og Romsdal fosters innovations in the design, engineering and construction of offshore and specialized vessels, creating a global niche through a focus on product innovation and management of complex projects. The regional maritime clusters in Norway can be seen as dynamically changing over time. One of these

changes is gradual globalization containing increasing interaction with firms from other clusters. Central actors in the maritime industry are increasing their international presence. Jets have approximately 94% of revenues outside Norway. STX Europe (Former Aker Yards) owns shipyards in France, Romania, Ukraine and Vietnam. Ulstein Group ASA has subsidiaries in Brazil, Slovakia, Poland, Netherlands, Turkey and China. The focus has shifted towards design and engineering, whereas ship building is increasingly outsourced to partner yards in e.g. in Poland, Ukraine, Dubai, Brazil, Spain and China. The industry also observes increasing inward foreign direct investment as foreign firms acquire or merge with local firms.

2. Research question

We have proposed the following research question:

What strategic considerations are important for firms in the maritime cluster of Møre og Romsdal, Norway, when exploring the opportunities of going into maritime clusters in Brazil?

2.1 Companies of interest:

The companies involved are two large firms that are centrally located in production value chains, STX offshore and Ulstein Group, and two suppliers of equipment and solutions, Jets and Tingstad as (a division of KoppernæsGruppen).

Ulstein is an internationally renowned provider of ship designs, shipbuilding and system solutions for ships. Over the years the Ulstein group has evolved into a trendsetter in ship design, shipbuilding and solutions within systems & services.

STX Offshore is a major global shipbuilder, constructing offshore and specialized vessels used in the offshore oil and gas exploration & production and oil services industries. The group has a strong position in terms of developing state-of-the-art concepts, technology, processes and products for customers around the world. Nine shipbuilding facilities located worldwide; five in Norway, two in Romania, one in Brazil and one in Vietnam. In addition the company comprises 15 shipyards in Brazil, Finland, France, Norway, Romania, and Vietnam.

Tingstad AS has a leading position in Scandinavia within their core business which is; Fasteners, tools, bits & pieces and supply chain systems. The company uses a system called “Tingstad Geographical Independent Solutions” which allow them to serve customers worldwide with goods, documents and support without having to be physical present.

Jets is a worldwide innovator within sanitary systems. The robust Jets solution has proved to be highly practical for merchant and offshore vessels of any size or type. Jets sanitary systems are backed up by the reassurance of our long experience.

3. Literature review

In this part of the paper we will present a literature review of some basic cluster theory, knowledge sharing, cluster reputation and market orientation, the internationalization process in general, strategic considerations for internationalizing enterprises, the Uppsala theory, and the phenomenon of born global firms.

3. Cluster

3.1.1 Clusters in general

The economic map of the world today is dominated by what Porter call clusters; critical masses-in one place-of unusual competitive success in particular fields (Porter M. E., 1998a). The review of the literature on clusters quickly illustrates that a number of researchers has contributed within this field the last decades. The literature reveals a myriad of definitions given to the construct of clusters. A unique definition has still not been set. The fact is that a cluster, or clustering, means different things to different people. There is limited agreement among researchers how to define the phenomenon.

In fact, Rosenfeld (1997), stress that there are as many definitions of clusters as there are types of organizations using the term (Rosenfeld, 1997). Navickas et al (2009) support this view and states that during the last decades several scholars have carried out studies related to this topic, but still the result has been limited agreement among researchers how to define an industry cluster. According to Campaniaris et al (2011) a part of this problem is due to the fact that there have been a variety of definitions used when examining clusters (Campaniaris, 2011). Svetina et al (2005) argue that the reason behind various viewpoints is that a cluster is markedly different and much more complex than the traditional organization. As clusters bring profit and non-profit organizations, companies that are competitors, as well as

companies that are engaged in buyer-supplier relationships together. As a result of increased interest in microeconomic conditions for generating the growth and prosperity, clusters has been recognized as an important instrument for promoting industrial development, innovation, competitiveness and growth (Svetina. Cotic, 2005). This statement is supported by Porter (1998a) and Navickas et al (2009) which argue that clusters include a much wider range of organizations, such as academic, financial, and government institutions. Those elements lead in some manners to specialized training, education, information, research and technical support (Porter M. E., 1998a) (Navickas, 2009).

Further on Porter (1998b) states that clusters occur in many types of industries, in both larger and smaller fields, and even in some local activities. Clusters are also present in large and small economies, in rural and urban areas, and at several geographic levels (Porter M. E., 1998b). Clusters can take varying forms depending on their depth and sophistication, but most include end-products or service companies; suppliers of specialized inputs, components, machinery, services, financial institutions and firms in related industries. Porter (2000) argues that clusters often involve a number of institutions, governmental and otherwise, such as universities. Many clusters also include trade associations and other collective private sector bodies that support cluster members (Porter E. M., 2000). The geographic scope of a cluster can range from a single city or state to a country or even a group of neighboring countries (Porter E. M., 2000).

Sølvell et al (2003) states that for a cluster to successfully develop it is not enough to determine a good strategy, it is also important to follow and fulfill the strategic goals, believe in them and be competent enough to realize them. Edelman et al (2004) argues that specialization is an exceptional feature of cluster companies. According to Svetina et al (2005) organizations within a cluster have their own corporate cultures and follow their own strategies. All of this means that there may be some differences in a cluster as opposed to a traditional organization. Clusters are considered to increase the productivity with which companies can compete, nationally and globally. Menzel et al (2009) states that companies within a cluster experience stronger growth and faster innovation than those outside clusters.

According to Navickas (2009) companies within a cluster can take advantage of various resources; cost economy: cluster companies tend to minimize their costs through specialization, as they make use of their key competencies and choose only the cheapest and

most efficient production alternatives. Knowledge and learning: companies form a cluster in order to learn from their partner's experience. Thus, they can advance in technical, financial, R&D, marketing and other fields of competence and increased specialization: a cluster enables smaller companies to get specialized and promotes their cooperation (Navickas.V, 2009). However, according to Menzel et al (2009) the strong research focus on the way clusters function is contrasted with a disregard for their evolutionary development, i.e. how clusters actually become clusters, how and why they decline and how they shift into new fields. The few existing insights on the emergence of clusters, for example, lead to the conclusion that the processes responsible for the functioning of a cluster cannot explain its emergence (Menzel, 2009) (Bresnahan, 2001).

The most common definition of an industry cluster is given by Doeringer et al (1995) which describe clusters as geographical concentrations of industries that gain performance advantages through co-location. Rosenfeld (1997) defines industry clusters as a geographically bounded concentration of similar, related or complementary businesses, with active channels for business transactions, communication and dialogue that share specialized infrastructure, labor markets and services, and that are faced with common opportunities and threats. In other words, Rosenfeld (1997) places emphasis on the role of social interaction and cooperation between firms in ascertaining the dynamic nature of clusters.

However, much of the analysis related to clusters is based upon Porter's (1998a) definition which describes clusters as geographic concentrations of informally linked/ interconnected companies and associated institutions (for example universities, standard agencies, research institutions and trade associations) in particular fields that compete but also cooperate with each other. Another approach is given by Svetina et al (2005) which argue that clusters stands for agglomeration of small-medium sized firms engaged in one or few complementary industries in a limited geographic area. Another view is provided by Michael J. Enright (2005) which define clusters as groups of firms in the same and related industries whose performance is independent. Enright's definition is reflected upon his thoughts for a cluster to be successful, it is not enough for firms to be in related industries or interconnected, but they should be independent.

According to Companiaris et al (2011) clusters can be characterized as groups of independent companies and institutions which; cooperate and compete, are geographically concentrated and specialize in a specific industry (common technologies and skills). Porter (1998a) also

emphasizes focus on the fact that clusters promote both competition and cooperation. Rivals compete intensively to win and retain customers. Porter (1998a) states that without vigorous competition, a cluster will fail. Yet there is also cooperation, much of it vertical, involving companies in related industries and local institutions. Competition can coexist with cooperation because they occur on different dimensions and among different players (Porter M. E., 1998a). Furthermore, Porter (2000) states that most cluster participants do not compete directly, but serve different industry segments. However, they do share many common needs and opportunities and encounter many common constraints and obstacles to productivity. A common understanding among various researchers are that clusters are geographically integrated companies and associated organizations that share together technological know-who, knowledge, skills, competencies and resources (Navickas, 2009), (Porter M. E., 1998a), (Enright, 2005). According to Porter (2000) what has been missing, both in theory and in practice, however, is an understanding of the tight relationship that exists between clusters and competitive strategy at the firm level. Porter (2000) argues that forging this relationship can shed new light on the influence of locations well as the role of government in economic development.

Table 1: Overview of some definitions of clusters

-
-
- Geographical concentrations of industries that gain performance advantages through co-location. (Doeringer, 1995)
 - Geographically bounded concentration of similar, related or complementary businesses, with active channels for business transactions, communication and dialogue that share specialized infrastructure, labor markets and services, and that are faced with common opportunities and threats. (Rosenfeld, 1997)
 - Geographic concentrations of informally linked/ interconnected companies and associated institutions (for example universities, standard agencies, research institutions and trade associations) in particular fields that compete but also cooperate with each other. (Porter M. E., 1998a)
 - A cluster is a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities. (Porter E. M., 2000)
 - Clusters stands for agglomeration of small-medium sized firms engaged in one or few complementary industries in a limited geographic area. (Svetina. Cotic, 2005)
 - Groups of firms in the same and related industries whose performance is independent. (Enright, 2005)
 - Clusters are geographically integrated companies and associated organizations that share together technological know-who, knowledge, skills, competencies and resources. (Navickas, 2009), (Porter M. E., 1998a), (Enright, 2005)
-
-

Porter (1998a) states that what happens inside companies is important, but clusters reveal that the immediate business environment outside companies plays a vital role as well. Further on Porter (1999a) stress that this role of locations has been long overlooked, despite striking evidence that innovation and competitive success in so many fields are geographically concentrated – whether it's entertainment in Hollywood, finance on Wall street, or consumer electronics in Japan. However, Porter (2000) argues that the configuration and the role of clusters seem to be taking on a new character as competition globalizes and economies become increasingly complex, knowledge-based, and dynamic. The presence of clusters suggests that much of competitive advantage lies outside a given company or even outside its industry, residing instead in the locations of its business units. Svetina et al (2005) argues that the main characteristic of a cluster is that it brings together firms, R&D institutions, universities, public sector organizations and thereby enabling them to gain several competitive advantages which are not available for firms not located in geographical concentrations.

3.1.2 Clusters and knowledge

The shared knowledge basis enables cluster firms to continuously combine and re-combine similar and non-similar resources to produce new knowledge and innovations (Bathelt, 2004). Malmberg et al (1999) argues that this stimulates economic specialization within the cluster and result in the development of localized capabilities which are available to cluster firms. A location within a cluster brings further advantages that are not available to firms situated elsewhere (Bathelt, 2004). In order to explain the advantages firms have when locating within a cluster, Bathelt et al (2004) distinguish between the horizontal and vertical dimensions of a cluster and identify the advantages of local or regional as opposed to extra-local or interregional interaction between firms.

Furthermore, Bathelt et al (2004) argues that the horizontal dimensions of clusters consist of those firms that produce similar goods and compete with each other. These firms do not necessarily have close contacts to one another or intensive input-output relations. Rather, the respective firms benefit from their co-location through which they are well informed about the characteristics of their competitors and about the quality and cost of the production factors that they use (Bathelt, 2004). On the other hand the vertical cluster dimension consists of those firms which are complementary and are interlinked through a network of supplier,

service and customer relations. According to Marshall (1920) a variety at the horizontal level stimulates growth in the vertical dimension.

Porter (2000) argues that seeing a group of companies and institutions as a cluster highlights opportunities for coordination and mutual improvement in areas of common concerns without threatening or distorting competition or limiting the intensity of rivalry. The cluster can offer a constructive and efficient forum for dialogue among related companies and their suppliers, government, and other salient institutions (Porter E. M., 2000). Lawson et al (1999) argues that co-location within a cluster stimulates the development of a particular institutional structure shared by those who participate. Firms develop similar language, technology attitudes and interpretative schemes (Lawson, 1999). Given the contribution of network relations to the internationalization of firms, networking firms within a highly reputable cluster will have a greater chance of coming across the particular piece of information they might need in their internationalization efforts (Coviello, 1999). In effect by having a pool of information available within their own cluster it becomes easier and less costly for cluster firms to get information through their own informal and formal networks of acquaintances and contacts (De Martino, 2006).

3.1.3 Cluster reputation

Corporate reputation is defined as “the overall estimation in which a particular company is held by its various constituents” (Fombrun, 1996), and is considered as one of the most strategically significant resources of a firm (Fombrun, 1996). A cluster reputation refers to the esteem in which a particular cluster is held by various constituents for its expertise in the specific field practiced by the interconnected firms and institutions of a specific locality (De Martino, 2006). When a firm lacks corporate reputation, which is one of the most valuable intangible assets of a firm, they can lean on the reputation of the cluster they are part of.

Porter argues that one of the possible ways in which cluster membership can assist a firm in its internationalization efforts is through cluster reputation (Porter M. , 1998) (Porter E. M., 2000). DeMartino et al (2006) presents two different ways through which a solid cluster reputation can assist firms, particularly small and medium-sized enterprises (SMEs), in their internationalization efforts. First, a solid cluster reputation can directly assist SMEs in dealing with the resource constraints they face, while going international, such as lack of capital, and

lack of international business experience. Second, a solid cluster reputation can indirectly assist the internationalization of cluster firms by enabling the cluster to attract valuable resources that sooner or later local firms can draw on (DeMartino, 2006).

De Martino (2006) argues that cluster reputation has a direct positive impact on the internationalization process of SME's reducing their managerial, financial, and competitiveness constraints. The reputation of a cluster has a historical aspect, therefore, the reputation of a cluster at a given point in time impacts the future accumulation of other factors in the cluster, such as specialized personnel and technological infrastructure (DeMartino, 2006). When a firm can rely on the reputation of the cluster they are part of, they can use their resources on continuing to develop their competitive advantages instead of putting a lot of time and resources into building their own corporate brand and reputation abroad.

3.1.4 Market orientation

The processes of market orientation consist mainly of generating intelligence, disseminate it and take action based on it (Ajay, 1990). Within a cluster a successful market-oriented strategy can change the strength and competitiveness of the cluster as a whole (De Propis, 2006). Much of the work on market orientation underscores the importance of their contribution to strategic marketing. But several researchers notes that market orientation requires commitment of resources (Pradeep, 2004) (Ajay, 1990) (Narver, 1988). Based on this research it is wrong to presuppose that, regardless of the context, market orientation would lead to improved performance.

According to Ajay (2010) it is important to take into account that market orientation is useful only if the benefits it affords exceed the cost of those resources. Hence, under conditions of limited competition, stable market preferences, technologically turbulent industries or a unique economic situation, a market orientation may not be related strongly to business performance. It will also be important for companies to determine what forms of market orientation that might exist among organizations and how the differences in forms of market orientation will affect the performance on the specific cluster they are operating in. Within a cluster it is important to be able to combine and integrate locally embedded knowledge with knowledge derived from international operations and from products and services developed abroad. The overall objective is to develop a new knowledge and capabilities in order to improve the cluster international competitiveness (De Martino, 2006).

3.2 Internationalization process

According to Sune Carlson, one of the pioneers within the field of firm internationalization, firms that intend to go abroad lack the sufficient knowledge to conduct and operate a business in a foreign market (Carlson, 1966) (Forsgren, 2002). His research was the basis and beginning of decades of research conducted on how and why firms internationalize. But what is the internationalization process?

In economical terms the internationalization process has been viewed as increasing involvement of an enterprise in international markets (Welch & Luostarinen, 1988). However, there has not been agreed upon a common definition of internationalization or international entrepreneurship (Bell & Young, 1998) (Young, Dimitratos, & Dana, 2003). Throughout the next sections we will review the most suitable theories and provide a broader picture of this phenomenon.

3.3 Strategic considerations for internationalizing enterprises;

A lot of research have been conducted during the past decades on which firm who choose to internationalize, which characteristics they have, what kind of different entry modes they can use, and which risks that are connected to all of the above. We will examine the most relevant literature within the field.

3.3.1 Why do firms internationalize?

According to Leahy & Pavelin (2003), the field of foreign direct investment (FDI) have tend to focused on two reasons of why firms are locating in a particular country. The first is that firms are motivated by the search of lower costs of supplying a market. The second reason is to gain improved access in a country or some other country's market of interest (Leahy & Pavelin, 2003). However, Dunning (2000) identifies four general foreign based MNE activities in his research article "The Eclectic paradigm as an envelope for economic and business theories of MNE Activity":

1. Which is designed to satisfy a particular foreign market, or set of foreign markets.
This approach is called market seeking or demand oriented foreign direct investment.

2. Designed to gain access to natural resources, like agricultural products, oil and minerals, and unskilled labor. This approach is called resource seeking or supply oriented foreign direct investment.
3. Designed to promote a more efficient division of labor or specialization of an existing portfolio of foreign and domestic assets by MNEs. This is often a result of either the first or second type of activities, and is called rationalized or efficiency seeking foreign direct investment.
4. Designed to protect or augment the existing ownership (O) specific advantages of the investing firms, or to reduce the advantages of competing firms. Another term for this is strategic seeking foreign direct investment.

3.3.2 Which firms internationalize?

John Dunning (1977), one of the founding fathers within this field, developed a framework called “the eclectic paradigm”, or the “OLI-framework” back in 1977 that focus on which characteristics and reasons firms have to internationalize. This framework is based on three factors or capabilities that firms need to have in order to successfully internationalize (Dunning, 1977). The first one, *ownership*, says that a firm needs to have a competitive advantage in terms of current assets or in the nature of the company compared to competitors in a foreign market in order to internationalize. The second one, *location*, says that a firm should expand in a nation that has specific locational advantages. This could for example be specific natural resources, logistical benefits, or cheap labor. The third and last factor is *internalization*, meaning that a firm should set up their own manufacturing/production in a foreign market/nation instead of example licensing it out. This is based on a cost-benefit analysis, meaning that, if a firm would benefit from this either operationally or organizationally, then the firms should pursue this strategy (Dunning, 1977). This is also recognized as important by Hirsch (1976), claiming that for a firm to be able to produce in a foreign market it need to possess additional ownership advantages sufficient to outweigh the costs of servicing an unfamiliar or distant environment.

Since the eclectic paradigm was developed in the 1970s a lot of changes have happened in the international business environment. According to Dunning (2000) especially four significant factors points out as important during the 80s and 90s; first, the maturation of the knowledge-based economy. Second is the deepening integration of international economic and financial

activities, including fostered by electronic networks (Kobrin, 1999). Third are the liberalization of cross-border markets, and the flotation of the world's major currencies, and finally the fourth is the emergence of several new countries as important new players on the global economic stage (Dunning, 2000).

3.3.3 Risks connected with the internationalization process

During the past decade, various researchers have contributed to the risk factors connected with firms internationalizing. According to Hill, Hwang and Kim (1990) there are three main variables that firms have to take into account when entering a foreign market (foreign entry mode). These are strategic, environmental and transaction variables and firms have to evaluate these to find the proper entry mode for successfully operate in a foreign market (Hill, Hwang, & Kim, 1990). Depending on the level of control, resource commitment and dissemination risk the firm decide whether they shall license out, entering a joint venture or setting up a wholly owned subsidiary (see figure 4). The more knowledge the firm has about the foreign market, the more commitment and resources it will allocate. (Johanson & Vahlne, The Internationalization Process of the Firm - A model of knowledge development and increasing foreign market commitments, 1977)

According to Ghemawat (2007) most business people make two assumptions when deciding a global strategy; first, the central challenge is to strike the right balance between economies of scale and responsiveness to local conditions. Second, the emphasis companies place on scale economies in their worldwide operations, the more global their strategies will be. These are problematic assumptions, since the main goal of a strategy should be to manage and overcome the large differences whether or not these are based on a border or other factors (Ghemawat, 2007).

As a response to these assumptions Ghemawat have developed a framework called “the AAA Triangle” which aim to help firms deciding which strategy they should pursue when integrating their businesses globally (Ghemawat, 2007). The “AAA” letters stand for adaption, aggregation, and arbitrage. Adaption means that the firm is seeking to increase its revenue by maximizing a firm local relevance. This could be done by for example creating local units in the foreign market they are operating in. Aggregation is an attempt to create regional or global operations, and by doing so creating economies of scale. This could be

done by creating a standardized product or service across borders. The final word, arbitrage, means that the firms try to exploit the differences between national or regional markets by having different parts of the supply chain in different locations (Ghemawat, 2007).

Further in his research Ghemawat (2007) make some suggestions for firm developing a strategy based on the AAA framework (see figure 5). The firm should *focus on one or two of the A's* in order to achieve competitive advantages by not aiming too high while trying to serve their customers. Further, the firm should *make sure the elements of a strategy are good a good fit organizationally*, meaning that if a firm embodies new elements to their strategy you have to make sure that it is incorporated well into the organization. Further on the firm should *think about externalizing integration*, meaning that the firm does not need to do all activities by themselves in order to pursuit one or two of the AAA strategies. This could for example be joint ventures, licensing out the manufacturing etc. The last suggestion Ghemawat makes is that the firm should *know when not to integrate*, since this could result in lack of flexibility and that some business units actually perform better separated (Ghemawat, 2007).

3.4 Traditional Internationalization theory – The Uppsala theory

Traditional internationalization theory sees the internationalization process as an incremental and stepwise process, where the firm first expands gradually to the countries which are geographical the closest and then move further away after they learn and acquire knowledge from the new markets they are operating in. The goal is to finally have the worlds as its marketplace. This theory is often called incrementalism, and could be seen as a management learning process where the basic logic is “learning by doing” (Johnson, 1988). The theory have its roots from Johanson & Vahlne’s article “The Internationalization process of a firm – a model of knowledge development and increasing foreign market commitments”, published in 1977. The article aims to see how organizations learn and how this learning affects their investment behavior in foreign markets (Johanson & Vahlne, The Internationalization Process of the Firm - A model of knowledge development and increasing foreign market commitments, 1977).

According to the establishment chain (figure 1) the firm often starts to export to a given market by using an agent, then later establish a sales subsidiary, and eventually, in some cases, begin production in the host country (Johanson & Vahlne, The Internationalization Process of

the Firm - A model of knowledge development and increasing foreign market commitments, 1977). This is done in a cautiously and sequentially manner. The main reasons for applying this approach are lack of market information and uncertainty as a consequence of lack of this information (Hornell, Vahlne, & Wiedersheim-Paul, 1973). This is called the “liability of foreignness” and the only way to overcome this challenge is by being present in the given market.

As shown in figure 2, increasing *market knowledge* of a new market leads to *commitment decisions* that affect the *current activities* in a given market that again leads to in increased *market commitment* and higher market knowledge. This is seen as a cyclical process where each activity will lead to more knowledge and thus increased market commitment. This is a reactive process since you are learning and acquiring knowledge only by being in the market, and therefore cannot take advantage and learn from other players. The result of this is a slower internationalization process with higher costs (Johanson & Vahlne, The Internationalization Process of the Firm - A model of knowledge development and increasing foreign market commitments, 1977). Proactive learning focuses on the search for new solutions, something contradicting to the Uppsala theory (Huber, 1991).

In the article “The concept of learning in the Uppsala internationalization process model: a critical review (2002) Mats Forsgren criticized the Uppsala theory for being too narrow with regards to the interpretation of the term learning. Especially the emphasis on experiential learning through ongoing activities from the Johanson & Vahlne’ article from 1977 have received criticism from researchers during the two last decades (Forsgren, 2002). A example of this is that organization can acquire knowledge through their business relationships without having to go through the same experiences by themselves (Hansen, 1999) (Kumar & Kofi, 1998) (Lane & Lubatkin, 1998).

Furthermore, Forsgren claims that it is possible to imitate learning by observing other forms with high legitimacy and acting in a similar way (Forsgren, 2002). Other ways to overcome the uncertainty is by hiring people with the necessary knowledge to operate a business in a foreign market (Huber, 1991) (Barkema & Vermeulen, 1998), or by acquiring firms that operate in the given market (Forsgren, 2002). Finally, the last method for gathering knowledge is by conducting market research in order to find relevant information about a new market (Huber, 1991).

As a reply to this criticism Johanson and Vahlne decided to revisit the article from 1977, and

come up with some new research regarding the matter Forsgren highlighted. The result was “The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership” (2009). The main focus in the article is to review new research conducted after the Uppsala model came out in 1977, and based on this review come up with a better and up-to-date model (Johanson & Vahlne, 2009) (Figure 3).

The focus in the model and in the business environment as a whole has changed from a neoclassical market with independent suppliers and customers, to a web of relationships, also known as a network. A good example of this is the empirical studies of the internationalization of small software firms made by Coviello and Munro (1995, 1997). Their research supported that network relationships affect the foreign market selection as well as the mode of entry in the given market (Coviello & Munro, 1995) (Coviello & Munro, 1997). This is further supported by (Coviello, 2006) that shows that “insidership” in networks is of great importance and instrumental before entering a new market.

The root of uncertainty is no longer physic distance, but the outsidership of not being a part of a relevant network for your operations in a foreign market (Johanson & Vahlne, 2009). One of the changes in the model is from “market knowledge” to “knowledge opportunities” since the relationships within a network varies, so does also the opportunities the firms have to engage these opportunities. The change from “commitment decisions” to “relationship commitment decisions” states the fact the most important term added is relationship which is the whole basis for the new model.

Further on, the change from “current activities” to “learning, creating, and trust-building” have been done in order to make the model more explicit and easier to grasp (Johanson & Vahlne, 2009). Also the last change, from “market commitment” to “network position” state the fact that firms internationalizing should focus on the position in the relevant network, and by doing so increasing their market commitment.

3.4.1 Born global

Based on the previous theory a new set of theory were developed as a response to the rapid changes on how firms internationalize. The term “Born Global”, which first appeared in the literature in 1993, when McKinsey & Co (1993) identified several firms in Australia who were exporting only two years after its inception, was a strong contradiction to the

incremental and stepwise Uppsala model from 1977. It was claimed that these companies “views the world as its marketplace from the outset” (McKinsey & Company, 1993). This phenomenon were further researched by Oviatt & McDougall (1994) in their article “Toward a theory of international new ventures” where they defined it as “a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries”. This view was supported by Madsen & Servais (1997) which view international new venture (INV) and/or born globals as international at inception. A somewhat similar view were held by Knight & Cavusgil (1996, p. 11) that conceptualize born global firms as being “small, technology-oriented companies that operate in international markets from the earliest days of their establishment”.

All though a lot of research has been conducted, the researchers still strive to come up with a common, acknowledged definition for the term “born globals”. The reasons for this are two-folded as researchers have included a “time limit from inception to export” aspect, and/or an “export vs. domestic sales” aspect when they try to definite the term “born global” (McKinsey & Company, 1993) (Rennie, 1993). After reviewing the existing literature in the field, Gabrielsson et al (2008) attempts to conceptualize and clarify the term “born global” in their article. A “born global firm is a “firm [who] have products with global market potential. Moreover it can combine this potential with an entrepreneurial capability to seek methods of accelerated internationalization. It must have a global vision at inception [and] carry the risks of a small start-up company” (Gabrielsson, Kirpalani Manek, Dimitratios, Solberg, & Zuchella, 2008).

According to Madsen & Servais (1997) it is three important factors of why we in the early 90s experienced a boom of international new ventures and an increasing focus on the term “born globals”: “(1) new market conditions, (2) technological developments in the areas of production, transportation and communication, and finally (3) more elaborate capabilities of people, including the founder entrepreneur who starts the Born Global firm. All three factors are, however, interrelated”. (Madsen & Servais, 1997, p. 565). If we look at the business environment as a whole, we can see that the emergence of these “born global” firms as a sign of the developments the internationalization process theory have gone through since its early beginning with the Uppsala internationalization process from 1977 (Rialp, Rialp, & Knight, 2005).

According to Knight & Cavusgil (2004) the “born global” firms faces different challenges compared to firms having a more stage-oriented international process. Especially regarding financing, resources, limited human resources (Knight & Cavusgil, 2004), and international experience (Gabrielsson, Kirpalani Manek, Dimitratios, Solberg, & Zuchella, 2008). The researchers following the stream of “stage-theories” claim that these challenges only can be countered by achieving international experience over time. But according to the proponents of the “born global” theory these firms are able to overcome these challenges through internal capabilities that traditional multinational enterprises (MNEs) are lacking.

Knight & Cavusgil (2004) argues that these capabilities are; international entrepreneurial orientation, international marketing orientation, global technological competence, unique products development, quality focus and ability to leverage foreign distributor competences. The born global are able to use these capabilities in order to speed up their internationalization process. However, Gabrielsson et al (2008) claim that a successful BG is dependent on venture capitalists or other sources of external financing in their infancy to be able to internationalize at the necessary rate. Gabrielsson et al (2008) also claim that after the initial rush of the Born Global’s internationalization, it will become a “normal” MNE, operating internationally in accordance with the traditional stage internationalization process.

4 Methodology and data collection

As this is an exploratory problem, our paper will mainly be studied through a case study approach, even though it can be difficult to generalize our findings due to the fact that we have a small sample during study. The most appropriated research instrument will be in-depth interviews with managers of companies within the cluster, but it could also be of interest to interview managers in companies outside the cluster in order to analyze the differences of the internationalization process and the integration in local clusters, or knowledge networks in Brazil with and without a cluster. It could also be sufficient to interview business managers in Brazilians companies within maritime clusters in order to highlight the differences in doing business in Brazil in comparison to Norway. Also experts within the field of cluster and internationalization processes could be of great interest to interview. The interview process will be conducted through a semi-structured interview guide.

4.1 Design

When conducting research, it is important to make the right decision about what kind of research design to choose, and how to organize the research activity. According to Easterby et al (2008) the research design should explain and justify what data that is to be gathered, how and from where. It is also of importance to be able to achieve the research aims through the chosen design, method and instrument (Easterby-Smith, 2008). Since we will look in depth at one cluster in order to find support for or reject our hypothesis, we will use a case study approach. Eisenhardt et al (2007) argues that the main idea behind the case study phenomenon is to look at different cases in order to develop theory inductively. The underlying philosophy of this method has been studied by various researchers the last decades. As a consequence there are still differences among researchers regarding how the right way of performing a case study should be done. For our study, the constructionist research design is deemed appropriate, as it assumes that there is no absolute truth, and the job of the researcher should be to establish how various claims for trust and reality become constructed in everyday life (Easterby-Smith, 2008). The most appropriated way of conducting such research should be based on direct observations or personal contacts, take place within a single organization, and then involve sampling from numbers of individuals.

As mentioned above our research instrument will be to conduct in-depth interviews with managers in companies that are a part of the Møre og Romsdal Maritime Cluster. If possible we will also conduct in-depth interviews with companies outside the cluster and with Brazilian business managers in order to make some comparisons. As we want to conduct in-depth interviews to collect our data, we have a qualitative method, meaning that the data collected is mainly in form of words (Easterby-Smith, 2008). Further on Easterby et al (2007) argues that in qualitative studies there is a distinction between instrumental and expressive studies.

The cluster in Møre og Romsdal is chosen due to its uniqueness as one of two industrial milieus, alongside the Oil & Energy sector, where Norway has a strong and complete national cluster that is globally competitive it can be characterized as a expressive design, as the case involved is chosen due to its unique features (Easterby-Smith, 2008). As a consequence of choosing an expressive study we ought to know that the results of the study may not be able to generalize, but as we do not aim to test theories, but rather develop theories by testing our upcoming hypotheses it's seen as justifiable. Theoretical sampling (the process of choosing

new research sites or cases to compare with ones that have already been studied), which is not random or stratified, is therefore deemed appropriate for our purpose.

4.2 *Participants*

The samples we have chosen are various companies within the maritime cluster of Møre og Romsdal, whereas both SME and MNE are represented. The respondents from this sample will most likely be business managers of the respective companies. As we are going to analyze *the firms' strategic considerations when exploring opportunities in Brazilian clusters*, it could also be beneficial to interview respondents from Brazilian companies within the same industry in order to get first-hand information about the market situation in Brazil. In addition to this, experts within the field could also be beneficial to interview.

4.3 *Research Instrument*

As already mentioned above, we will use in-depth interviews as instrument to collect the data. Easterby et al (2008) stress that when conducting interviews, one of the aspects that have to be taken into account is the level of structure, which in some manners can range from highly structured to unstructured and free-ranging conversations. The main purpose of our interviews is to get an understanding of the manager's views on the situation in their own companies, the perceptions they have about advantages drawn from the cluster, and how this can support them in their internationalization process when exploring new ventures in the Brazilian market. As mentioned earlier we will use a semi-structured interview approach in order to get data that will give us enough details to either confirm or reject our upcoming hypotheses. In short, a semi-structured interview approach does not have a fixed questionnaire, but focuses on a certain aspects and topics that need to be covered throughout the interview. A topic guide for the interviewers is often used in order to make sure that all topics are covered.

5 *Thesis progression:*

January: Preliminary report hand in
February: Preparation for data collection – Interview guide etc
March: Collection of data

April: Collection of data
May: Analyzing the data
June: Analyzing the data
July: Interpreting the data
August/September: Concluding remarks and hand-in

6 Attachments

6.1 Overview of existing literature

Author(s)	Major Findings regarding FLE	Study
Micheal E.Porter 1998a	Clusters and the new economics of competition. This article presents a review on the importance of clusters in today's economic situation.	Journal article
Valentinas Navickas and Asta Malakauskaite 2009	The aim of the study is to investigate the impact of clusterization on the development of SME sector.	Systematic-logical analysis of scientific literature, synthesis, holistic approach
Anja Cotič Svetina, Marko Jaklič and Hugo Zagorsek 2005	The paper explores the issue of leadership in the context of clusters. The authors compare leadership in a cluster environment to leadership in a traditional organization	Literature review
Richard DeMartino, David McHardy Reid and Stelios C. Zyglidopoulos 2006	The paper explores the impact of firm internationalization on regional industrial clusters. The paper explores whether the internationalization of local firms weakens the local relationship associated with industrial clusters.	Reports the findings of research conducted on the internationalization of a cluster of companies in the photonics industry. Twenty-three senior executives were interviewed, face to face.
Stelios C. Zyglidopoulos, Richard DeMartino and David McHardy Reid 2006	The authors argue that a solid cluster reputation can assist in the internationalization process of cluster firms, especially when these firms are small, medium sized enterprises, which face a number of obstacles in their internationalization process.	Literature review
Constantine Campaniaris, Steve Hayes, Michael Jeffrey and Richard Murray 2010	The purpose of this paper is to identify and map trends in the Canadian apparel industry (in a global context) and, through the application of Porter's models, establish strategies that could be employed by Canadian small and medium enterprises (SMEs) in response to the move toward trade liberalization since the phasing out of the multi-fibre	The literature review established trends in the apparel industry both in Canada and globally. Qualitative research in the form of case studies highlighted apparel suppliers' perceptions of Canada's strengths and weaknesses as a business setting and provided

	arrangement.	preliminary information on possible supplier activities which provide value and competitive advantage.
Max-Petter Menzel and Dirk Fornahl	The authors present a model that explains how the very cluster dynamics is both the driver for the movement of a cluster through a life cycle and the reason why this movement differs from the industry life cycle. The model is based on two key processes: the first is that the emergence, growth, decline and renewal of the cluster depend on the technological heterogeneity of firms; the second is that firms have a larger relative absorptive capacity, when they are in the same location, and thus especially localized learning changes heterogeneity	Field research. Pilot test of a new SST technology by an Automobile Manufacturer and its dealer network
Harald Bathelt, Anders Malmberg and Peter Maskell 2004	In this paper, our aim is thus to present an admittedly crude model that takes into account the global connections of firms in clusters while retaining the notion that in some crucial sense knowledge is created, stored and utilized locally in a decisive manner.	
Jan Johanson and Jan Erik Vahlne, 1977	The aim of the study is to research and investigate how firms internationalize, and based on this research develop a model of an internationalization process. Key words: commitment and knowledge.	Empirical research of previous research on the internationalization process. Previous observations on how Swedish firms develop their international operations.
John Dunning, 2000	The purpose of the study is to give an updated version of the author's eclectic paradigm of international production from 1977.	Report findings within the field of study during the last decade, and see how this research has contributed to the eclectic paradigm.
Rialp, Rialp and Knight, 2005	The aim of the study is to review contributions, drawbacks, limitations and major discrepancies found in the research conducted to date.	Synthetic literature review. Examine 38 studies from the last decade that deals with international new ventures, global startups and born

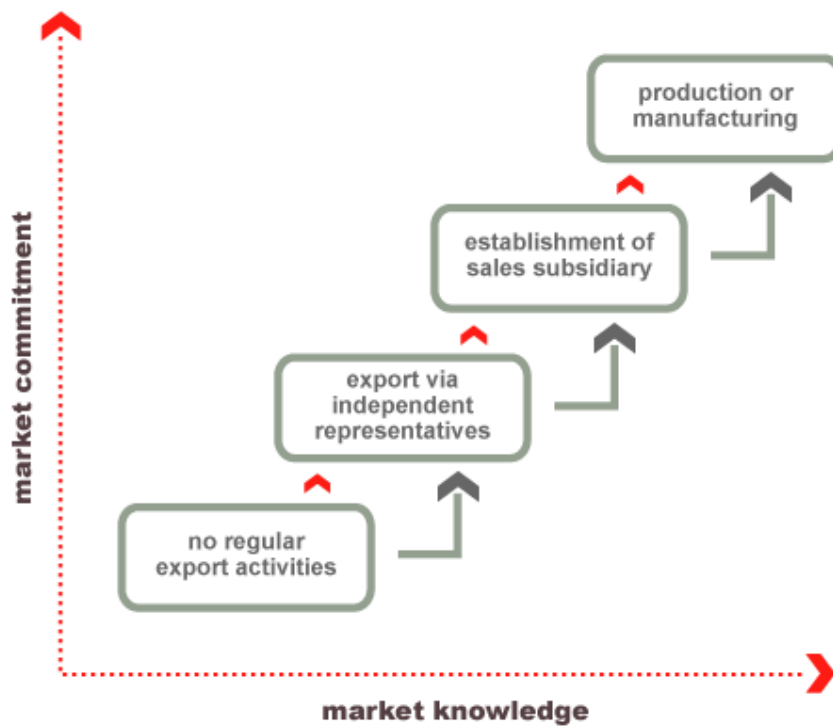
global firms.

Gabrielsson, M., Kirpalani Manek, V.H., Dimitrations, P., Solberg, C.A., & Zuchekka, A, 2008

The aim of the study is to clarify the definition of a Born Global and to describe the three faces which a BG goes through.

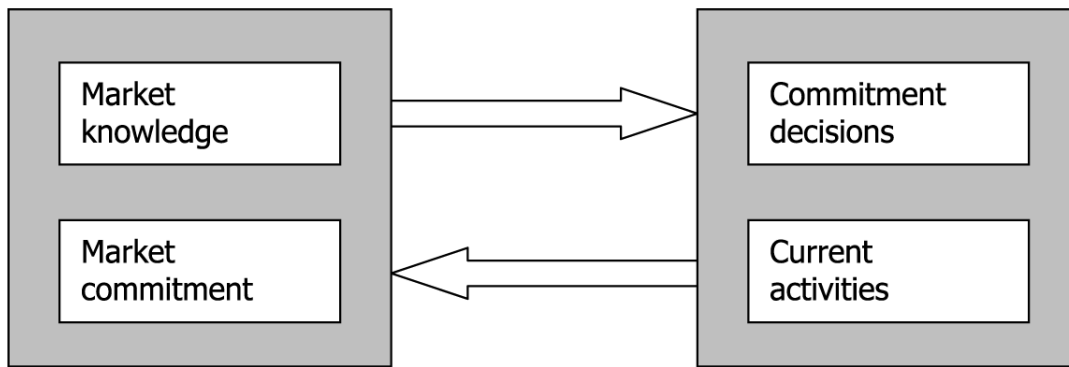
Analyze the literature to see if the hypotheses proposed holds up.

6.2 Figure 1: Establishment chain



(Johanson & Vahlne, The Internationalization Process of the Firm - A model of knowledge development and increasing foreign market commitments, 1977)

6.3 Figure 2: The original Uppsala model (1977)



Source: Johanson and Vahlne (1977)

6.3 Figure 3: The revisited Uppsala model (2009)

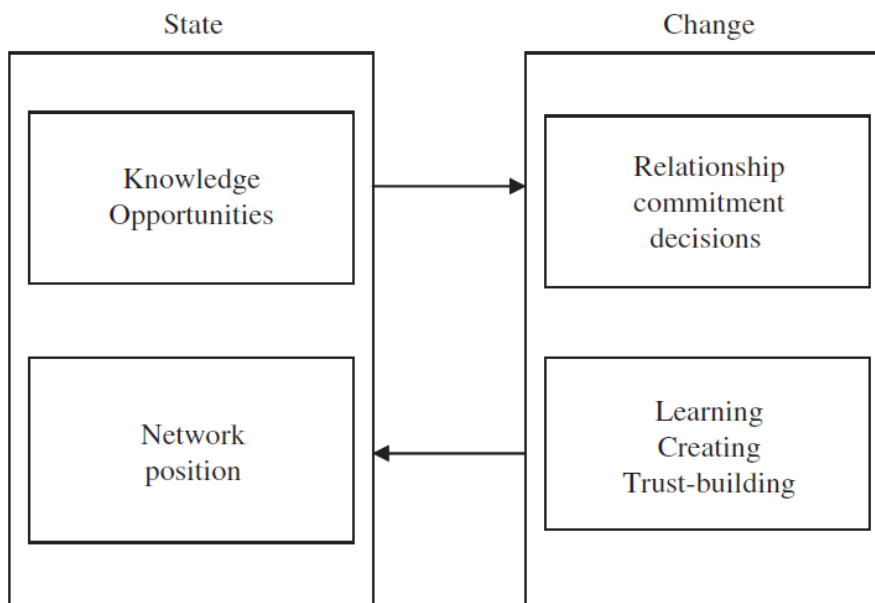
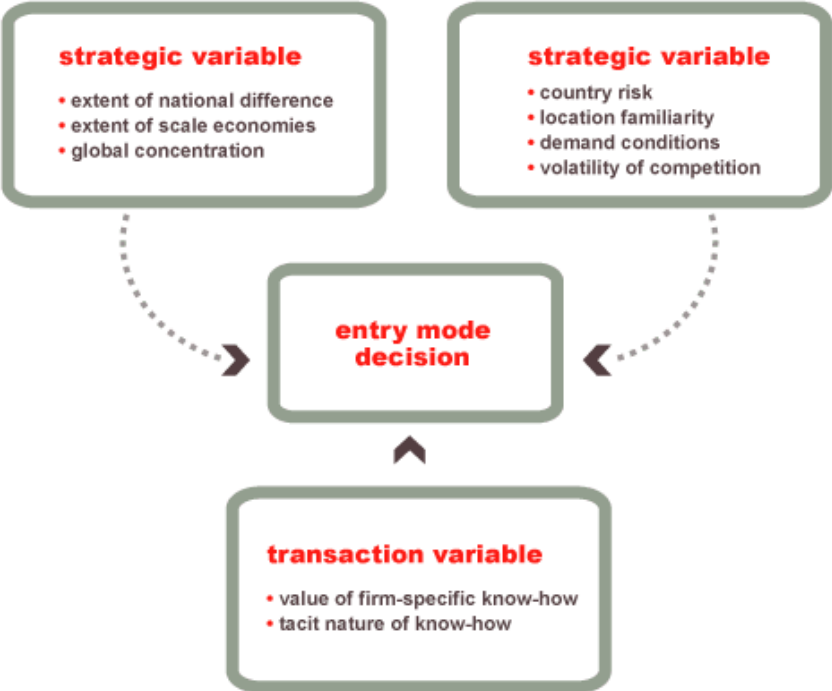
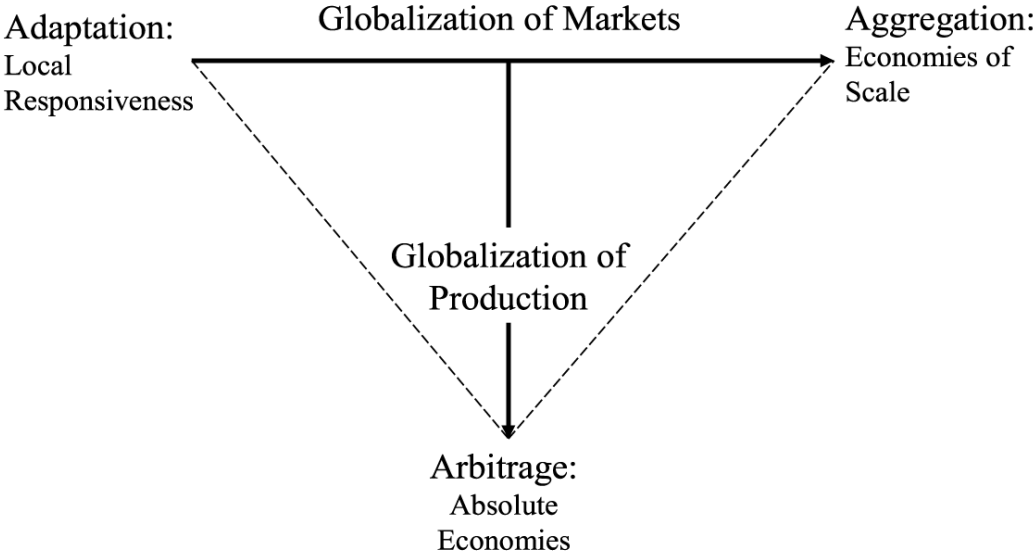


Figure 2 The business network internationalization process model (the 2009 version).

6.4 Figure 4: The Entry Mode Decision Framework (Hill, Hwang and Kim, 1990)



6.5 Figure 5: AAA Triangle (Ghemawat, 2007)



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