

Changes in strategic positioning in the Icelandic fish industry's value chain

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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. One of the distinctive competences of the Icelandic fishing industry 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. In many ways a higher level of competitiveness can be assumed to be possible through the 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 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. Kogut (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"*.

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). Both conclude that 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.

Increased global competition has added to the importance of a holistic analysis of the competitive status of the value system 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.

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.

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. 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. 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) claimed as a capability in the supply base. An analysis of relationships between companies thus highlights the value chains 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 such as 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 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, in-sourcing/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.

The value of 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). 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). 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. This shows a "*Captive*" network where the ability of the supply end is low and the lead firm is strong 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. 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. Direct communication supports both better marketing knowledge by the producers and better knowledge and understanding by 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).

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.

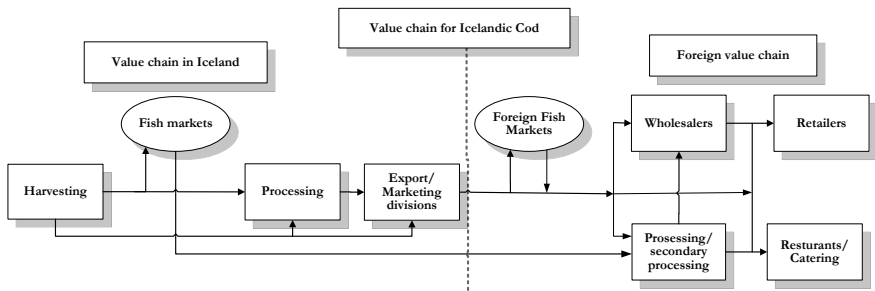


Figure 1. Value chain for Icelandic cod

Though the establishment of fish markets was of great importance there was also, according to the interviewees of the research, a fundamental change after the abolishment of the export license system in the relationship between agents in the value chain 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.

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, in the beginning, induced the new smaller MSOs to take on the more ad-hoc and opportunistic marketing. In the last 10 years however, they have been building more and more up 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; “... *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; “*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.*” The interviewer then carried on; “*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 webcams 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 the 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 of 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). Now the second phase of the changes has began; “*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*”. 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; *“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”*. 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 the influence of the big foreign end-customers increases as does the need to fulfil their often strict requirements. 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. 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.

Although all 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 can be noticed. The MSOs did not only sell the products but worked hard on creating an image of the Icelandic fish products as the best fish products in the world. Nowadays no one is working on maintaining or creating the generic image of Icelandic fish products; *“...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.

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

From the interviews it becomes evident that the value chain has changed greatly since the 1990s. The strategy of the producers has shifted to a more marketing focused and market driven strategies than before. It can be claimed that during this stage the positioning of the producers in the value chain shifted from being “*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 changes in the value chain. From the interviews with the managers of the eight 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 reflecting the variation of the operational strategies and the great flexibility of the Icelandic fish industry.

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 the spot market sales are avoided when possible. Instead, cooperation and coordination is flourishing with emphasis on trust and long term relationships. 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.

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 seem to be precipitated in the policy to meet the customers' wishes and facilitated by the robust technical development in the Icelandic fish industry. Efficiency in the chain is gained through direct ties between producers, foreign wholesalers and secondary processors or retailers with bilateral or trilateral connections and by simplifying or cutting out expendable or links in the 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.

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