Resource heterogeneity and its effects on interaction and integration in customer-supplier relationships

Morten H. Abrahamsen
BI Norwegian Business School

Håkan Håkansson
BI Norwegian Business School

IMP Journal, 9(2015)1:5-25

DOI: 10.1108/IMP-01-2015-0001

Publisher's version available at http://dx.doi.org/10.1108/IMP-01-2015-0001

Resource heterogeneity and its effects on interaction and integration in customer–supplier relationships

BI Norwegian Business School, Department of Marketing

and

BI Norwegian Business School,

Department of Innovation and Economic Organisation

Paper submitted for the IMP Journal,

Review, October 2014

1 Abstract

In this paper we will study the phenomenon of customer–supplier interaction and integration from a resource perspective. In economic terms, a fish may be seen as a more or less homogeneous resource. If the herring is seen as a homogeneous resource, a market should be the best way to handle the selling and buying. However, if the herring is seen as heterogeneous resource, a more extensive type of interaction is needed. One interesting aspect with herring is that different business actors apparently see this resource in different ways. Thus, we will have a mixed situation, creating possible difficulties for the actors involved.

Our starting point for this study is Germany, one of the most important export markets for Norwegian herring. Today, Norwegian legislation hinders the possibility of vertical integration and cooperation at the supply side of the network. However, the industry sees opportunities for growth and integration on the marketing side.

To examine this issue, our study uses a qualitative design methodology, incorporating personal in-depth interviews with selected respondents in Norway and Germany. Secondary data is also used. To analyse the data, we introduce five interaction and integration patterns termed (1) pure exchange – no integration, (2) limited interaction and integration, (3) extensive interaction and developed integration and (4) indirect interaction and structural integration, and (5) full integration.

Our paper is an investigation of the link between the resource heterogeneity and the patterns of customer–supplier integration. Our findings suggest that there is a link between how the actors perceive herring as a resource and how they interact with counterparts. We find that the actors who see the resource as homogeneous have limited interaction and little or no integration, whereas the actors who see the resource as heterogeneous have a much more extensive interaction and closer ties.

The research reported in this study was funded by the Seafood Research Council in Norway (FHF).

2 Introduction

The pelagic industry is changing. From a time when pelagic fish was mainly considered a standardized raw material, there have been substantial developments in catching, sorting, filleting, storing and transporting of pelagic fish. On the marketing side, large international actors in processing, manufacturing and retail have contributed to the Norwegian herring developing from a basic 'everyday' meal to high-end products in demanding markets. Norwegian *matjes*-herring in the Netherlands is a good example here.

Other changes are occurring concerning the way how pelagic fish is bought and sold. From a time when trade was based largely on single transactions, industrial actors are now increasingly developing long-term business relationships and have closer cooperation with customers and suppliers.

This development raises an interesting issue concerning how the herring is viewed from a resource perspective. Previously, the herring was considered a homogeneous resource in economic terms, as it was handled as a standard raw material. Current development indicates that more actors are viewing and handling the herring as a heterogeneous resource where different features of the fish are combined with other resources. From an economic point of view, a homogeneous resource has the same value independent of the other resources it is combined with. But the value of a heterogeneous resource is directly affected by how it is combined with other resources.

This apparent difference in how the fish is perceived becomes fundamental in determining what kind of economic model should be used to formulate advice and policies. If the herring is seen as a homogeneous resource, the market model is very suitable. This model assumes homogeneity in the relevant resources which makes it possible to use the market price as a market-clearing mechanism. However, if the fish is seen as a heterogeneous resource, the industrial network model is more useful, as resource heterogeneity is a fundamental assumption in the model – it is considered the basis for interaction. Subsequently, if the actors involved in the herring industry are seeking marketing efficiency, improvement and cost savings, the recommendations will be quite different given the assumption of the fish's features.

The apparent variety in how fish is seen and handled as a resource creates both analytical and managerial problems. From a managerial point of view, we have the problem that different actors will not expect or understand the behaviour of others. Some actors will behave as if the herring is a homogeneous resource, whereas other actors will identify special features of the

herring. This may create problems in some relationships and possibilities in others. Some of the interaction aims to deal with these problems as there will be a search for counterparts viewing the fish, or at least treating the fish, in the same way. Some of the interaction will aim to influence the counterparts in changing their perception of the fish in order to influence the acting.

Our paper is structured in the following way: Introducing the two theoretical building-blocks on which we develop our case, we first discuss that resource heterogeneity is closely related to *the interaction process* taking place between the companies. Second, we introduce *integration* as this has been the way relationships between companies have been analysed given that the basic resource is homogeneous. Then, we present a categorization of *five integration and interaction patterns* in order to make it possible to analyse an empirical picture where we have actors who have different perceptions of the basic resource. We then describe and analyse our case in terms of these theoretical components: First, we analyse how differences in resource perspectives shape the interaction between the actors involved in the Norwegian and German herring industry; then we apply the five patterns to our case; analysing how actors handle differences in resource perspectives. Our paper concludes with a discussion of the managerial and analytical problems we face when the actors have different perspectives on something as fundamental as the resources they share and how they seek to solve these problems.

3 Theoretical background

We will look at this phenomenon in terms of the *interaction process* with a starting point in industrial network theory (Håkansson et al., 2009) and in terms of *integration* with a starting point in micro-economic theory.

3.1 Interaction process and the resource dimension

There are several theoretical perspectives explaining why it is beneficial for companies to invest in long-term customer–supplier relationships. In economic theory, the cost aspect is often emphasised; relationships reduce transaction costs between companies (Williamson, 1985). Well-established relationships reduce procurement costs because we develop knowledge about our suppliers over time (Kumar et al., 1992). Well-established relationships also reduce marketing costs as it is easier to sell to existing customers than to repeatedly target new ones. Relationships reduce uncertainty because we know our partners.

However, in the IMP tradition, relationships can also create revenues (Håkansson et al., 2009). According to this approach, the substance of a relationship can be divided into three dimensions (Håkansson and Snehota, 1995). The first dimension comprises the *resource-ties* that companies develop and share, such as goods and services, manufacturing facilities, finance, technology, knowledge and personnel. The second dimension comprises the *activity-links* that companies perform together, for example storage, logistics, technical development, sales and marketing campaigns and purchasing. The third dimension comprises the *actors'-bonds* established between companies in terms of trust vs. distrust, closeness vs. distance, cooperation vs. competition, power and conflict. A relationship can be strengthened by working along these three dimensions, i.e. by integrating resources and activities and emphasising cooperation, openness and trust. The interaction between these three dimensions is the driving force in the relationship.

If we look at the resource dimension, the link between resource heterogeneity and type of interaction is an aspect that earlier IMP research has dealt with extensively (Holmen, 2001; Håkansson and Snehota, 1995; Håkansson and Waluszewski, 2007; Håkansson and Waluszewski, 2002; Håkansson, 1982). In IMP terms, heterogeneity is the basis for interaction. For instance, Håkansson and Walusewski (2002) say that '*…resources used in an industrial setting are combined in intricate patterns – which are not necessarily obvious to the actors involved*' (p. 31). Further, they say that

> '*[T]he heterogeneity of resources is mainly considered in terms of interactive effects… as a resource always has hidden qualities, since there are always new ways to combine it with existing resources...By being activated in a new way, an established resource can exhibit new features…This also implies that it is impossible for any human being to have full knowledge of any resource.*' (p. 32).

This suggests that the specific features of a resource are not only created by interaction, but also dependent upon how actors perceive the resource can be used in combination with other resources. Such specific features may be exploited by new activity designs through cooperation and interdependence. This becomes more important, the larger the companies are, because the total amount of resources becomes greater. In this way relationships develop specific resources, where two companies working closely develop resources unique to their relationship (Jahre et al, 2006; Pfeffer and Salancik, 1978). Increased cooperation and actor bonds will protect this investment because specific resources have little application elsewhere.

Subsequently, when actors develop their relationships they become systematically connected. For instance, the way in which a company chooses to handle its suppliers has an impact on its ability to work with its customers. Indirect relationships are, thereby, an important effect of heterogeneity. Relationships are, therefore, part of an extensive, complicated and complex network structure where relationships are mutually affected. This perspective challenges the view of companies as independent actors. Blois (1998) encompasses this neatly by arguing that having business relationships is not a matter of choice for companies. The important choices are about which relationships to develop and how to develop them.

To sum up, the *interaction process* can be studied in terms of how the resource-ties, activity-links and actors'-bonds are developed between the actors. Relationships are, by definition, highly time-based. As interaction progresses the relationship becomes strengthened, but if the parties fail to invest in the relationship, it will eventually dissolve (Dwyer et al., 1987; Ford, 1980; Ford et al., 2011).

3.2 Integration structure

Integration, which can be seen as a specific outcome of the interaction process, has been dealt with to a lesser extent in the IMP tradition. Instead, it is rooted in economic theory where it is one of the components describing the market structure. For example, in strategic and supply chain management literature building on economic theory, integration is commonly seen as a 'make or buy' decision, i.e. to what extent a company can create economies of scale by integrating activities and avoiding opportunism, or keeping an activity in-house where a company has superior performance (Huemer and Furlan, 2011). In industrial marketing literature, integration is defined along an axis where we find perfect competition or market solutions at one end of the continuum, and full vertical integration on the other (Webster, 1992). In the perfect market, actors have no ties beyond the single transaction. Here the actors seek freedom of choice and avoid commitment. At the other extreme is full economic integration between the actors or *hierarchy* in Webster's terms. In between these two extremes, Webster defines five typologies (pure exchange, repeated transactions, long-term relationships, partnerships, strategic alliances, network organisations and hierarchies) representing increasing degrees of vertical integration. Blois (1972) originally labelled this as quasi-integration, where '*it is possible for a firm to develop a relationship with some of its suppliers such that the advantages of vertical integration can be obtained without the normally associated*

disadvantages' (Blois, 1972, p. 254). The prerequisite for this is that the customer is of sufficient size, i.e. represents a significant proportion of the suppliers output.

There is a rich body of research into quasi-integration, most predominantly in the transaction cost analysis (TCA) tradition (Williamson, 1985; Williamson, 1981). Here, quasi-integration '*serves as an alternative governance structure to vertical integration*' (Cai et al., 2009, p. 660). Cai et al. (2009) see quasi-integration as a hybrid of governance which protects specific assets, adapts to uncertainty and enables efficient transactions. According to the TCA theory, governance mechanisms are a question of cost. If we look at empirical observations, we definitely see a rich variation in the relationship types. Industrial markets are often represented by a limited amount of dominant buyers and sellers. In addition, both parties are active. Customers approach suppliers with their needs or requirements, while the seller offers a solution to the customer. This leads to repeated transactions which often develop into long-term relationships where both parties must adapt and, therefore, become more or less interdependent and integrated. This suggests that there is a larger variety in terms of quasi-integration in the real world compared to the theoretical model of a perfect market. One way to treat this is in terms of market failure arguments, i.e. suggesting that quasi-integration means that the conditions for a market solution are not fulfilled.

However, if we take another step – assuming the existence of heterogeneity in some of the relevant resources – this will dramatically change the basic conditions for achieving efficiency and the use of quasi-integration. Heterogeneity in important resources means that companies will seek to utilise the development potential of their resources. If an actor can utilise the heterogeneity potential of its counterparts, his own resources will become more valuable. Thus, we will have relationships where both parties make mutual investments. The results might be adaptions and increased interdependence where breaking relationships and building new ones will be costly and often counterproductive.

3.3 Interaction and integration depending on resource view

Subsequently, the apparent differences in resource view will have an impact on both the interaction *process* and integration *structure*. In Figure 1, we present this as four relationship patterns:

Resource View	**Interaction** *Process*	**Integration** *Structure*
Homogeneous	A: Arm's length	C: None or full integration
Heterogeneous	B: Varying patterns of interaction	D: Varying patterns of integration

Figure 1: Relationship patterns depending on resource type.

When the fish is seen as a homogeneous resource, the recommendation is that the interaction should be at an arm's length distance (A), whereas if the fish is seen as more or less heterogeneous, the interaction can vary in both intensity and extent (B). The aim of this interaction is to identify and implement better combinations of how other resources are related to the fish. If the fish is seen as a homogeneous resource (A), there are no such reasons and the interaction becomes a matter of price.

In terms of integration structure, if the resource is treated as homogeneous, the actors will revert to the market model where competition (no integration) or economies of scale (full integration) are the key features (C). But if the resource is seen as heterogeneous, there are a number of possibilities for the parties to become more or less integrated. We get several different patterns of integration (D).

In our case, we have the interesting situation that some of the actors see the fish as a homogeneous resource while others see it as heterogeneous. For a pelagic company, this means that it must develop its interaction and integration patterns differently according to how it sees the fish and how its counterparts see the fish.

3.4 Five patterns of interaction and integration

In reality, we find different types of relationships or linkages, somewhere between the two extremes of complete homogeneity and complete heterogeneity. Companies seldom operate completely independently of each other, but neither are they highly integrated. Actors always have some kind of relationship with other companies, but they will vary in dimension. It is between these two extremes we find what we have chosen to call *varying patterns of interaction/integration*. Companies will always seek a certain freedom of choice when it comes to which actors they want to enter into relationships with. Some companies will have numerous

weaker relationships with a number of counterparts. Other companies will have closer ties with only a few actors. What is right for one business may not be right for another – it is the company's ability to develop and handle (utilise) their relationships that is crucial.

This perspective on interaction creates new possibilities for integration: A company might have few or no close relationships. Another company may have some close relationships limited to one or two partners, but few close relationships beyond this. A third company may handle many close relationships. There is, therefore, no 'natural law' that determines the number and type of relationships the company chooses, but this is rather determined by the company's ability and willingness to develop relationships that it considers appropriate.

In this study, we have found a variation in how different actors relate to their counterparts. This applies both to the supply side and the customer side. No actor has found an 'optimal' way of working, but we have identified a variety of different opportunities for customer–supplier relationships to develop, depending on how the actors see the fish as a resource. If we look more closely at these different opportunities or relationship types, we see that we can group them into some specific categories. On this basis we suggest five interaction/integration patterns: (1) pure exchange – no integration, (2) limited interaction and integration, (3) extensive interaction and developed integration and (4) indirect interaction and structural integration, and (5) full integration. These patterns are mainly derived from our empirical data, but we are also draw upon our previous theoretical discussion.

Here is a description of the five patterns:

1) Pure exchange – no integration

This is the case where the actors try to create and sustain pure exchange in the market, thus assuming that the fish is a homogeneous resource. Here we will look at deliberate acts and attitudes against integration. A policy for multiple suppliers in a tendering process to avoid dependence is an example of this pattern.

2) Limited interaction and integration

This type of interaction/integration is characterised by a certain degree of cooperation and adaptation, which in turn is based on an assumption of some, however less influential, heterogeneity. This is more of a random consequence of the cooperative interaction and the relationship's characteristics than an intentional move towards closer integration. An example

of this can be regular meetings and updates on deliveries. This type of relationship is directly between two parties.

3) Extensive interaction – developed integration

This pattern is based on an assumption of heterogeneity, and here we group relationships with a greater degree of adaptation between the two companies. Examples of this may be that the counterparts have developed manufacturing technology together or have developed common storage or transport activities. This type of interaction/integration is direct and requires an active attitude, willingness to cooperate and investment in the relationship from both parties.

4) Indirect interaction – structural integration

Here we group relationships where we see an indirect influence of interaction in other relationships, i.e. indirect links between the actors that nevertheless have consequences for the way they interact. There is a basic heterogeneity where each actor does not have to handle it directly in his relationships, but needs to adapt to how other actors handle their relationships. For example, production technology developed between two companies have consequences for the interaction between other companies when this technology becomes an industry standard.

5) Full integration

Here the parties are fully integrated, resembling structures referred to as hierarchy or vertical integration in the literature. The parties have become a unit with integrated operations and control; they share financial systems as they now are part of the same organisation. Here the fish may be seen both as homogeneous (economies of scale) or heterogeneous (strong interdependence and adaptations between the parties).

This is a summary of the interaction/integration patterns and a view of resource heterogeneity (Figure 2):

Patterns of interaction and integration	Resource view
1. Pure exchange – no integration	Homogeneity
2. Limited interaction and integration	Partial heterogeneity
3. Extensive interaction and developed integration	Heterogeneity

4. Indirect interaction – structural integration	Heterogeneity
5. Full integration	Homogeneity and heterogeneity

Figure 2: Interaction/integration patterns and view of resource heterogeneity.

Our case analysis in section 5 draws on these building blocks. First, we look at the extent differences in resource view shapes interaction between the actors involved. We then apply the five patterns to look at how actors handle differences in resource perspectives.

4 Methodology and case

4.1 Research sample

Industrial markets are characterised by a few dominant actors, and this is also the case for the pelagic industry. We, therefore, decided upon a qualitative design methodology, primarily personal in-depth interviews with key respondents in Norway and Germany. In Norway, the pelagic industry has been characterized by several mergers, and today five large actors dominate the market, representing 70% of all the pelagic production (see Table 1). These companies constitute our Norwegian sample. They purchase, process and export herring to the world market.

Table 1: Norwegian sample and share of herring exports.

Norwegian Sample	Annual Production (tons)
Brødrene Sperre	22,000 herring 26,000 mackerel
Nils Sperre A/S	25,000 herring 22,000 mackerel
Egersund Seafood	Not stated (around 15% of market share)
Nergård	110–115,000 herring
Norway Pelagic	Not stated

Germany was chosen as it is one of the main markets for Norwegian herring. German imports of herring products (fillets, fresh and frozen) amounted to 150,000 tons in 2011, of which

104,000 tons was from Norway (Norwegian Seafood Export Council, 2013). In Germany, we have interviewed six large importers, agents and producers. All have direct relationships with Norwegian suppliers. Our sample imported 56,000 tons in 2011, which is close to a 50% share of the market for imports of Norwegian herring (see Table 2):

Table 2: German sample and share of herring imports.

German sample	Annual total herring import (tons)	Import from Norway (tons)
Fokken & Müller	Not stated	3,000
Friedrichs	250–200	Not stated
Friesenkrone	6,000	3,500
Hawesta	Not stated	16,000
Homan	Not stated	25,000–30,000
Lübbert	Not stated	Not stated

To gather information about key relationships between Norwegian suppliers and German customers, we developed an interview guide (Appendix A). In particular, we wanted to address the following issues:

a. Identification of the actor's most important relationships with their counterparts and their input and marketing activities
b. Identification of the actor's most important internal technical resources
c. Discussion with the respondents about how they handled the most important relationships
d. Identification of the actor's connected relationships (their networks).

In addition to qualitative methods, we have used secondary data from various sources. The interviews lasted between one and two hours. They were taped and later transcribed, and the transcripts were subsequently coded and analysed using NVivo.

5 Case presentation and analysis

Our paper deals with two theoretical components: Differences in resource perspectives and interaction/integration patterns. This theory also guides our description of the case, and the case

analysis thus becomes an integrative part of the empirical presentation material. First, we analyse how the different resource perspectives shape interaction between the actors involved, and then we apply the five interaction patterns to analyse how the actors handle differences in resource perspectives.

5.1 Case analysis from a resource perspective

5.1.1 Resource homogeneity and Norwegian suppliers

From a Norwegian perspective, fish is seen very much as a homogeneous resource and Norwegian legislation actively promotes de-integration. A good example of this is the Norwegian auctioning system of pelagic fish. Here, all herring must be sold through the Norwegian Fishermen's Sales organisation (NSS) in a closed auction system. Five auctions are conducted daily. The auctions take place by fishing boats reporting their catches to the auction and buyers bidding on these catches. After the auction has come to an end, the prices are made public. Buyers in this case are the production companies, with receiving facilities at different locations along the Norwegian coast. In recent years there has been a restructuring of the industry, and several receiving facilities have merged or closed. Today there is considerable overcapacity on the receiving side.

> '*Much of our focus is still on the catch side because it is extremely important to obtain raw materials. Particularly now as the quotas are reduced. We and our competitors have adapted to a production capacity which is 300,000 tons above today's limits. So now our focus mainly concerns how to get raw material.*' (Norwegian exporter).

This particular legislation prevents the Norwegian exporters from forming long-term relationships with their foreign customers. The focus of the exporters is to get access to the herring, keep their facilities running, and ensure steady supplies to their customers in a back-to-back situation. One respondent said, '*We do not buy the goods before we have orders. This gives us less risk. But the margin between the auction price and our sales price is reduced.*' Meanwhile, Norwegian exporters are facing price pressure from their export customers, who in turn are facing price pressure from their customers which are mainly large European retailer chains. These buyers usually make annual agreements and cannot change the price in the middle of the catch season. One Norwegian respondent said:

> '*Our customers face problems when dealing with the supermarket chains. These chains are keen to secure volume. Herring has long been an affordable product with high volume and low prices. Customers in Eastern Europe, Germany and Poland have*

extensive contracts with supermarkets, but when the price increases they have a challenge.'

These statements reflect a view of herring as a homogeneous resource, where price mechanisms are the driving force of the exchange mechanism.

Another problem reported is the seasonal variation in the herring stock. It is difficult for the Norwegian exporters to plan ahead and make long-term agreements. One exporter said: '*The fishing industry is the only industry in the world where access to raw materials varies greatly from one day to the other due to quotas and weather.*' This means that there is hectic activity at the facilities at times when the herring is landed, but there may also be quiet periods: '*We are working day and night. We started to produce 1 September. When we got to the middle of October, the workers had had two days off. We're not talking 6–7 hour working hours, but 12-hour shifts*.' Several facilities, therefore, receive different fish species which have different catch periods. For instance, catch periods for mackerel and herring are different from each other. This is a way for the receiving-facilities to utilise their capacity. The natural variety in quotas also implies that the actors are forced to treat the herring as a homogeneous resource.

This is further reflected in the way the Norwegian producers process the herring. Production activities in Norway are mainly sorting, filleting and freezing of the fish. The industry has developed quality and traceability systems; pictures are taken of the products and random samples are selected from the different boxes so that customers can have a certain idea about the quality. Sometimes customers come to Norway to supervise this process, but quality supervision is largely left to the Norwegian producers. Processing beyond sorting, filleting and freezing is expensive and impractical because of Norwegian customs barriers; currently a 20% customs duty into the EU is added. German customers, therefore, prefer to buy frozen fish and add further production value such as marination and preservation.

It also appears that the Norwegian exporters have little experience with the various ways in which the herring is treated. For instance, one respondent signals that the fish is heterogeneous in use in the various markets. In Norway on the other hand, the fish is treated as a homogeneous resource: '*We cannot rule out processing in Norway, but this is expensive and we have no culture for it. Denmark, Germany and Poland have long traditions and know what the market wants,'* one Norwegian respondent claimed. Another said that

'*This has been discussed at length. In terms of value added, it is difficult to produce for the consumer market in Norway. This is partly due to the cost level in Norway and because each export market has its own product preferences and requirements*'.

The handling of the fish also reflects this view of homogeneity. After the fish is sorted and/or filleted, it is packaged in 20-kilo cartons and frozen. Fish can be stored at the exporter's production facilities in Norway, but this is expensive. Most of the fish already has buyers, and is immediately transported to the customers. The fish is mainly sent by ship to markets in Europe and Asia. Hamburg is a major receiving port for the German market, like St. Petersburg for the Russian market and Stettin for Poland. Fresh fish is transported via car. Frozen fish is shipped on pallets or containers.

5.1.2 Resource heterogeneity and the German market

Germany is, in many ways, the most developed market for Norwegian herring, and there many actors see herring as a heterogeneous resource. This has partly to do with the traditional German food culture. The herring has many applications in Germany. It is marinated, used in salads and eaten as traditional *matjes*. German shops provide a large variety of processed products such as herring in brine, herring salads, canned herring and vacuum packed herring. Herring is also sold individually by weight, so-called *rollmop*s, in fish shops or deli counters in supermarkets.

German buyers are either agents/traders or factories that buy directly from Norwegian exporters and use herring as input to their production process. The various herring-products are then sold to wholesalers and, in some cases, directly to the purchasing departments of large German retailers.

The German producers have relationships with a number of other suppliers of resources used in production, such as packaging (tin cans, glass, plastic, paper, etc.) and ingredients (creams and sauces). In addition to this are suppliers of logistic services such as transportation and storage. A particular feature of the German market is that several producers use subcontracted production in Poland, which represents an important input factor. We also find relations to the Norwegian Seafood Council, which is a key actor in efforts to promote Norwegian seafood to consumers in cooperation with the German producers and retail chains. Several respondents mention ties to WWF's sustainability assurance scheme, the Marine Stewardship Council (MSC) label, as an important relationship. WWF has been an important driving force to get German producers to use the MSC standards in their quality system, and several producers have included their Norwegian suppliers in these efforts.

5.1.3 Conflicting views of fish as a resource

The German producers have extensive contacts with their domestic customers, and a lot of product development is done in close cooperation. This may indicate that German producers and their retail customers see the fish as a heterogeneous resource, as they mutually put great effort in developing and tailoring unique products. Such relationships are long-term and well developed. Norwegian producers are, on the other hand, rarely introduced to German retailers and wholesalers. '*It makes no sense*,' said one respondent. Norwegian suppliers have apparently little knowledge of the preferences of the German market, according to one German buyer who said, '*Norwegians don't know because they don't eat matjes! But we do.*'

The Norwegian auction system is the main factor that worries the German producers. The system is perceived as rigid and costly, and prevents stability and long-term investments. One German producer said

> '*In 2011 and 2012 the herring quotas were very low, and we subsequently had fewer raw materials available. But the demand was still there. We had to pay too much to the Norwegian suppliers, but our German customers were not willing to pay correspondingly. We therefore lost money in 2011 and the first half of 2012. I have discussed this many times with Norwegian producers, but they blame the fishermen.*'

From a German perspective, the auction system means that the Norwegian exporters sell their fish to the highest bidder in other export markets, even though the fish is in high demand in Germany. This makes it difficult for German factories to plan their production, and has an additional impact on their relationships with their customers. A German respondent said,

> '*When the catching starts in September/October, the herring is really big. This is the right size for the East-European markets, like Russia and Ukraine. The fisherman is subsequently focusing on catching the big herring for these markets because they get high prices there. And they will continue looking for big herring until this demand is met. But this is not what the German market needs. We need smaller sizes. The fishermen often know where the small herring is, but they don't want to catch it because they get more money for the big herring. It's in the interest of the fisherman to go for the big sized herring.*'

Here we see that the view of resource heterogeneity of the German customers' conflicts with the view of homogeneity of the Norwegian supply side. The suppliers appear to be maximising

each single transaction, even behaving opportunistically, whereas the German customers have a long-term view of their relationships to the suppliers.

5.1.4 Degrees of relationship commitment

Nevertheless, we find varying degrees of cooperation and commitment in the relationships between Norwegian suppliers and German customers. Large German producers with substantial volumes argue that they must rely on deliveries from several Norwegian suppliers. Here the relationships are less developed. One respondent explained

> '*I cannot depend on one producer. It's impossible. Things can change. You must compare prices and have more places to go... We have made no adaptions to the Norwegian suppliers. The producers produce, and we buy. They sell the same type of fish to all the other producers. We gain nothing by working more closely. But they know what we need.*'

Still, a certain degree of adaptation is present. Once a year this producer meets with his Norwegian suppliers and presents his production plan for the entire season. He estimates the qualities and sizes of the herring, and then asks the producers to submit quotes for what they think they can deliver. Based on previous knowledge, he then places orders with the suppliers who he thinks are best equipped. Thereby, it is the same suppliers who deliver every year.

Another German customer has made a greater degree of adaptation in his supplier relationships. He uses several Norwegian suppliers, and his suppliers have made adjustments in their fillet production to meet his quality standards. Nevertheless, this customer relies on balancing his suppliers against each other. He said

> '*Our demand is so huge and we can't buy just from one. Because one supplier doesn't have the quantity and quality we need. We have to balance the market, to use all possibilities. The suppliers are more interested in doing business with us then. Price is important.*' And his suppliers share this objective. They said, '*Our contracts are based on volume, not price, because that is a risk for both sides. We are interested in getting the quantities we need at a reasonable price. And our suppliers are interested in having a partner which is able to take huge quantities. So we share the same goals when we meet up.*'

Here we find good examples of production adjustment and closer ties between the Norwegian producers and German customers. But this also indicates that production volume is an important

factor: customers who buy small volumes, and those who buy very large volumes, have made a few adaptions on the resources side. The parties have regular meetings where they enter into binding contracts on deliveries, but not on price. These relationships are characterised by trust and a generally good atmosphere. There is a low level of conflict – their frustration concerns the auction system and, to a lesser extent, the role of the Norwegian exporters.

We also find examples of close cooperation and commitment. This is to a large extent driven by a need for information about fish quality and size. During the catching season in Norway, one of the respondents says that he gets information about sizes and qualities from his Norwegian supplier and can turn down fish with lower quality. Others do their own inspections. One respondent said

> '*I was recently at two of the Norwegian factories. I had a look at the whole production line. We usually test and taste the quality. This is important. We want to know when the fish is caught, how much – how high is fat content, the texture, etc… This is very important to us. When send samples to our lab to see whether we have received correct product information. We also discuss what we need and when we need it.*'

Access to information is one of the reasons why one of the companies in our sample has only one Norwegian supplier. Previously, this company used different Norwegian suppliers but found that product quality varied greatly. To get access to the best quality, they were forced to work closely with their Norwegian supplier and share their knowledge of production quality:

> '*Earlier we would ask Norwegian producers for quantities and they would send samples. We would check the samples, and if it was OK we would take the lot. But we had problems. If you get a delivery of 20, 40 or 60 tons there is a big variation in quality. You cannot see this in the sample blocks. This created a lot of problems at our plants because we never knew what we had in stock. We then decided to make a trip to Norway and look at some producers. We decided which producer should be our partner for the future. We then made our specifications and placed orders based on our requirements from this single producer. As a consequence we did not have as many production problems as before. We did this step by step, from season to season. We had to find out what was wrong last season, and what needed to change in the next. We introduced a completely new quality system for our company, and gradually this became state of the art production technology in Norway.*'

This is an example how two actors have related their resources to each other. Now they have developed a long-term relationship where they share production technology. This technology has had positive effects for other relationships.

This is also an example of how German customers have challenged the view of the Norwegian suppliers. The German customers see the fish as a heterogeneous resource, whereas the Norwegian exporter sees it as a homogeneous resource. The German customers have had a hard time getting their Norwegian supplier to produce herring fillets that are of high enough quality for the German market. '*Norway has a different view of herring than we have in Germany',* said one respondent. He further added

> *'The quality and processing of Norwegian herring fillets is not good enough. The Norwegian customers don't look at herring as high quality food. To them herring is just another fish. They don't know how we use this food in Germany and what you can do with herring. Herring is not just herring – you marinate it, fry it, make salads. It has varied use. At first the Norwegian producers didn't know how to produce herring to our standard. They tried their best, but when the fish arrived at our plant there were a lot of damages that our people had to remove with knives. On several occasions the cut was wrong and we could not use the fish. You can make a lot of mistakes when you don't know what the customer needs or how he uses the raw material. When we started working closely with our Norwegian supplier we helped them with their production. We stayed for several weeks, followed the production day by day and helped the producers to adjust the machines and make the right cut*.'

This knowledge has gradually been adopted so that it is now standard for a number of customer relationships: '*Today all of them have the same cut, and the same quality demands that we initiated originally. But we were the first.'* This quality improvement makes it easier to sell fish to restaurants and retailers. In this way, it has created value for all actors*:*

> *'This was of course to avoid costs in our company. Our products are going into restaurants and hotels. If you have a nice dinner and order herring, you do not want the filet be broken or have big belly flabs. Or a yellow colour which means that it is oxidized. It must be very good because you are paying a lot of money for it.*'

This speaks about a very distinct knowledge of how a resource such as herring should be developed to provide maximum value to the end customer.

5.2 Case analysis of interaction/integration patterns

The case indicates that there are several patterns observable in the relationships between Norwegian suppliers and German customers. The actors' view on resource homogeneity vs. heterogeneity seems to be an important factor in how these relationships are seen and progress.

We will now look at some important facets of our case in terms of the five different patterns identified.

5.2.1 Pure exchange – no integration

The auction system in itself is perhaps the best example of this pattern. The system is designed based on the view of pure exchange with a market and formally and legally defers integration. The actors involved clearly see the fish from a perspective of resource homogeneity. This prohibits Norwegian suppliers from interacting in a closer way with the catch side and restricts access to the raw materials. Further, it becomes difficult for the Norwegian suppliers to interact closer – form relationships – with their German customers as they need to engage in a market system to sell their products to the highest bidder.

Several actors on the German market state that they avoid becoming dependent on their Norwegian suppliers, and they want to use several suppliers. In these cases dependency is seen as a problem. The extent of this attitude varies. One respondent for example said that '*we have to follow the market*' and pointed out that a market solution would give him the best possible conditions. Another importer said: '*We have no adaptations to the Norwegian suppliers. Only trade activities, no common projects. We have nothing to gain by becoming more integrated*.' Others explain this from a capacity perspective: No single Norwegian supplier is large enough to supply all fish that a German producer needs. Closer integration, therefore, becomes problematic because it requires that he must develop ties with a supplier that may be incapable of meeting his needs in the future. Therefore, the customers need to balance the suppliers against each other.

5.2.2 Limited interaction and integration

We find several examples of limited interaction and integration in the case.

Adaptations over time: Many German factories produce large volumes and they have to rely on deliveries from several Norwegian suppliers. These relationships are characterised by

interaction over time resulting in long-term planning and adjustments or common procedures to some degree. The companies have cooperated for some time and know what they can expect of each other.

Information access during the catching: The actors' interactions include information about product quality and size during the fishing season in Norway. In this way the customers can remove fish of poorer quality.

Inspections: We find examples where a German importer makes regular inspections at facilities in Norway. They discuss production together, but these agreements are not as extensive as the examples above.

Seasonal planning: Several German customers plan their season ahead with their Norwegian suppliers. They discuss volumes, qualities and sizes of herring. Based on this, the suppliers report what they think they can deliver during the season. Customers then select who gets the order based on past experiences. This is an example of limited interaction and integration because the cooperation is done in a routine manner, and it is the same companies that deliver every season. Hence, both the customers and the suppliers know what they can expect.

The common denominator here is the resource perspective. In these relationships the fish is seen as less heterogeneous, and the German suppliers are wary of becoming too committed to one or few Norwegian suppliers. This has partly to do with the fact that the fish is easily substituted with fish from other suppliers, and the customers have nothing to gain from becoming interdependent.

5.2.3 Extensive interaction – developed integration

The interaction between several Norwegian exporters and customers in Germany are extensive, leading to developed integration.

Customised production technology: One of the German producers has chosen to buy from only one Norwegian supplier, and his supplier has adapted its production lines to his German customer. The parties have, through extensive interaction, developed a close relationship, and this was a deliberate strategy by the German customer. After some trial and error, they have developed a high quality production process together. Here resource sharing appears in terms of product knowledge, market information and mutual learning. The German customer has a clear idea of how he wants to utilise the resource for his end users, and the Norwegian production technology must be tailored to his requirements in order to secure the resource

quality. This development has largely been driven by the customer, as he has a different resource perspective compared to his Norwegian supplier. As a result of the interaction process, the Norwegian supplier has opened up to new perspectives, and the production technology subsequently has become an industry standard, benefitting several connected relationships.

Another German respondent points to similar adaptations. This company uses a number of Norwegian suppliers, but the suppliers have made adjustments to their fillet production to meet German quality requirements. We also find examples of this pattern where one of the German producers gets his supplies from only one Norwegian supplier and one German agent. Here we are talking about relatively small volumes where the producer does not need to rely on multiple suppliers.

Information exchange during catch season: Extensive information exchange is another good example of developed integration. The German customers need information about fish quality and size, and together with their suppliers, they have developed systems for taking production samples and tracking shipments on regular intervals.

Logistics and storage: Our case shows how transportation and storage are handled in a number of ways in the interaction. This has to do with how the production structure is created at one end, and how the fish is sold and consumed at the other end. The fish is caught and consumed at different seasons, and this creates the possibility for extensive activity-links across the network. Frozen fish can be stored for a period of time without loss of quality. Cost-effective storage can also help mitigate the problems created by seasonality and capture variations. However, large storage facilities bind capital, and there must be agreement between the actors how this cost should be distributed. In the case study, we find many examples of how different actors have managed to do. One way might be to develop solutions beneficial for all the parties involved, such as shared storage capacity. Other actors try to find more specific solutions better tailored to their relationships.

> '*Customers have different ways in which they want the goods delivered. Some want to have the fish right away; others want a longer delivery schedule. It varies from customer to customer. They approach us and we must then tell our processing facilities how the customer wants the fish delivered. For example, we discuss which production lines we should run: Should we make adjustments for higher priced products, or be run more standard production for the lower priced ones? But customers are very conscious of what they want*' (Norwegian exporter).

5.2.4 Indirect interaction – structural integration

In this case there are a several good examples of this pattern.

The auction system and herring quotas: The relationship that exporters have with the catch side is perhaps the best example of the indirect interaction relationship between Norwegian exporters and their export customers. The auction system in Norway increases prices and this can lead to opportunistic behaviour among the exporters. At the same time, reduced herring quotas have an impact on the volume available for export.

New production technology: Production adjustments between German customers and their Norwegian suppliers, which have gradually become standard production technology, is a very good example of structural integration. Here technological developments in the interaction with one customer have effects on connected relationships.

MSC certification: Another good example of structural integration is where NGOs exert pressure on the German producers to demand MSC certified herring from Norwegian exporters related to their interaction with suppliers**.** Norwegian herring is traditionally regarded as being of a higher quality compared to herring from Iceland and the Faroe Islands. Additionally, it is harvested in a sustainable manner due to strict Norwegian quota regulations. German producers are therefore interested in developing more extensive certification schemes with their Norwegian suppliers.

Substitution of herring by other export countries: Even though Norwegian herring is considered to be of high quality, the ties between Norwegian exporters and German customers are affected by changes in demand for herring from other countries. Due to its geographical proximity, Danish herring is available as fresh whereas Norwegian herring is only available as frozen. Volumes from Denmark are nevertheless low due to limited production capacity and a restructuring of the industry toward fewer actors.

Substitution of herring by other product categories: Several respondents mentioned the threat of herring substitutes. Producers will reduce the herring content in their products and increase ingredients such as sauces, spices, vegetables if Norwegian herring continues to be sold at high prices. One respondent said that chicken and soy products would take over the market share for

herring in much the same way. This type of indirect interaction and structural integration will create changes in demand which will affect all herring producers.

Storage and transport: We find examples of indirect interactions in cases where the actors use joint storage and transport facilities on sea and land in order to utilise spare capacity. We also find shared short-term storage with agents in Germany and Holland.

Hired production in Poland: Two of the German companies in our study have subsidiaries in Poland which produce for the German market, and this is an increasing trend. Such indirect interactions affect relationships between Norwegian exporters and German customers.

Cooperation with the Norwegian Seafood Council: Several of the German actors have extensive cooperation with the Norwegian Seafood Council concerning sales promotion and advertising campaigns. The Norwegian Seafood Council has a good overview of the German market and helps Norwegian exporters with practical organisation of their marketing activities in cooperation with German producers and retailers. Here multiple relationships are affected because market knowledge and consumer insight created in one relationship becomes available to all the connected actors.

5.2.5 Full integration

Interestingly, we don't find much evidence of this type of integration in the case. The closest example we have, is one of a Norwegian supplier which has been in discussion with his German customer about a possible takeover. They are, however, reluctant to make such a move. The main argument is that it is difficult to have a good relationship with other customers in Germany if you become an importer because you also become their competitor. Currently the suppliers are dependent on several customers, and the customers are dependent on several suppliers. Full integration is believed to create problems that far outweighing the benefits.

On the other hand, we find examples of full integration in some of the connected relationships. For instance, several of the largest German producers own processing facilities in Poland. The main reason here is economies of scale such as reduced labour costs. We also find examples where German producers have factories is Poland to be closer to the Polish market, the main reason here being market entry considerations. But in the case of the herring in Germany, Norwegian exporters and German importers have yet to make the move.

This analysis may be summed up in the following Table.

Table 3: Summary of different interaction and integration patterns.

1. Pure exchange – no integration	2. Limited interaction and integration	3. Extensive interaction – developed integration	4. Indirect interaction – structural integration	5. Full integration
• Norwegian auction system promotes pure exchange and defers integration • Many actors want more suppliers to deal with • Dependence is seen as problematic • Few links between Norwegian suppliers and German retailers	• Long-term and routine adaptations over time • Information sharing during the catch season • Inspections at supplier plants • Seasonal planning between several actors	• Examples of customised production lines based on customer needs • Logistics • Information exchange	• The auction system and herring quotas has great influence • New production technology has become new industry standard • MSC certification important for retailers • Substitution of herring by other export countries • Substitution of herring by other product categories • Storage and transport • Hired production in Poland • Cooperation with the Norwegian Seafood Council	• No examples in the ties between Norwegian suppliers and German customers • Examples in connected relationships: • Ownership between German producers and Polish
Resource view				
• Homogeneity	• Partial heterogeneity	• Heterogeneity	• Heterogeneity	• Homogeneity and heterogeneity

6 Discussion and conclusion

Our findings suggest that there is a link between how actors perceive herring as a resource, how they interact and the subsequent integration. This follows our initial statement that resource heterogeneity is the basis for interaction. In our case, we find that actors who see the fish as a homogeneous resource limit interaction to pure exchange and have none or limited integration, whereas actors with a more heterogeneous view of the resource have a more extensive interaction and usually end up in a closer type of integration. This also suggests that the degree of interaction is shaped by a common understanding or shared frame of references between the actors, resembling research on *network pictures* (Abrahamsen et al., 2012; Ford and Redwood, 2005; Mouzas et al., 2008), *idea structures* (Abrahamsen et al., 2011; Håkansson and Waluszewski, 2002), or *network theories* (Johanson and Mattsson, 1992). Our study finds that the differences in perceptions, not only of the network structure but the value put on the resource itself, determine the extent of interaction and integration. Actors with a homogeneous view of the resource limit the value of the resource to a question of price, whereas actors with a

heterogeneous view see the value of the resource depending on how it is combined with other resources.

On the one hand, the Norwegian auction system is organised from a market perspective based on pure exchange. Actors who benefits from this system, such as the catch side and the representatives from the auction house, see this system as the best way to create efficiency. However, the actors in connected relationships, such as the German producers and German retailers, are dependent on well-developed interaction with their suppliers. Efficiency, in their mind, is access to raw materials suitable for a diverse product range, and to them herring is clearly a heterogeneous resource. These two perspectives 'clash' in the case of the Norwegian exporters and their network position. On the one side, the exporters have to buy the resources from a homogeneous market system, and on the other side they have to sell the resource to a heterogeneous network. However, the perspective the exporters take, to a large degree, reflects the catch side of the network where resources are seen as homogeneous. For instance, the German producers and retailers state that the Norwegian suppliers are little concerned with the various uses of this valuable resource in the consumer market. As one respondent so clearly described it: *Herring is not just herring!* However, it is not just a case of changing one's perspective in order to create space for extensive interaction. Representing an industry structure characterised by overcapacity and heavy investments, the actors revert to a short-term, transaction-based perspective where the ultimate objective is to sell the resources available at any time, and to the highest bidder. Accordingly, the structure itself promotes no integration or limited integration patterns. Thereby, one may question whether our previous argument should be reversed: Is it the actor's view of the resource as homogeneous which leads to limited interaction and integration, or does the auction system force the actors to treat the fish as a homogeneous resource?

In the case where there is a greater presence of extensive interaction and developed integration patterns, these activities are driven by actors with a more heterogeneous resource view. And it is to a large extent customer driven. It is the German customers' perspective of the fish as a heterogeneous resource which, in a number of cases, has led to the development of closer ties and cooperation between Norwegian suppliers and their customers. Obviously, to cater to the demands of the German retailers and their wide range of herring products, the German customers need to develop ties and invest in relationships with suppliers that can tailor their production to the customers' needs. As such, heterogeneity creates a strong basis for extensive

interaction. Good examples here are adaptation of production technology (sharing tangible resources) and extensive information exchange (sharing intangible resource).

Concerning product development, Norwegian production technology has been adapted by several exporters to specific customer needs in Germany. One of the exporters said:

> '*Many of our customers have very specific requirements. In all our factories, we have detailed specifications that we have to take into account. Our customer may have several end-customers. In these cases our products are adapted for each customer. For instance, we make different cuts for each customer. These customers have been very open with us. For our largest customer, we have made production specifications and processes in order to adapt to their needs. We also have niche customers who are even more specific. But this is a difficult market to operate in, and not anyone can do it*.'

This trend is driven by large retail chains focused on creating cost-effective workflows.

Information and communication are also important interaction means in developing closer integration. Good information is essential for effective customer and supplier relationships. This is particularly important in situations where there is a natural variation in herring availability. In this particular industry, we find both seasonal variations and variations in the volume and quality of each catch. This means that there sometimes is very intensive communication between the actors, while at other times there is less activity. In our case, Norwegian suppliers meet their European customers in person at regular intervals, usually three to four times a year, and often at trade shows and other customer events. The contact is more frequent via email and telephone, sometimes daily in busy periods. Large customers send their own inspectors to Norway at regular intervals. Smaller customers send agents or wholesalers.

Information about product quality is a key factor determining the extent of integration. From our case, it is apparent that the actors have found several ways to handle the flow of information. German importers and producers have, for instance, joined forces with their Norwegian suppliers to develop an MSC certification scheme for herring, in addition to regular visits at their Norwegian suppliers' production facilities. The MSC label represents an important quality indicator. This flow of information also makes it easier for retail chains to track production quality. This is important because it represents a key part of marketing to consumers.

Our study also highlights the role of resource heterogeneity in indirect interactions, referred to as structural integration. At the start of the paper, we argued that from an economic point of

view a homogeneous resource has the same value independent of the other resources it is combined with. But from a heterogeneous perspective, the value of a resource is directly affected by how it is combined with other resources. The MSC certification is a good example here. Norwegian herring becomes more valuable when it is combined with new industry standards from NGOs and requirements from German retailers. Here, herring as a resource is combined with other resources such as information and knowledge. In total, this increases the value of the Norwegian herring to the actors. Similar examples may be found in the relationship between Norwegian and German industrial actors and the Norwegian Seafood Council. This actor provides a similar resource in terms of knowledge about the German market. We have also seen many examples where the herring is combined with a range of other resources such as sauces, brines, packaging, etc. as a consequence of the wide range of products found in the German supermarkets.

We also find examples where German actors process Norwegian herring in Poland. Here, the herring is combined with production capacity resources and new production technologies. A similar case is where production technology in Norway has become the new industry standard. Here, the resources developed in one relationship have spill-over effects on connected relationships with benefits for the entire industry.

Conversely, if the actors are unable to combine the herring with the other resources available, there is little space for integration. For instance, some respondents argue that the high price of herring will eventually shift demand to substitutes like chicken and soy products, suggesting that resources that are difficult to access (in this case due to high prices) will be substituted with other resources that better fit with the existing resource structure.

Interestingly, we do not find many examples of full integration in the study. One reason may be the found in the industrial structure where the auction system favours opportunism and short term exchange. The other explanation is, of course, the Norwegian legislation. But there is nothing preventing the actors from integrating with the customer side in the network. Few of the actors are, nevertheless, willing to do this.

Comparing the pelagic network with other similar networks, there are some interesting similarities and differences. In seafood networks such as Norwegian salmon in Japan, white fish in England and bacalao in Portugal, there has been a considerable shift towards closer integration between the actors recent years (Abrahamsen and Håkansson, 2011; Cantillon and Håkansson, 2007; Cantillon et al., 2006; Haugnes, 2010). A similarity in all these cases is the

increased importance of retail chains, calling for new ways to combine important resources across the network.

Current trends, such as overcapacity at the catch side in Norway, industry concentration and the production level, and increasing retail concentration in Europe, suggest that the industry may increasingly be dominated by a small number of large actors in the coming years. There is also beginning a concentration amongst Norwegian fishing vessel owners. An auction system, with only a small number of actors left, will then be of little significance. Rather, the industry will develop towards a network of large actors with close ties. In such a system, the prerequisite for interaction is resource heterogeneity. The supply of herring will, nevertheless, be dependent upon seasonal variations and quotas which favours short-term exchange events. As this paper has highlighted, the ability to interact and integrate will subsequently depend on how the actors view their available resources. At the same time, the interaction reflects the logic of the system in which it takes place.

References

Abrahamsen, M. H., Henneberg, S. C., and Naudé, P. (2012), 'Using actors' perceptions of network roles and positions to understand network dynamics,' *Industrial marketing management*, 41 (2), 259–69.

Abrahamsen, M. H. and Håkansson, H. (2011), 'Networks in transition,' *IMP Journal*, 5 (2), 194 – 209.

Abrahamsen, M. H., Naudè, P., and Henneberg, S. C. (2011), 'Network change as a battle of ideas? Analysing the interplay between idea structures, I,' *MP Journal*, 5 (2).

Blois, K. (1998), 'Don't all firms have relationships?,' *Journal of Business and Industrial Marketing*, 13 (3), 256–70.

Blois, K. J. (1972), 'Vertical quasi-integration,' *Journal of Industrial Economics*, 20 (3), 253.

Cai, S., Yang, Z., and Hu, Z. (2009), 'Exploring the governance mechanisms of quasi-integration in buyer–supplier relationships,' *Journal of Business Research*, 62 (6), 660–66.

Cantillon, S. and Håkansson, H. (2007), 'Behind The Fish Market Façade,' *International Marketing and Purchasing Journal*, 3 (1), 50 – 74.

Cantillon, S., Prenkert, F., Håkansson, H., Følgesvold, A., and Haugnes, S. (2006), 'The UK seafood network - recent developments and the role of Norwegian exporters,' in *Primary industries facing global markets*, Asche, F., (ed.). Oslo: Universitetsforlaget.

Dwyer, F. R., Schurr, P. H., and Oh, S. (1987), 'Developing Buyer-Seller Relationships,' *Journal of Marketing*, 51 (2), 11–27.

Ford, D. (1980), 'The development of buyer-seller relationships in industrial markets,' *European Journal of Marketing*, 14 (5/6), 339–54.

Ford, D., Gadde, L., Håkansson, H., and Snehota, I. (2011), *Managing Business Relationships*. Chichester: Wiley.

Ford, D. and Redwood, M. (2005), 'Making sense of network dynamics through network pictures: A longitudinal case study,' *Industrial Marketing Management*, 34 (7), 648–57.

Haugnes, S. (2010), 'Consumers in Industrial Networks: a study of the Norwegen–Portuguese bacalhau network,' Norwegian Business School.

Holmen, E. (2001), 'Notes on a conceptualisation of resource-related embeddedness of interorganisational product development,' University of Southern Denmark.

Huemer, L. and Furlan, A. (2011), "RE-CONCEPTUALIZING INTEGRATION STRATEGIES AND POSITIONING CHOICES: BEYOND THE UPSTREAM-DOWNSTREAM DIMENSION " in 27th IMP Conference. Glasgow.

Håkansson, H., Ford, D., Gadde, L.-E., Snehota, I., and Waluszewski, A. (2009), *Business in Networks*. Chichester: Wiley.

Håkansson, H. and Snehota, I. (1995), *Developing Relationships in Business Networks*. London: Routledge.

Håkansson, H. and Waluszewski, A. (2007), *Knowledge and Innovation in Business and Industry*. London: Routledge.

Håkansson, H. and Waluszewski, A. (2002), *Managing Technological Development*. London: Routledge.

Håkansson, H. e. (1982), *International Marketing and Purchasing of Industrial Goods*. Chichester: Wiley.

Jahre, M. (2006), *Resourcing in business logistics: the art of systematic combining*. Malmö: Liber & Copenhagen Business School Press.

Johanson, J. and Mattsson, L. G. (1992), 'Network position and strategic action - An analytical framework,' in *Industrial Networks: A New View Of Reality*, Axelsson, B. and Easton, G., (eds.). London: Routledge.

Kumar, N., Stern, L. W., and Achrol, R. S. (1992), 'Assessing Reseller Performance From the Perspective of the Supplier,' *Journal of Marketing Research (JMR)*, 29 (2), 238–53.

Mouzas, S., Henneberg, S. C., and Naudè, P. (2008), 'Developing network insight,' *Industrial Marketing Management*, 37 (2), 167–80.

Norwegian Seafood Export Council (2013), "Seafood Export Statistics."

Pfeffer, J. and Salancik, G. R. (1978), *The external control of organizations: a resource dependence perspective*. New York: Harper & Row.

Williamson, O. E. (1985), *The economic institutions of capitalism*. New York: Free Press.

Williamson, O. E. (1981), 'The economics of organisation: The transaction cost approach,' *American Journal of Sociology*, 87, 548 – 77.

Appendix A: Interview guide

General information about the company:
Brief history of the company
Market share
Competitive conditions
Products
About the company's relationships:
What does your network look like?
Which suppliers do you buy from?
Which customers are you selling to?
What other actors do you have relationships with?
How long have these relationships existed?
What do you buy? How much? How often?
How are the relationships organised? Who does what?
Have you made special adaptations for your customers and suppliers?
What activities do you perform with your suppliers? Are these activities linked to relationships with your customers?
What resources have you developed together? How are these resources linked with the resources of other actors?
How is the climate of cooperation? (Cooperation and conflict, mutual adaptation, trust, power and dependency, formal or informal tone?)
How will these relationships evolve in the future? How will your network look in five years?
In what areas can Norwegian suppliers create value for its customers in your market?