INTERNATIONALIZATION PROCESSES IN THE SALMON FARMING INDUSTRY
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ABSTRACT
In this paper the focus is on the process of internationalization and globalization in the seafood farming industry. The development in the five largest and international farming firms is studied in relation to both traditional stage-theories of internationalization, and more recent theories, like the RBV, contributing to IB. Integration processes, and the internationalization of sales, farming and processing, have been studied. Results show that stage-theory still in some respects have explanatory power, but that other approaches contribute to a fuller understanding.

Keywords: Internationalization, salmon farming, restructuring, IB, RBV

INTRODUCTION
During the last decade, we have witnessed a widespread internationalization of salmon farming. This process of internationalization is led by the largest, mainly Norwegian, salmon farming firms. From being small and locally owned, based in Norway or Scotland, some farming companies have grown to become full-grown MNCs. This is part of a restructuring process that on one side seems to be driven by the search for more farming capacity and more cost-efficient production, and on the other side developments in the consumption, sales and distribution of fish. Consumers’ seafood consumption is constantly developing, retail trade patterns and distribution patterns are changing as supermarket chains are oligopolizing national markets, while some chains are turning international (Nadkarni and Perez 2003). Producers of farmed salmon thus face a concentration of buying power, that clearly affects the importance of traditional distribution channels, but also make room for influencing the growth of new ones.

In a study on globalisation of the Norwegian seafood industry (Iversen 2004), I found that responses to globalisation varied immensely. While many firms have as always focussed on surviving in the well-proven way, others have during the last few years underwent an extensive internationalization of their businesses, with ambitions of both horizontal and vertical growth. In this paper I will focus on some of those that have employed the most expansive strategies, developing from locally owned and embedded operations to full-grown MNCs in 6-8 years. Today, several firms produce salmon in all four major farming regions, Norway, Chile, the UK and Canada/USA. Some farming firms have integrated upstream, towards feed production, and to varying degrees they have integrated towards processing and marketing. The 5 largest producers today produce roughly 45% of the total of farmed Atlantic salmon.

In this paper I will describe the internationalization of the salmon farming industry, and discuss this in relation to theories of internationalization. Traditional theories of internationalization have predicted a gradual, step-wise internationalization of firms (Johanson and Vahlne 1977), this does not seem to be the case in the salmon farming industry, so that challenging approaches might be needed.

This leads to the following research problem: Do salmon farming firms follow the process of internationalization predicted by the stage-model of internationalization, or do we need other theories to explain and predict patterns of internationalization?
THEORETICAL BACKGROUND

I have mainly focused on two strands of literature in this paper, literature on international business (IB) and the resource-based view of the firm (RBV). While the IB-literature was the point of departure for this study, it soon became clear from studying the salmon farming firms that the stage approach would not adequately explain and predict the internationalization of firms in this business. Thus other fields of literature contributing to the field of international business, and in particular the RBV, was reviewed. During the last few years, a convergence of this strand of strategy literature and literature on international business has been observed (Peng 2001). Thus, how these two literatures influence each other will also be touched upon.

Processes of internationalization

A long established, and indeed influential, model of the internationalization of firms, is the step by step, stage model of internationalization (Johanson and Wiedersholm-Paul 1975; Johanson and Vahlne 1977; Johanson and Vahlne 1990), predicting that internationalization of firms take place in a sequential process, in which one level is reached before pursuing the next. Typically, a firm serving the domestic market may find that export to overseas markets is necessary for maintaining growth and profitability. For taking further control of the market, a sales outlet may be set up or acquired, and finally, for reducing costs of transportation or for adapting products to the new market, a production facility may be set up or acquired (see for instance (Dicken 1992)). Their model thus focuses on the firm’s gradual acquisition, integration and use of knowledge in foreign markets and operations, and on the firm’s successively increasing commitment to foreign markets (Johanson and Vahlne 1977). They distinguish between two directions of internationalization: increasing involvement of the firm in the individual foreign country, and successive establishment of operations in new countries. They find internationalization to be the product of a series of incremental decisions, and that some common characteristics of the internationalization process may be identified.

This "stage"-view of internationalization is challenged by empirical findings that some SMEs are able to internationalize more rapidly than the model would predict (Knight 2000; Lu and Beamish 2001). That some firms could internationalize, and succeed abroad, without going through different stages, required an explanation. One explanation could be provided by the RBV, identifying important tacit knowledge about global opportunities, and the capability to leverage such knowledge, as an instrumental resource (Peng, Hill et al. 2000), (Mitchell, Smith et al. 2000; Peng and York 2001).

The stage model is further challenged by the demonstration that when eventually internationalizing, firms following the stage model must overcome substantial inertia because of their domestic orientation (Autio, Sapienza et al. 2000), as opposed to firms that internationalize earlier, and has shaped their organization accordingly.

Liability of foreignness and familiarization

When entering foreign markets, firms must often compete with indigenous firms more familiar with the local business environment. This relative unfamiliarity, the liability of foreignness (Zaheer 1995), adds to the uncertainty faced by the foreign firm. Diverse local preferences, cultures and business systems increase the odds that foreign firms will make costly errors, encounter substantial delays or otherwise struggle in their attempts to establish operations abroad (Pedersen and Petersen 2004).

Liability of foreignness is associated with uncertainty, and the larger it is, the lower the probability of high commitment of resources to the foreign operation (Johanson and Wiedersholm-Paul 1975; Johanson and Vahlne 1977). Further, if a misjudgement of the liability of foreignness takes place, performance is likely to suffer (Pedersen and Petersen 2004).
To overcome the liability of foreignness a process of familiarization must take place. Internationalization process theorists argue that entrant firms hesitate to commit resources, the argument being that familiarity with the local business environment must reach a minimum level. Further, they argue that due to the experiential and context-specific character of local-market knowledge, most learning needs to take place post-entry. Even with this focus on post-entry learning, the focus on pre-entry familiarization becomes evident in the prediction that firms enter foreign markets that are of successively greater psychic distance from the home market (Carlson 1975; Johanson and Wiedersholm-Paul 1975). Thus, when moving into a new market, the firm will have gained valuable knowledge from having operated in a similar, culturally adjacent, foreign market. Another source of pre-entry learning is pointed out by more recent work from Uppsala scholars, focusing on business networks for gaining access to knowledge and learning (see for instance (Eriksson, Johanson et al. 1997)).

The first foreign market to enter is expected to be one similar to the home country, where the psychic distance is small. But even for countries sharing language, history and traditions, business attitudes and practices may vary, thus leading managers to overestimate similarities between markets; this is termed the Psychic-distance paradox (O’Grady and Lane 1996).

Emerging economies
A strand of the IB-literature is the one focusing on emerging economies (see (Peng 2001) for a short overview). This may be of relevance regarding the strong position Chile has gained in the salmon farming industry, and the role Chile may play in the international division of labour within the salmon farming MNCs. Chile is an emerging economy, and it is also a low-cost producer of salmon. From theory an international division of labour between Norway and Chile could be expected.

The RBV and internationalization
How to overcome the liabilities of foreignness is stressed in both TCE (Buckley and Casson 1976) and “eclectic” (Dunning 1993) approaches, but for being able to specify the nature of the resources and capabilities necessary for overcoming the liabilities of foreignness, the RBV may be doing a better job, by high-lighting firm-specific advantages like administrative heritage, organizational practices or bargaining power (Peng 2001).

The Resource-based view of the firm (RBV)
In the 90s the field of strategic management underwent a major shift in focus regarding the sources of sustainable competitive advantage: from industry to firm-specific factors. While in Porter’s competitive strategy framework the firm is viewed as a bundle of activities, in the resource-based view of the firm (RBV), it is viewed as a bundle of unique resources. While the focus in Porter’s framework is on adapting to the industry environment by seeking an attractive position, the RBV postulates that performance is ultimately a return to unique assets owned and controlled by the firm. In opposition to the positioning literature, the RBV posits that firms are heterogeneous regarding their resource endowments, and that this heterogeneity may be long lasting (Barney, 1991). Resources are assets that are either owned or controlled by a firm, whereas capabilities refer to the firm’s ability to exploit and combine resources, through organizational routines, in order to accomplish its targets (Amit and Shoemaker 1993). For resources to be a source of sustainable competitive advantage they must be valuable, rare, costly to imitate and non-substitutable (Barney, 1991).

The IB and the RBV literature
The IB literature can be viewed as the application of management literature on a specific level, the international, or multinational, firm. As such, it has been phenomenon-driven, with scattered, unconnected topics (Peng 2001). The IB literature has during the 1970s and 1980s moved from being mostly influenced by economics towards an embrace of the management literature, in many ways a
transformation opposite to the strategy literature, as IO-reasoning came more into fashion (Hoskisson, Hitt et al. 1999; Peng 2001). As mentioned above, IB and RBV-literature has influenced and contributed to each other. By presenting a unifying framework for understanding several of the phenomena discussed in the IB literature, RBV has made IB research more theoretically rigorous (Peng 2001). What is perhaps the most significant contribution of IB to the RBV is the identification of international knowledge and experience as a valuable, unique and hard-to-imitate resource that differentiate the winners from the losers and mere survivors in global competition (Peng and York 2001).

As for the IB literature’s contribution to strategy, it is interesting to note that issues that in the early nineties were regarded as IB-topics, like global strategies, subsidiary capabilities and emerging market strategies, now naturally fits into the strategy research agenda. More than perhaps any other discipline (except IB) the strategy literature has been explicitly concerned with international dimensions. For instance, ”what determines the international success and failure of firms?” has been identified as one of the five most fundamental questions in research on strategy (Rumelt, Schendel et al. 1994).

“Born-Global” approach to internationalisation
Another challenge to the stage-model is the born-global approach (Chettie and Campbell-Hunt 2004). This model posits that some firms do not start with the national market, but approach the global market from the outset. This kind of form is often associated with information technology, internet based firms or other new or high-tech industries.

Geographic scope
One issue of the IB literature is how the geographic scope of an MNE affects its performance. There is a discussion in the literature as to whether a wider geographic scope affects performance positively or negatively (Goerzen & Beamish 2003). Geographic scope may be operationalised in several ways, but one fruitful distinction is between international asset dispersion (the extent to which the MNE’s assets are spread across foreign countries) and country environment diversity (i.e. the range in political, economic and cultural differences among the MNE’s foreign operations). In this literature minimum diversity is considered an advantage. I suspect, though, that this is not necessarily the case for fish farming. It might be the case that farming companies are internationalizing to take advantage of the diversity of country environments. From the RBV-perspective, one would expect different countries to offer different resources, or to offer different conditions for making the most of the resources that the firm controls.

RESEARCH METHODOLOGY
Methods and data
In this paper I follow an exploratory approach, aimed at mapping internationalization processes and explore the perceptions and reasoning behind the strategies pursued.

The internationalization of the largest and most international salmon farming companies has been mapped through secondary data material, like official statistics, annual reports, industry reports (Kontali 2003) and wide coverage in daily general as well as industry press. Some of this coverage has included company profiles and lengthy interviews of great relevance.

To gain qualitatively stronger information on the perceptions and beliefs of managers, and their reasoning behind the strategies that have been pursued, key informants have been interviewed. These interviews have been lengthy, semi-structured interviews that has been taped, transcribed and analyzed. Some findings will be illustrated by excerpts from these interviews.
Setting
The farmed salmon industry is well suited for studying internationalization, as it an industry characterized by expansion both in terms of output and in terms of geography. As regards output, the industry has grown from 4-5000 tons around 1980, to more than a million metric tons last year. Farmed Atlantic salmon does not to a high degree compete with wild-caught salmon, but has benefited from its reputation and exclusivity. This is one of the factors that have made possible such rapid growth of production.

As regards geography, commercial farming of Atlantic salmon and rainbow trout was pioneered in Norway in the 1960ies. Since the 1980ies Norway’s position has gradually weakened, while other regions have increased in importance. Farming was soon taken up in regions around the northern Atlantic, primarily Scotland, but also Ireland, Shetland, the Faeroe Islands and Iceland. In Northern America farming takes place both in the northern parts of U.S.A and in Canada, on both coasts. In Chile farming has grown rapidly, and production is now reaching Norwegian levels. The best conditions for growth, and the largest potential for further growth, is found in Norway and Chile. Long and sheltered coastlines, along with favorable temperatures and water currents, provide for ideal farming conditions. Another factor that has made the rapid growth possible, is research and breeding programmes that has led to faster growth, and vaccines that has led to higher survival and less use of medication.

FINDINGS
In this section, short company profiles, along with a schematic representation of each firms’ international expansion is presented. Secondly, some general trends and patterns are identified.

Company profiles

Cermaq
This is probably the closest one gets to a “born-global” firm in salmon farming. When they decided to engage in farming, prices for Norwegian licenses had already soared. Being owned by the government, it was probably also considered wrong to crowd out investors interested in Norwegian licenses. Investments were thus made in on-going businesses in Chile, Canada and Scotland in 2000.

Pan Fish
Pan Fish was established in 1992, and was, like Cermaq, close to a born-global firm. Even though it started out with production in Norway, it soon had most of its farming activities abroad. In 1998 they...
farmed 18.5% of their volume in Norway. It was only with the “rally for concessions” from 1999-2000 that their production in Norway reached the level of the international farming activities. During its heydays in 2000-2001, the firm diversified into other marine species (Pan Marine), pelagic species (Pan Pelagic), fish meal and fishing of pelagic species. This was both to get a financial hedge towards price fluctuations in farming, but also to get control of the access to what was perceived to be an increasingly critical factor in salmon farming, the feed.

Figur 2 Growth and restructuring in Pan Fish

Stolt Sea Farm
Stolt Sea Farm has been in the salmon farming industry since 1973. It differs from the other four in its focus on other species, having farmed halibut for 16 years, turbot for 11 years, sturgeon for 17 years and caviar for 8 years, tilapia for 5 years and bluefin tuna for 4 years. They have for years worked for getting closer to end consumers, increasing the share of products sold through direct distribution channels and building a strong marketing presence in major markets. Latest news is that they have agreed to merger with Marine Harvest, and will own 25% of the new Marine Harvest.

Figur 3 International growth in Stolt Sea Farm

Fjord Seafood
In 2000 Fjord Seafood merged with Domstein Salmon, making Domstein the majority shareholder in Fjord Seafood. Combined they are less regional, but still not even a nation-wide company. But now things happen at a certain pace. In 2000 they acquired more farming and processing capacity in Norway, before
two Chilean farming companies were acquired. By the end of the year they also acquired Pieters, to get a solid foothold in Belgium, The Netherlands and France. This also included some farming capacity in Scotland. Then, also by the end of 2000, to be effectuated in 2001, the U.S. ContiSea was acquired. Fjord Seafood Sales was established in 2001, co-ordinating offices in Norway, Denmark, Spain, Italy and China. In 2002 and 2003 the focus has turned from growth to consolidation, streamlining of activities and trying to reap synergy effects. Downsizing in most countries has been one result, but more importantly, Fjord Seafood is now much more of an international firm, with activities like sales and processing being co-ordinated across national borders.

Marine Harvest
Marine Harvest, owned by Dutch Nutreco, is the largest producer of farmed salmon. They have been in farming for around 25 years, first in Scotland, then Chile and from 2000 in Norway, when they acquired Norway’s largest salmon farming firm, Hydro Seafood. Latest news is that they merge with Stolt Sea Farm, keeping 75% of the new firm.

Figure 4 Internationalization and restructuring in Fjord Seafood

Figure 5 International expansion of Marine Harvest
Waves of restructuring and internationalization
During the 1990ies the salmon farming industry went through a process of concentration and restructuring, process that in 1999/2000 both increased in pace and changed character. From being restructuring as a consequence of slack in regulations on small-scale, local ownership, restructuring came to be more a result of international/global trends, both in food-retailing (and distribution) in general and in the salmon farming business in particular.

As the industry experienced low prices and financial strain from 2001, restructuring came to a halt. One firm found it to be “surprisingly small efforts at restructuring during 2002 and 2003”. This is partly explained by lack of financial power and partly by unwillingness to invest more in an industry in trouble, as illustrated by one of the other managers:

“Those that are most eager to restructure [referring to Fjord Seafood and Pan Fish] don’t have the finances, and those that have owners that should be able to increase investments [referring to Cermaq, Marine Harvest and Stolt Seafarm, I believe] don’t dare to.”

As prospects are better, with slightly increased prices and more cost-efficient production, several actors are expecting things to happen:

“Restructuring is expected to increase, leading to the establishment of larger and stronger units”

If their expectations come through, we may be looking at a new wave of internationalization from 2004.

Patterns of internationalization
Stage-theories of internationalization predicts the expansion into countries with successively greater psychic distance from the home market (Johanson and Vahlne 1977). When expanding out of Norway, it was not only a question of finding the country with the lowest psychic distance, perhaps more important was to find suitable farming conditions. Only when farming conditions was deemed satisfactory, psychic distance (or similar considerations) could be assessed.

But still, the notion of least psychic distance seems valid, as most early attempts of foreign farming, in the eighties, took place in countries around the North Sea. Norwegian firms and individuals played an important role in the growth of salmon farming in Scotland, Ireland and so on. It was then a short step to Canada and the USA. On the other hand, if psychic distance were the most important determinant, Chile would not be the next country in line. This again indicates that other factors must be more important for determining what country to be the next.

DISCUSSION
Some research has identified a movement from downstream asset specific investments to market-like arrangements by Norwegian farming firms (Grønhaug and Haugland 2004). Their findings are not in line with what would be predicted by stage models of internationalization. My findings mainly points in the opposite direction to what were found by Grønhaug and Haugland, towards higher commitment over time and involvement further down the value chain. As this study is of only five firms, it can not be ruled out that what I has observed is an exception to the rule. The strategies observed here are partly based on managers’ belief that presence in their main markets is vital. As I in this study have studied only the most internationalized firms, my sample is obviously not representative in this respect. On the other hand, the four largest producers in Norway account for 25-30% of the production. Thus, even though few in numbers, the development of the largest firms fills in an important part of the picture.

Post- vs. pre-entry learning observed?
One form of pre-entry learning, as mentioned earlier, could be through business networks (Eriksson, Johanson et al. 1997). In the US and Canada barriers to entry were lowered as Norwegian firms had broad business networks in the Seattle/Vancouver area, from fisheries and from financing of fisheries and shipbuilding. With Norwegian banks established in Seattle, and being familiar with local conditions,
loans could be given on terms of normal risk, and not the high risk often associated with foreign investments. For one of the firms, Pan Fish, this connection is very obvious, as two of its founders have their background from banking in Seattle.

The observation that firms following the stage model must overcome substantial inertia because of their domestic orientation (Autio, Sapienza et al. 2000), as opposed to firms that internationalize earlier, seems to fit the situations faced by the Norwegian seafood industry and the agricultural food industry. The agricultural food industry has a very strong position in the domestic market, but has only to a very limited degree been able to internationalize. Within the agricultural food industry, we find large organizations that have become very advanced in serving the Norwegian market with ready-to-cook meals, with a strong focus on market segmentation and product development. However, this national stronghold has not led to firms gaining a similar position in foreign markets. The seafood industry, on the other hand, has always depended on foreign markets.

Familiarization
Stage theorists predict a gradual commitment and involvement, along with post-entry learning. In several of these salmon farming firms, gradual commitment is observed, as they first go for part ownership, then after a few years increase to 100%, as well as buying into new firms in the same region. Stolt Sea Farm is a good example of this, with first part, then full ownership in firms in Chile, Canada and France.

Managers international experience represents firm-specific tacit knowledge that is difficult to access by other MNCs (Roth 1995). International knowledge and experience is considered a vital factor for the internationalization of salmon farming:

*If there is any industry in this country with a tradition for being international, it is the seafood industry. But tradition is limited to selling our products, while today we have moved to investing and producing abroad.*

This study shows that international experience of value to the firm is not only found with top managers, but also with middle-managers, technical personnel and sales personnel with frequent international contacts.

Geographic scope
The findings of this paper adds to the discussion of geographic scope, and in particular *country environment diversity* (range in political, economic and cultural differences among the MNE’s foreign operations). While the literature predicts MNEs to search for minimum diversity (Goerzen & B.), fish farming firms seem to actively pursue strategies aimed at reaping advantages from diverse environments.

Firstly, they internationalize to be able increase production in areas where growth of production is less limited than in Norway. This has one political dimension, as licenses and feed regulation restricts production increase in Norway, and another dimension regarding production cost, which is now lower in Chile than in Norway.

Secondly, fish farming MNEs seek to process in countries with differential cost structures, in most cases that is equal to lower wages, permitting more manual operations for a more flexible and specialized production.

Thirdly, they consider it an advantage to perform secondary processing in the market country, as market preferences differ widely among countries.

Fourthly, to produce in areas closer to core markets will reduce transportation costs and give improved ability to serve the market with fresh products.
Fifthly, different natural conditions may be sources of advantage/flexibility. Disease problems may be smaller in some regions, which may turn to a disadvantage if new diseases develop. Thus, to produce in all major farming regions may be considered a hedge strategy, as unfavourable natural conditions may not affect the entire production. Examples of such conditions may be el Niño affecting Chile, superchill affecting the east coast of the US or algae invasions affecting Norway.

Finally, to move production within the borders of a trade union, may make the political environment appear less hostile. Trade hindering measures, like tariffs and quotas, have been frequently used by the EU to protect their own salmon farming industry. From 1997 to 2003 the Norwegian share of the EU market for farmed salmon has been reduced from in excess of 75% to below 50%. A natural response from Norwegian salmon farming MNEs has been to buy into the Scottish and Irish farming industry. As tariffs are higher on processed salmon, tariffs have also contributed to the move of processing from Norway to the EU. In the US, tariffs have been put on both Chilean and Norwegian salmon. For Norwegian salmon a 26% tariff that was put on fresh salmon from around 1990 effectively cut access to what was then the second largest market for Norwegian salmon. This is also reported as a reason for establishing production within the US (or Canada, as part of NAFTA). For Chilean salmon, tariffs have been put on a firm-to-firm basis, and on a much lower level, typically 2-10%. After closer examination of their sales, many firms have been freed from tariffs.

Emerging economies and international division of labour
As mentioned above, when firm from highly developed economies invest in emerging economies, an international division of labour would be expected. Labour is cheap in Chile, and both farming and processing is more labour intensive. But an international division of labour is still not important with these firms. With high shipping costs, and the share of labour costs in farming steadily decreasing, international division of labour becomes less interesting. Salmon farmed in Chile is primarily shipped to the US market, while the European market is served from Europe.

CONCLUSION
To sum up, patterns of internationalization are closely related to the reasons for internationalization, as firms have searched for production opportunities, access to markets and differential institutional environments.

Part of the observed internationalization can be explained and understood by stage theories, like the gradual commitment or increasing involvement observed.

But there are other aspects of the internationalization of salmon farming, observed in this study, which can not be explained by stage theory. Some firms are more or less born globals. For some firms international experience has been an important resource, facilitating rapid expansion. The parallel expansion into regions of differential psychic distance (like with Cermaq), and expansion into regions of higher psychic distance before regions with lower psychic distance (like Fjord Seafood going into Chile before the US), require other explanations than what can be provided from stage theory.

Areas for further research
As regards geographic scope, from what has been observed in this study, it seems rather clear that the test of an alternative hypothesis would be fruitful, namely the one that higher diversity contributes positively to performance.

Most (if not all) of the IB literature focus on foreign subsidiaries as units set up to serve the domestic market of the country in question. This is only partly true for salmon farming. In important cases, like Chile, the production capacity being built up or acquired is meant to serve foreign markets, primarily the
U.S. market. An important question would be to judge whether/to what degree this literature is still useful when focusing on new countries as sites of production for serving existing markets.

A similar concern regards the liability of foreignness. In the case of the salmon farming firms the unfamiliarity is concerned with foreign factor markets (access to feed, farming licenses, smolt et.c), which might lead to different implications than literature focusing on firms moving into new markets?

A feature of emerging economies is that institutions may be less well developed, magnifying the liability of foreignness. With institutional differences between emerging and developed economies, RBV research may in general capitalize on institutional work uncovering the intricacies of competition in emerging economies (Peng 2000, 2002). But again, as establishment in Chile is not for exploiting the local market, national regulations regarding salmon farming and Chile’s trade conditions with other countries may be important aspects not covered in this literature.

REFERENCES


