

The importance of SMEs in the global value chain of the Icelandic fisheries

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As in many resource based industries where the resources are in abundance but the home market is small, the solution is to export goods processed from these resources. Consequently, domestic activities must be linked to international activities. The Icelandic fishing industry has for a long time claimed a considerable advantage over its counterparts in other nations. This assumption, until the introduction of the ITC system, rested to a certain degree on the country's easily accessible, rich natural fish resources and the freedom for new actors to enter the industry. But when the present fisheries management system (FMS) was introduced in Iceland in the early 1980s, the fishing rights were mostly allocated free of charge to all active fishing companies according to their catch volume in the three years prior to the introduction of the FMS system. In other words, for the most parts, the owners of the fishing companies got exclusive rights to the fishing grounds, a very valuable asset. In 1990 individual transferable quotas (ITQ) were introduced as major part of the FMS system. Since then the inherent efficiency increase in the ITQ system has partly been able to counter the diminishing allowable catch from the stock of the industry's main species.

Distinctive competences of the Icelandic fishing industry have been the strong clusters of fisheries and processing activities along the coastline; strong commitment to technical know-how; efficiency of the sea transport and strong and dedicated export and sales management. One of the distinctive competences was rooted in the former oligopolistic structure of the producers' marketing and sales organisations (MSOs). The MSOs were dealt a considerable blow with the abolition of their exclusive export licences in the early 1990s when smaller competitors in sales and marketing entered the industry and then ceased to exist as major players in the industry in the late 1990s when they had given way to both the small independent MSOs

and the individual company marketing divisions of the bigger fishing companies. Thus the small and medium enterprises (SMEs) took over the administration of the global value chain of the industry. The international part of the chain, through export and marketing, is therefore inherently an integrated function in the activities of the Icelandic fishing industry, exactly such an industry that benefits greatly from the global value chain.

At the national level the main competition is found between actors in sourcing inputs such as raw material and manpower. In international markets the main competition is found where the products are marketed and sold to the customers. A higher level of competitiveness can be assumed to be possible through the type of cooperation in the former oligopolistic MSOs which forced producers to take part as cooperative members in order to be able to sell their products. It is therefore interesting to study how the abolishing of the export licence system and subsequent freedom to export has affected the Icelandic fish industry and its competitive status.

Literature

Value chain analyzes has steadily gained attention in the last decades partly due to the influential writings of Michael Porters on the subject. Porter (1985) defines the role of the value chain as *“a template, which allows managers to examine in a systematic way all the activities a firm, performs and how they interact, which is necessary for analyzing the source of competitive advantage”*. Here the focus is on the company’s internal value chain and its relationship with its environment. Porter (1980) also put emphasis on the strategic position of companies in what he calls a value system, which is the embedded value chain from suppliers to buyers. Similarly, Kogut (1986) claims that the *“concept of the value added chain is developed in order to analyse the competitive position of firm in the global industry”*. He adds that the knowledge of the value added chain is fundamental to the understanding of the critical success factors of the industry. Kought (1986) also sees the value-added chain as a system’s or an industry’s process and describes it as the *“Value added chain is process by which technology is combined with material and labour inputs, and then processed inputs are assembled, marketed, and distributed. A single firm may consist of only one link in this process; or it may extensively vertical integrated...”*. According to Kaplinsky, (2000) *“the value chain describes full range of activities which are required to bring a product or service from conception, through the intermediary phase of production, delivery to final consumers, and final disposal after use”*. Although the n

When studying the economic relationship and governance of value chains, transaction theories originally traced to R. H. Coase (1937) and Williamson (1975) are usually the starting point explaining how the economic system is coordinated by factors other than the pure price mechanisms of the free market (Larson, 1993). The essence of Williamson transaction cost theory is that the hierarchy of the fully vertical integrated firm is placed on one end and on the opposite end resides the free market with the price of a transaction as the ruling force. Thus the market will be used when the transaction cost is lower in the free market where companies can buy their subcomponents rather than make them, and in the same way, if it benefits the company to make the subcomponents it will integrate the production into its own company (Jarillo, 1998). Hence there are only two stable forms of organising the relationship between suppliers and buyers, the free market and the totally vertical integrated firm.

It has been pointed out that viewing relationships between companies in this purely duopolistic way leaves out the third dimension of coordination and cooperation. This dimension can lower transaction cost and make companies quicker to respond to changes and thus help companies become more flexible than those relying on either the hierarchy or the market (Jarillo, 1998). Ouchi (1980) approached this problem by splitting “*hierarchy*” into two parts, the “*bureaucracy*” which reflects the traditional hierarchy of the transactional theories and the “*clan*” which includes and describes long term relationships carried out through non-specific contracts within the formal environment of an organisation. In the same way he splits the “*market*” into two parts, the “*classic market*”, where the relationships are built on a spot market basis and a part which Jarillo (1998) calls the “*strategic network*”. This way Ouchi (1980) has added the third dimension dealing with win-win (cooperative) companies’ relationships that are built on “*fairness*” instead of the “*opportunism*” relationships of Williamson’s transaction cost theories that rest on win-lose (competitive) relationships between suppliers and their customers. Hence this economic relationship is not just built on lowering the transaction cost but rather on increasing the total value by the actors working together in the value chain, improving the value adding process by synergising their activities and resources. Larson (1993) maintains that a strategic trend has moved from the “*transactional perspective*”, where the transactional cost determines the form of the relationship, towards an “*interaction approach*” with various kinds of socio-economic alliances. Hence, when analyzing industries it is important to take a more holistic view of the

value system than to concentrate on the competitive status of individual companies in the value system.

Increased global competition has added to the importance of a holistic analysis of the competitive status of the value system as a whole and the concept of a global value chain (GVCs) has received increased attention. Sturgeon, Biesebroeck and Gereffi (2008) argue that the concept of GVCs highlights three features of any industry; “(i) *the geography and character of linkages between tasks, or stages in the value added activities; (ii) how power is distributed and exerted among firms and other actors in the chain and (iii) the role that institutions plays in structuring business relationships and industry location*”. Furthermore they claim that these three factors are important for explaining the status of the industry and offers insight to how it might develop in the future.

Doz (1988) claims that interface between partners should not be left to chance or to ad hoc adjustment. Therefore it is necessary to analyze which factors determine what kind of governance mechanism is needed to govern the relationship. Gereffi, Humphrey and Sturgeon (2005) categorise networks into three main types; modular, relational and captive networks and suggest that five stable forms of organising the relationship between suppliers and buyers exist; *the markets, modular value chains, relational value chains, captive value chains and hierarchy*. Thus they acknowledge the extremes of the free market and other extreme is the vertical integrated companies or hierarchy but still add their version of the third dimension. Furthermore they claim (Gereffi et al., 2005) that the key factors determining the global value chain governance are the complexity of transactions, the ability to codify transaction, capabilities in the supply base and the degree of explicit coordination and the power asymmetry used. Thus both the type of the relationship between companies and the most important factors in determining the form of governance needed form the base for their framework for analyzing value chains.

Gereffi et al. (2005) put their emphasis on their framework of lead firms in the value chain, usually on the end user of the chain. By a lead firm they mean the firm that is in a leading position in the value system. This leading position can stem from vertical intergration in the value chain as well as from access to information and knowledge. One of the central issues concerning the relationships in the value system is power and power balance and, often an important element in determining the form of governance of the value chain. Pfeffer's (1992) points out that the value chain power can arise from centralisation of control and activities that can be connected to the lead firms. Similarly Johnston and Lawrence (1988) point out that large vertically

integrated companies tend to share as little knowledge as possible with other actors in the value chain. In many cases they view their external relationship in accordance with the dominant competitive perspective, concentrating only on maintaining bargaining power for their divisions and subsidiaries. On top of this a rigid bureaucratic structure often results in the managers' lack of knowledge about activities in the value adding chain (Johnston & Lawrence, 1988) losing sight of what Gereffi et al. (2005) claim as a capability in the supply base. The studying of relationships between companies in the value system is, as has been discussed above, is a necessary part of a holistic analysis of the value system, Such an analysis highlights its governance mechanisms and its elements; the degree of vertical integration, allocation of power and knowledge, the degree of information sharing and measures the capability of different firms of the value chain.

Methodology

This study is a part of an ongoing study on the structure, organisational- and productivity changes in the Icelandic fisheries sector and is a follow-up of the authors' study on structural changes in the fisheries value chain in Iceland during the period from 1990 to 2007 and. The research focuses mainly on the global value chain of the Icelandic demersal fish industry.

For this research first hand data was collected through semi-structured interviews with managers of eight companies in the Icelandic fish industry. Interviewees come from a broad spectrum of companies in the Icelandic demersal fish industry value chain. The companies are three vertical integrated companies with high share of the total fish quota; three companies that are almost exclusively in processing and source a great share of their raw material on fish markets or through direct (often long term) contracts with fishing vessels owners; one international marketing company which has its origin in two of the three oligopolistic producers' marketing and sales organisations (MSOs); and one medium sized marketing company. The aim of the interviews was to explore the different business models of the companies regarding their global value chain governance, insourcing/outsourcing decisions, structure of integration and type and degree of coordination along the value chain. The interviews were conducted in May, June and August of 2009 and all the interviews were recorded and the typed.

This study is a continuation of previous studies of the authors. These studies are Knútsson's (2001) study *The Role of the Central Firm in Governing Strategic Alliances Between Small and Medium Size Companies; The Case of the Icelandic Fish Industry*; Knútsson's & Klemensson's (2006) study *The development of the Icelandic producers' sales organisations*, Knútsson's & Gestsson's, (2006) *The Icelandic Fishing Industry: a Comprehensive Overview until the End of 2001* and Knútsson's, Klemensson's & Gestsson's (2008) *Structural changes in the Icelandic fish sector 1990 – 2007, a value chain analysis*.

The value chain in the Icelandic fish industry

The value chain in the Icelandic fish industry until the 1990's was greatly influenced by the export licences system. Exclusive export licences were granted to the producers' MSOs (Knútsson & Gestsson, 2006). These export licences were for example the monopoly on export of salted fish from Iceland granted to Union of Icelandic Fish Producers (SIF) until 1993 and the duopoly on export to USA that the Icelandic Freezing Plant Corporation (IFPC) and Icelandic Seafood had until 1987. At that time the USA market was the single most important market for frozen fish products from Iceland (Knútsson & Gestsson, 2006). This system ceased to exist with the liberations of export in the late 1980s and early 1990s and in the mid 1990s when the form of the MSOs was changed from cooperative societies to limited liability companies. Until 1997 the Icelandic fish industry's value chain can best be described as product driven with the three major Icelandic marketing organizations (MSOs) in the strategic position of controlling the physical flow of products and the flow of knowledge and information in the whole value chain (Knútsson, 2001). It is clear from the same study that the high number of producers and their small size impacted the networks and made the companies at the supply end less qualified to take on more activities in the value chain than if their companies were larger. When analyzed in the light of Gereffi's et al. (2005) framework this shows a "Captive" network where the ability of the supply end is low and the lead firm is strong. This form was typical for the Icelandic fish industry until in the late 1990s where the supplier was highly dependent both on the lead firm and on the existing network. One of main conclusions of Knútsson (2001) research was that conflict of interest in value creation in the value chain caused lack of trust between actors in the value chain. This became more evident and critical with the companies getting larger due to the later consolidation and

rising demand for further value creation. The research findings indicate that *“the informal mechanism with decentralisation and direct communication was much more likely to create value for the participants’ companies”* (Knútsson, 2001). On the other hand, it can be concluded that it is the processing stage of the products that determines the needs for direct communication and the degree of flexibility required by the network or in other words, *“standardised products and/or low value added products demands little flexibility meanwhile special products and/or high value added products call for much more flexible environment with direct communication and overview of all the value chain”* (Knútsson, 2001). Hence Knútsson (2001) concludes that one of the major roles of the central firm is to create an environment that is value creating for the participants’ companies. The precondition for value creation is to avoid a conflict of interests between actors in the value chain and to establish the uninterrupted transfer of information and knowledge between actors and levels in the value chain. Thus the necessary overview can come from direct communication between actors will help to can support and stimulate producers to become more value creative by having an Direct communication supports both better marketing knowledge to the producers and better knowledge and understanding to the marketing sector on the needs and aims of the producers. This is supported by the literature about learning and the importance of knowledge transfer in networks (Badaracco, 1991). Furtehermore, such inter-company relationships have moved from formal product-driven alliances towards more informal ones (Axelsson 1992, Shaughnessy, 1994).

Changes and dynamics in the value chain

Figure 1 depicts the basic links in the Icelandic fish industry’s value chain for cod as it is now. It highlights the new support links and recent changes of the demersal part of the Icelandic fish industry’s evolution over the last years. One of the greatest changes in the value chain was the establishment of fish markets in Iceland in 1987. Before that, an independent boat owner had to enter into a more or less permanent business relationship with a producer to gain entry to the services of the MSO’s.

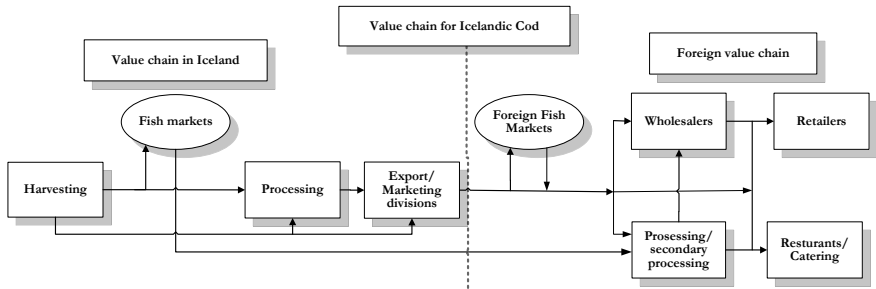


Figure 1. Value chain for Icelandic cod

Though the establishment of fish markets was of great importance there was, according to the interviewees of the research, also a fundamental change in the relationship between agents in the value chain after the abolishment of the export license system or as one interviewee put it *"This weakening of the marketing organisations (e.g. abolishing their exclusive right to export) is the greatest general change resulting in that there are now more actors selling and this knowledge of marketing is found inside the producers' companies..."*. In the years following the abolishment of the export license system, the larger producers started their own marketing divisions that managed their own marketing activities. These activities could range from just collecting general marketing information to taking complete care of all export activities of the company.

The diminishing role of the big MSOs in the global value chain in the 1990s also created a space and opportunity for smaller and medium size exporting companies to enter the exporting business. According to the interviewees this induced the new smaller MSOs in the beginning to take on the more ad-hoc and opportunistic marketing. In the last 10 years however, they have been building more and more on long term relationships and contracts with their foreign customers *"... in the beginning we naturally were in the spot sales, that was the way of business during that time but today we... are more into fixed contracts and making plans that we can almost stick to"*. Such relationships are either build on bi-lateral relationship contracts, e.g. between the producer and the retailer, or tri-lateral contracts or cooperation between the producer, the retailer and the exporting company (or distributor) which often are small independent companies. In the case of tri-lateral contracts, the producer outsources the exporting activities and related functions to the exporting company which then functions as an agent.

Simplification of functions, relationships and flow of marketing information through the value chain has been the main policy goal of the actors/agent in the value chain during the period. This has mainly been done in two ways, either when a vertically integrated company takes care of harvesting, production and their exporting function and even operates a sales office abroad. In other cases this simplification is acquired through the outsourcing of different activities and the use of fish markets for the sourcing of raw material. Generally the interviewees emphasise the need for gaining possession of the necessary market information as the control and management of such information to them is vital.

Increased demand from customers for the production of freshly sold fillets and fillet cuts has made it increasingly important for producers to be in direct contacts with the markets, as well as being able to control the supply of raw material. In the vertically intergraded companies this is done through direct control of landing days, type of species targeted and the length of the fishing trips as shorter trips can translate into increased quality; *“Our strength is based on that we can regulate our fishing activities, what specie we catch, when we catch the fish and where and, as much as it is possible, what size of fish we catch”*. Furthermore, this manager of a vertically integrated fishing company claims that this ability to control the harvesting and thus the supply to his own processing facilities is a great competitive advantage for his company. This is possible as the Icelandic fishermen are not bound to sell all landed fish through the fish markets as similar companies in Norway have to do; *“...we can make a plan for the next 12 months by synchronising catching and processing and it is our own decision if we want to sell fish on the market.”* Because of this the manager maintains that he can better manage his marketing effort, quickly react to the markets signals and thus better fulfil the customer’s requirements.

In the case of the none-vertically intergraded producers this coordination or synchronisation of catching and production is more or less obtained through the fish markets, yet, according to the interviewees, in none of their cases is this coordination solely acquired through the auction of the fish markets. The producers are also relying on long term contract relationships with boats owner that will supply fish of certain sizes, quality and freshness. The fish markets are then used as clearing houses, taking care of the physical transactions and paperwork of the contracted transaction.

The possibility of sourcing wet fish from fish markets has greatly facilitated the specialisation effort of the producers interviewed. All of them but one specialise in certain fish species for their processing activities. The vertically integrated producers use the fish markets to channel off the species

they are not specialising in and augment their own supply they need for their production with fish from the fish markets. One producer processes most of the species brought to harbour from the company's own trawlers. This producer is also using fish markets to source extra raw material in order to acquire stability and flexibility for its production. On the whole the fish markets have led to increased specialisation of production in the Icelandic fish industry as well as created stability for producers that was lacking before the fish markets came into being.

One of the key elements of the changes in the value chain is the increased general capabilities of the producers from the times of the old marketing organisations (MSOs) or as one interviewee claimed "... *there is now much greater knowledge and more language skills than before ...*". This, with the concentration in the production sector has made the producers better qualified to go deeper into the markets and take over more activities in between the stages of production and the end-buyer in the value chain. Another important precondition for this is the access to and use of market information that was so severely limited in the time of the MSOs' or as one interviewee working in a small marketing company phrased it: "*But they (the MSOs) never did allow the producers to go directly to the market, it was not as easy to travel as much as is done nowadays.*" And then he carried on and said: "*Now, even if these actors have a direct connection without us, we do this in much greater cooperation with both the customers and producers as there is full trust on both sides*". Other example of how direct connection and cooperation works is when one producer installed live web-cams in the production facilities and selected customers can watch the transmission live. The interviewees consider direct connection and cooperation between producers and the markets to be one of the cornerstones in increasing value creation in the Icelandic fish industry. According to all of them this is what has made it possible to enter deeper into the markets with their products like fresh fillets, special cuts of fillets and other speciality custom made products.

The implementation of the quota system in the Icelandic fisheries and the abolishment of the export licences changed the power balance in the value chain. Before, the power was in the hands of the MSOs as the prime movers in the value chain, controlling both the information flow from the markets as well as the physical flow of products. During this period the power of the MSOs began to decrease and shift more and more toward the quota holding fishing companies as is evident from the fierce contest between the MSOs in securing client agreements with the producers (Knútsson, 2001). The second phase in the changes in has started as can be seen from quote one of the

interviewees were he claims that: *“The power structure in the value chain has changed in that way that the power has now moved from the quota owner to the marketing agents. This rests on the fact that the importance is no longer the supply of raw material or buying of raw material but in marketing and the relationship with the customers”*. He claims that the fish markets have made it possible for producers who operate without fishing quotas or their own fishing vessels to run their businesses in an effective and successful manner. The complaint has been made that the prices at the fish markets are higher than the producers can pay. Undoubtedly this has induced the producers to stimulate more efficiency in their production processes, increase their yield from raw material input and to generate more value, or as one producer said: *“Historically when the fish market prices have gone up we need to find ways to get more for our products. This has called for product development as well as ways to find customers that can pay a higher price”*. This producer claims that for to be able to operate in this fish markets environment, producers must be much better connected to the customer markets than ever before. This is especially the case with the companies operating in the fresh fillets markets that pay higher prices for wet fish at the fish markets (due to the higher quality and freshness) than the companies operating in the traditional frozen fish markets. Hence, the marketing connection becomes ever more important in order to be able to support the different prices and fluctuations of the fish markets. Thus both the influence of the big foreign end-customers increases as does the need to fulfil their often strict requirements. Still, all things considered, the formal power in the value chain lies mostly with the quota holders and increasingly with the foreign end-customers.

The Icelandic fish industry has for a long time been in the international forefront in technological matters. New high technology for intensive production methods were introduced in the late 1980s and 1990s. These facilitated a high rise in productivity, efficiency and production flexibility. These new production methods were based on state of the art processing flow-lines backed up by powerful ITC technology. Because of this the handling of wet fish was greatly improved and also through better cooling systems, shorter fishing trips and general improvement in transport and logistics. Effort for product development and innovation, diversification and differentiation was strengthened. The product development and innovation facilitated an increase in the level of knowledge, skills in production and exports; in short they created intangible assets in services and sourcing such as know-how, goodwill, better business relations and brands. This has

increased creativity in the value chain, improved productivity and thereby strengthened the competitive edge of the industry.

It was also necessary to meet changing demand and a wish for a broader scope of products. Steps taken in new product development was a shift from the traditional and relatively low value added land frozen products¹ to fresh products, frozen custom made products and frozen at sea products. In salted products increased emphasis was put on light-salted (frozen or chilled) fillets instead of the traditional flat-salted products. Ways of steadily increasing utilisation level of raw material in order to gain maximum yield rate out of the wet fish input have been introduced. New products have been generated from material that formerly was discarded as waste or was put in low value by-products. Now nothing is discarded and even the fish skin is used in producing gelatine and fish heads and bones are specially dried and prepared for human consumption. New high-technology manufacturing methods are the prerequisite for these changes.

Although the interviewees agree that the time of the MSOs is long gone and that the new and more appropriate business models are here to stay, a general feeling of a loss of an image of the origin and quality of the Icelandic fish products is developing because of these changes. The MSOs did not only sell the products but worked hard on creating an image of the Icelandic fish as the best in the world. Now no one is working on maintaining or creating generic image of Icelandic fish products as can be seen from this quotation: *"...in the last years actors in the industry have started to realise this. One of our managers pointed this out after visiting Italy where he found that 12-15 year old image posters were used by our customers. There is no on-going marketing effort now and individual companies are not allocating money for this. This is something that the big MSOs did do in their time"*. The interviewees univocally stressed that it is necessary for the companies in the industry to work together on generic marketing and image-building issues.

It is evident from the interviews that the value chain has changes a lot since in the 1990s. The strategy of the producers shifted to a more marketing focused and market driven strategy than before. It can be claimed that during this stage the positioning of the producers in the value chain shifted from being a *"captive"* to becoming a more *"relational"* value chain (Gereffi et al., 2005). It is interesting to analyse the different operational strategies that can be derived from this research as well as discuss what has triggered these

¹ Block frozen products, interleaved skin on/bone in fillets, standardised 5 lbs. units etc.

changes in the value chain. From the interviews with the managers of the fisheries companies, the following six main operational strategies have been identified;

Quota-yield based optimisation – Exporting in cooperation with foreign wholesalers and retailers. These integrated fisheries companies produce and market products from selected fish species. The rest is mainly sold on domestic and foreign fish markets. The companies have few but steady business partners abroad grounded long term contracts. These companies have little or no reprocessing facilities abroad. Secondary-processing can in some instances be outsourced.

Value based optimisation – Exporting through its own marketing departments and foreign wholesalers/distributors or directly to retailers. Harvesting and producing to orders in Iceland and abroad. Long term bilateral or trilateral relationships with retailers

Globalized commission/sales and marketing (csm) company with processing – With three main lines of business 1) a straight csm both in Iceland and internationally selling both Icelandic and foreign products 2) a value adding subsidiary or connected company abroad with reprocessing facilities at chosen locations and 3) a processing company abroad. Marketing information is seen as of high strategic value and usually kept within the company.

Local csm company – Mostly operating locally in Iceland, focusing on quality and stability, selling Icelandic products to foreign markets – Seeking value added through strong ties with retailers and key customers in chosen markets, stability on the supply side through long term contracts, active sharing of marketing information to clients

Specialised producer – specialising in cod and haddock sourced from chosen vessels through long-term exclusive contracts and fish markets (also from selected vessels). Almost all products are sold to the UK, directly to major retailers in cooperation with an UK agent. The flow of market information between the actors in the value chain is of great importance as are the contacts to the vessels owners.

Harvester and specialised producer Specialising in processing selected species as cod. Harvesting cod and selling all other species on fish markets were additional cod is bought exclusively from chosen contracted vessels. Selling most products to Central-Europe to a Belgian buyer that resells to retail chains and hotels. The rest is sold through an Icelandic sales and marketing company. Long term cooperation between the producer and the customers is of high importance.

The main elements of these operational strategies seek greater efficiency through lowering cost (per unit operating costs and per unit overhead cost), high stability in sourcing raw materials and more reliability in the production and distribution processes. It is interesting to see how noticeably different the strategic positioning of the companies in the value chain is. It covers the spectrum from a specialisation in production and outsourcing all other activities to a company covering by itself all steps of the domestic value chain in Iceland as well as operating its own marketing company abroad. This reflects the variation of the operational strategies and the great flexibility of the Icelandic fish industry.

All steps to facilitate entry into foreign markets and to gain market position are of great importance. The location is not the most important issue anymore but the global approach obtaining both efficiency and effectiveness domestically or internationally, within the company or from outside. For the fish processing companies a definite gain can come from outsourcing the supply of wet fish to the vessel owners as the fishing activity requires a high level of special skills, high level of technology and the access to quota rights. Doing that, the processing companies can keep their focus on the processing activities as its core competence. For the seafood production in Iceland exporting is a necessity. Therefore the internationalisation in the form of off-shoring of vital inputs or outsourcing has to be an inherent part of the global value chain.

Conclusion

The value chain of the Icelandic fish industry has changed fundamentally in the last 20 years the main changes being the vertical integrated companies controlling more levels of the value chain than before by taking over the marketing activities or at least a part of them. The concentration in the fish industry indicates that fewer actors than before are controlling more of the value creation. After the demise of the three sales organisations in the late 1990s a temporary trend towards spot market sales of products emerged. In recent years this has changed so that today, when possible, the spot market sales are avoided. Instead, cooperation and coordination is flourishing with emphasis on trust and long term relationships, where direct contacts between producers and retailers in the global value chain seem to have created additional value. This is in accordance with the results of a previous study of the authors on the cooperation and coordination in the value chain. Two key

success factors for an efficient/effective market driven value chain were found through the interviews of the research. Firstly, coordination of harvesting, production and marketing of a vertically integrated company results from a pull from its international buyers and secondly, the possibility of specialisation and stability is maintained through the operation of fish markets.

Before 1997 the Icelandic fishing companies' value chain was product driven with the quota holders and the three big oligopolistic marketing organisations in power. The formal power of the IFi's value chain now mostly rests with both the quota holders and the foreign retailers. Access to markets is increasingly important in the power structure. This becomes especially evident in the case of producers that are not holding any fish quotas, and which have built up their competitive capabilities by gaining access to fresh fillets markets in the US, UK and Continental Europe through specialisation and value added products.

The value adding is derived through the specialisation in fish species that can easily and steadily be sourced from fish markets and from custom-making products to the retailers' stringent wishes. The main value added activities seems to be precipitated in the policy to meet the customers' wishes and facilitated by the robust technical development in the Icelandic fish industry. Part of this development has been the introducing of new techniques in cutting and grading fillets parts according to customers' demand. Another part has been the great improvements in yield out of input material and high output capacity in the production. The main foundation for those changes has been the direct ties between producers, foreign wholesalers and secondary processors or retailers through bilateral or trilateral connections and by cutting out expendable or simplify links in the value chain. For the Icelandic fisheries value chain the key success factors are reliability in quality and delivery, stability and efficiency, where companies are able to bring the right quality raw material through high-tech processing with high material yield, delivering top products up to buyers' fullest wishes to the right markets.

Most of the Icelandic fish industry's firms engaged in export activities are SMEs but only relatively few can be described as MNEs (ISI, Icelandic, Alfesca, Samherji etc.) For long it has been assumed that entry into foreign markets is problematic for SMEs. This is due to many kinds of internal or external barriers such as lack of confidence, difficulties in assessing and identifying opportunities on foreign markets, difficulties in gaining control and access to distribution channels. New possibilities of the global value

chain, often derived from the use of ITC and new possibilities in both transport and distribution, have greatly been used by the Icelandic companies to overcome these entry barriers. The Icelandic SMEs in fish processing have been taking advantage of these new possibilities, undoubtedly benefitting these companies by extending their market network and creating the very important vertical coordination of the value chain necessary.

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