

Being a networking firm on a day-to-day basis: customer and supplier routines in the Global Fish case

Debbie Harrison

BI, Norwegian Business School, Oslo

Abstract

This paper takes an ostensive-performative perspective on inter-organisational routines in discussing how Global Fish – a small fish processor organisation - handles resource use variety in regular supplier and customer interactions. On the supply side, informal interaction circumvents formally designed routines. On the customer side, routines are connected across customer relationships through time. The routines are therefore one starting point for the co-ordination, use and organising of Global Fish's resource collection for any given catching season.

Key words: routines, resources, interaction, relationships, networking

1. Introduction

The seminal idea of interaction episodes underpinning relationship development in business networks is well known (Ford 1980; Håkansson 1982). Recent work investigates the levels (Holmund 2004), types (Schurr 2007; Geersbro and Ritter 2007; Schurr et al., 2008) and time (Halinen 1998; Medlin 2004; Edvardsson and Strandvik 2009) dimension of interaction episodes in the ebb and flow of existing relationships. This paper takes as its point of departure the importance of inter-organisational routines in handling day-to-day interaction across companies (Håkansson 1982; Håkansson and Snehota 1995; Grandori and Soda 1995; Harrison and Bygballe 2006).

The Norwegian company Global Fish processes and exports mackerel to customers located in Japan and Poland. The case presented in this paper covers how the ongoing interaction processes for buying and selling are organised. Interactions involved in utilising resources with the supply and customer sides are recurrent as the catching season moves through its cycle year by year. There are clear economic effects in being able to handle both variety in customer requirements and operate within a regulated supply context. One way to relate to counterparts, embed adaptations and to systematically organise part of the interaction process is through routines.

Routines are learned, sequenced and repeated behaviours,

which are performed by many connected individual agents (cf Cohen and Bacdayan 1994; Feldman and Rafaeli 2002). They permit co-ordination, cognitive and motivation benefits (Nelson and Winter 1982). Organisational routines have been studied at the individual, group, and organisation level (e.g. Nelson and Winter 1982; Miner 1990; Gersick and Hackman 1990; Pavitt 2002). However, there are relatively few articles that consider inter-organisational routines (for exceptions, see Delmestri 1998; Dyer and Singh 1998; Araujo 1998; Andersen 2003; Holmqvist 1999; Harrison and Bygballe 2006; Bygballe 2006).

At the inter-organisational level, internal organisational routines need to be connected to other organisations, at least within the purchasing, marketing and production functions. Internal routines that have inter-organisational elements are those such as price setting, ordering, etc. The fact that at least some intra-organisational routines are connected to those of counterparts affects their operation because of the adaptations involved. In the case reported in this paper, the exchanges on the customer side are organised across multiple relationships which are connected sequentially. The exchanges on the supply side are regulated in line with a classical market representation. Taken to its extreme this should strongly limit the possibility for interaction.

A case concerned with the interplay between formally designed routines and informal interaction on a day-to-day basis on the supply side, and how routines are connected

sequentially across customers fits well with the current performative perspective on organisational routines (D'Adderio 2008; Feldman 2000, 2003; Feldman and Pentland 2003, 2005; Pentland and Feldman 2008; Howard-Grenville 2005). Routines can be analysed as three overlapping parts: ostensive, performative and artefact. The ostensive part describes the structure of a routine in abstract or ideal form. It is recursively related to and combined with the performative part of routines, which focuses on agency in practice (Feldman and Pentland 2003, p.95). Both parts are collective and distributed because multiple individuals are involved. To the best knowledge of the author, there are few studies taking a performative perspective on inter-organisational routines, especially when specifically connecting inter-organisational routines and resource uses.

The paper is organised as follows. The next section presents the empirical material. The case study is placed here before the literature review because the data contained within it was collected, synthesized and analysed prior to the 'research gap' within the literature being formulated. The presentation of the article therefore reflects the research process rather than conforming to the classic structure of an article. Section three provides a brief overview of the organisational routines literature, with a specific emphasis on the performative perspective. Section four presents an analysis of the ostensive, performative and artefact dimensions of the routines on both the customer and supplier sides. Lastly, conclusions are drawn relating to how inter-organisational routines embed knowledge about handling variety in resource use and thus have a clear economic dimension.

2. Global Fish as a Networking Firm

The case is presented as follows. Section 2.1 provides an overview of the company, including basic details about its development. Subsequently, the supply side is presented in section 2.2. Section 2.3 covers the processing of the fish at the two Global Fish production facilities. Then section 2.4 discusses the four key customer relationships in the case and provides information about the distribution arrangements.

2.1. *Some background details*

Global Fish is a small fish processing company based in Ålesund, Norway. It was founded in 1989 as a trading company by the Hoddevik brothers. At the time it purchased most of the fish for export from Iceland. Global Fish is a small organisation, and as a result it is possible to analyse many relationships, both on the supplier and customer sides. The four types of fish processed by the firm are mackerel, horse mackerel, herring, and capelin. The mackerel catches are for the Japanese market, and the herring catch goes to Eastern Europe, to Poland in particular. The company has five processing plants along the west coast of Norway. All of the facilities are unused out of the catching season. The

biggest season is the autumn, and therefore the heaviest use of the resources occurs during this time period.

The main customer market area is Japan. The Japanese started to buy mackerel from Norway in the early 1980s. This was largely due to the fact that the Japanese mackerel catch had been overfished. It is the most demanding market in terms of taste, size, and quality of fish, and is also the premium price market. The Japanese customers can be divided into three main groups: fishing companies, big trading houses, and small traders. Each of these three customer groups is an importer in the Japanese market. Therefore none of the customers are re-processors. Instead, the fish re-processors are Global Fish's customers' customers.

Global Fish export fish at a value of NOK 300 million overall to all markets (2003 data). The other important markets are Eastern Europe, Ukraine, Poland, and Belarus. 80% of the Global Fish business is in the whole fish market (human consumption), and 20% is an input into the fish meal business in various organisations in Ålesund. The highest annual production per annum was 230,000 tonnes; the average is 200,000 tonnes.

2.2. *Supply Side*

All of the fish used in production is bought in 'blind' auctions. A part of the Global Fish operation is therefore market-based, at least in theory. When buying mackerel, employees interact with the auction in Bergen organised by Norges Sildesalgslag (the pelagic fish monopoly sales organisation). Norges Sildesalgslag, which is owned by the pelagic fishing fleet owners, has a monopoly regarding the sale of pelagic fish caught using Norwegian quotas and landed in Norway. It operates a website in order to conduct auctions of fish which provides information about the daily catch and received bids. The boats report their catch by radio or mobile telephone. This includes data regarding the place of catch, species, and a rough estimate of the size and fat content of the fish.

The auction process is therefore co-ordinated by the fisherman's organisation. There are four 'blind' auctions per day, the auctions last for one hour, and the last auction takes place at 10pm. Global Fish's experienced employees are able to place one price quotation for each auction. They will not necessarily bid in all four auctions. This is dependent upon features such as the weather, estimated production for the day, and information received from ship captains regarding the quality of the catches. Global Fish staff may bid on all boats, but place restrictions on the bid in terms of the volumes to be purchased, and also by giving priority to those boats they wish to purchase the catch from. This prioritisation of bids vis-à-vis fishing vessels is based on the individual's knowledge of the product quality delivered by specific vessels in the past alongside information regarding

the location of a particular vessel.

There are no contracts in place (as this of course would imply a relationship). For example, if fishermen on one ship have caught 150 tonnes of mackerel by 4am, this fish will be entered for the 7am auction. The fishermen have to register into the auction system and report a series of data. The information provided concerns various tests on the catch (size, appearance, etc), the equipment present on the vessel and the ownership of it. For example, the number of tanks on a ship can affect the quality of the catch. If only one tank holds 100 fish, instead of this being divided between two tanks, the water temperature will be warmer for longer.

A bid might be for 1000 tonnes of mackerel spread over seven vessels. There will be between 10-15 active buyers in any one auction. One Global Fish buyer commented, "it is a game you know...we really do not know what they [the 10-15 other buyers] are bidding". In this sense the auction is 'blind'. On the other hand, the bids are 'informed'. The tendency is that Global Fish buys catches from the same trawlers over time. There are quality implications in this because the trawler owners can be very precise as to when a trawler will reach a processing facility. Knowledge regarding particular boats and owners of these boats has developed over time and has been formed into bid preferences. In addition, Global Fish's customers' inspectors (see below for more information) have developed knowledge of various boats and owners. There are instances in which a bid has been accepted between a buyer and the auction and a boat has sailed to Global Fish's plant for a customer's inspector to recognise the captain of the boat and refuse the catch!

The price paid for the fish bought at auction is not given and varies on a weekly basis. This means that the price paid by a customer will be renegotiated regularly. In other words, sales prices vary with auction prices and customers' offers. The Japanese customers know the prices of the fish and the cost of production when making their offers. It has been discussed whether the auctions should be secret but it was remarked by a buyer that "the Japanese would probably get the information anyway".

2.3. Processing

When the vessels arrive at the processing facility, the live fish are pumped into a tank. The fish are then moved into one of the processing lines. There are two factories in the Ålesund area. One is in the city centre, and is an old plant. There are four lines, and each line involves every stage of production because there is no specialisation. The capacity is 30-45 tonnes per hour, depending upon the size of the fish. The Ålesund city facility operates during two periods each year; January and February, and August to November. Therefore the processing periods are seasonal and intensive. At other periods of the year the facility is closed.

Liavaag, the second facility located just outside of the city centre, is not new, but has been substantially re-built. This second facility is able to process fish delivered from two vessels simultaneously, or 70-80 tonnes of fish per hour. Further, the packing capacity at the facility is 40-45 tonnes an hour. There are two lines, one can be used for mackerel, and the other herring, or both can be used for one type of fish in the peak seasons. Hence at this facility the two processing lines can be used in a flexible way. For instance, if fulfilling one customer's requirements required a production rate of 70 tonnes per hour, both lines could be used for processing whole or round fish, and the filleting machines, used for herring, changed for this purpose. In other words, the filleting capacity can be halted in order to boost the production of round fish. The Liavaag facility operates during two periods each year also; January to the beginning of March, and the end of May to December. The facility is often closed during the summer months.

At both the production facilities, after processing the fish are packed into cartons and blasted (frozen) in a cold storage unit. Global Fish has a cold storage capacity of 30,000 – 35,000 tons in Norway, with 15,000 tonnes in the Ålesund area, 10,000 tonnes of which is based within the Liavaag facility. Global Fish offer a service to Japanese customers by storing mackerel in and around Ålesund. Customers can and do rent cold storage facilities in Tokyo, although this is very expensive. It is cheaper to store larger quantities of mackerel in Norway and hold relatively small stocks in Japan. This is partly because the customers' customers (Japanese re-processors) buy on a short-term basis, often only one to two weeks of production in advance. In this way Global Fish's customers carry much of the risk and cost in the process because the main catching season is the autumn, yet processing takes place all year. In other words, there is a need for the importers to pay for storage for 12 months. Global Fish can store fish for a month free of charge.

2.4. Multiple Customer Relationships

Global Fish has 5-7 "main" customer relationships, 5-10 "mid-importance" customers and 10-15 smaller relationships, a total of approximately 30. Staff on the marketing side considers that they have a close relationship with the "main" and "mid-importance" customers. These customers account for 80% of turnover. The four largest customers by volume are Tsujino, Nissho/Wai, Tokai, and Dolphin respectively. Section 2.4.1 discusses these four largest customers and their quality requirements. This is followed by section 2.4.2 which contrasts the relationship between Global Fish and Tsujino with that of Global Fish and Dolphin.

2.4.1. The four largest customers

Tsujino is a family owned company that only trades in fish.

This customer accounts for approximately NOK 70-125 million in turnover. This relationship has been in place since 1986. Nissho / Wai are a large Japanese trading house. The company takes NOK 70-100 million in Global Fish's turnover (2003 data). The Global Fish - Tokai relationship has been in place since 1996. This company is small and family-owned and accounts for NOK 30-50 million in Global Fish's turnover. The relationship with Dolphin began in 1998. It is a crucial relationship from Global Fish's perspective because this company buys all of the fish caught in August, the so-called "early fish". This is high-risk fish catching pre-season. None of the other customers buy August fish, because it is full of red feed, and is therefore of poor quality because this red feed is still alive inside the fish.

An ability to charge a premium price

Global Fish is able to charge a price premium for the catches for the Japanese customers because of the quality standards required. These customers require differentiation in terms of consistent appearance, taste and size of the product. In terms of size, precision is crucial. This is because the Japanese market is used to a set size of fish, between 400 to 600 grams. In some seasons the fish are larger than average, which results in problems for Global Fish because of over-capacity in the 600-gram plus market. There is huge variety season by season. For example, in an exceptional year the fish might be very large. Japanese customers do not want larger fish. When the catch contains many large fish, Global Fish have a storage issue.

Between 50 to 55 % of the Global Fish catch is in the 400 to 600 gram grade of fish. In terms of the appearance of the fish, customers require pure skin without markings or discolouring. The ways in which the fish is cut needs to be very precise. The fish is cut in different ways for the European and Japanese markets. For instance, the Japanese cut requires two 90% cuts for the perfect fillet shape. The taste of the fish is also crucial. The Japanese like a fat range of 25-32 %, and this is possible from the autumn catch. The fat content is crucial because it affects the juiciness of the fish.

During the peak seasons, each of the large Japanese customers has their own inspectors at the processing facilities. First of all the inspectors inspect the fish at the quayside. The inspectors can accept or reject the fish load immediately, based on strict conditions within the contract signed between the two actors. If the inspection is successful, Global Fish start production processing for that customer. The inspectors accept an average of 70-80% of the loads in the peak season. The inspections carry on throughout the production process. As a rule of thumb, every 30 to 40 minutes an inspector can test between 20 to 30 kilos of fish.

It is important to note that an inspector does not accept a 'blanket' catch of mackerel. For instance, it might be that an inspector accepts the product at 7am. However, by noon the inspector may have decided that the quality is unacceptable.

Therefore the inspector buys the production between these time points but not what comes afterwards. Only the Japanese customers perform inspections. From noon onwards the production could be for any market – or any market that does not inspect Global Fish from mid-August to the end of November. The inspectors can take some time to make inspection decisions. This can cause problems for Global Fish because a backlog of fish is created within the processing system.

2.4.2. Two key relationships

Global Fish - Tsujino

Tsujino is a family-owned company. The company was founded in 1954 and is located in Choshi, the biggest fishing port in Japan. It is situated on the Pacific side of Japan, approximately 100 kilometres east of Tokyo. Tsujino are the largest importer of Norwegian mackerel in Japan. Tsujino are also a huge trader within the domestic market in Japan. Most of the business is involved with mackerel, but also herring, salmon, and squid. Tsujino's turnover is 900-1000 billion US dollars (2001 figures). The company has four types of customer; (i) a Japanese producer (40% of the total volume), (ii) wholesaler and consumer markets (30%), (iii) wholesalers that sell direct to retailers (20%) and (iv) direct to retail (10%).

Global Fish managers were first introduced to staff at Tsujino in 1987. No business between the two organisations was started at this time, but the individuals kept in contact. Business between the two organisations began in 1990/1. Global Fish asked Tsujino if they wanted to be involved in developing the new factory at Ålesund. The terms of the contract between the two actors was that Tsujino had to buy whatever volume of mackerel was produced by Global Fish within a certain period in the 'catching season'. The volume is approximately 5000-7000 tonnes of mackerel per annum. There is a clause in the contract whereby Tsujino cannot purchase more than 50% of Global Fish's production each year. This percentage has moved between 30-70 % as the market has varied. This contractual requirement is an attempt to protect Global Fish from over exposure to a potentially falling market in Japan.

Contracts are made on a yearly basis. The key point is that Tsujino agrees to buy whatever Global Fish produce between a date in September and a date in December. Therefore exact dates, quantities and prices are not agreed within the contract. This is Global Fish's standard way of allocating each seasonal catch across their important customers. In total these customers account for 80% of the production that is exported to Japan. Tsujino buys 33% of its Norwegian mackerel purchases from Global Fish. The company represents NOK 70-125 million of the firm's turnover each year (from NOK 300 million).

At Tsujino, there are six people overall on the buying side. There are two inspectors, one manager with an assistant, and an accountant with an assistant. The latter four persons are based in the Buying Unit. During the seasonal periods of the year, Tsujino and Global Fish have sets of routines through which to co-ordinate their purchasing activities. The Sales Director and his export co-ordinator are responsible for the contact with Tsujino. There are telephone conversations on a weekly basis, three visits to Japan each year, and the Japanese inspectors are based in Norway between autumn and March every year. The contract between the two organisations is agreed in May. All terms are agreed apart from price and quantity.

During the part of the season when Tsujino is buying mackerel, the sales unit at Global Fish is dedicated to activities relating to Tsujino. In the peak seasons Tsujino takes between 80-85% of the capacity of one of the processing facilities in Ålesund. This amount represents 80-85% of 20% of the Global Fish total capacity. Other large customers account for similarly large proportions of capacity. In other words, Tsujino becomes a sizeable user of the processing facility for a certain number of days twice a year.

The company buys fish in the autumn season after another Japanese customer - Dolphin - has bought the lower-grade early August catch. In this way, the price for the product set between Global Fish and Dolphin impacts the price paid by Tsujino (see below). This is because Global Fish add a mark-up to the Dolphin price for subsequent catches later in the season when quality is at its peak.

Global Fish - Dolphin

Dolphin is a crucial business relationship because the company buys the full production of the 'August' or so-called "early" fish from the Ålesund facilities. All of the trawlers in August come to the Ålesund plant because the other factories are closed or running on a very low production. There are high-risks in catching fish pre-season. The catch becomes more consistent from September. Therefore prior to September there are both lower catching rates and poorer quality fish. The production of the August fish begins at Ålesund and continues with the other plants being opened as the catch increases. Global Fish begin to set the prices for the season with Dolphin. In some ways, Dolphin acts as a price leader by accepting a NOK 2.25 margin on top of the auction price paid for the mackerel. Clearly, without this relationship Global Fish would not gain revenue from any of the early season production.

Distribution

The mackerel processed for customers is transported in containers loaded onto reefer carriers which sail to Hamburg or Rotterdam. At either of these two large European hubs the containers are loaded onto deep-sea ships. Customers are able to select a preferred carrier, but it is Global Fish

which make the bookings for containers and container space. Global Fish have Maersk as a preferred carrier. This is a long-standing business relationship. Maersk accounts for 40-50% of all goods transported by Global Fish. Both actors were said to "prioritise" the other. Global Fish work with the Maersk local sales office in Oslo. The freight bookings are therefore made directly, by one of three of Global Fish's Export Co-ordinators, depending upon the market and customer. Due to the size of the Global Fish business, in the peak season the Export Co-ordinator uses agents to buy space from other container lines because Maersk alone cannot supply enough containers.

A great deal of flexibility is required in the communication and organisation between Global Fish and Maersk in order for Global Fish to offer flexible service to customers. The flexibility is required because Global Fish receives advance notice regarding the quantities of containers to be sent in advance of sailing, and can pass on this information to Maersk, but often the advice regarding destinations is available very late. The fish is already packed into containers before customers make the destination lists available. Sometimes containers already in shipment in Holland or Germany need to be moved into another 'line' at the customer's request. This is possible for Global Fish to organise, but is also complicated. The destination list is lengthy because customers require shipments to their customers located in different parts of Japan and sometimes in China.

The next section of the paper provides a brief overview of the organisational routines' literature before analysing several routines from the case study.

3. A Performative Perspective of Inter-organisational Routines

The nature of inter-organisational routines

Inter-organisational routines are important in day-to-day interaction across business organisations (Håkansson 1982; Håkansson and Snehota 1995; Harrison and Bygballe 2006; Bygballe 2006). Routines are considered to be able to handle both stability and change. The 'classic' view is to emphasise their static, inertial properties that provide consistency in action (e.g. Cyert and March 1963; Nelson and Winter 1982). More recent empirical studies have focused on the flexible, change-related properties of routines by focusing on the agents within these. The dynamic between routines as adaptive phenomena, and routines as static entities, can in part be explained by differences in methodology (Feldman 2000; Feldman and Rafaeli 2002). By emphasizing that organisational routines are enacted by individual agents, it is implied that routines change as those performing parts in the routine reflect on their performance outcomes, and then adapt their actions to these assessments (Feldman 2000; Grant 1996; Feldman and Rafaeli 2002; Tsoukas and Chia 2002; Lillrank 2003).

The co-ordination, cognitive, and motivational dimensions of organisational routines are central (Nelson and Winter 1982). Routines can be considered as co-ordination mechanisms for what is to be done within organisations and how it is to be accomplished. They are thus capabilities for problem solving (Ibid.; Nelson 1991; Kogut and Zander 1996). Routines are also a mechanism for the sequential co-ordination and integration of individual agents' knowledge within an organisation (Grant 1996) and as such are carriers of organisational knowledge (Nelson and Winter 1982; Tsoukas 1996; Nelson 1995). They embed an organisation's capacity for learning, based in the development of skills by individuals (Powell 1998; Cohen and Bacdayan 1994). The motivational dimension of organisational routines was also recognised by Nelson and Winter (1982), who claimed that routines might be considered as "truces" among conflicting interests within an organisation. By implication, changing routines may reveal conflicts and be a perceived threat to internal political equilibrium (Ibid.; Coriat and Dosi 1998; Coriat 2000).

In supplier-customer relationships, inter-organisational routines therefore embed knowledge gained by business partners over time. Individual employees in each organisation perform activities, and their tasks are co-ordinated by sets of inter-organisational routines (Grandori and Soda 1995; Grandori 1997). Connections between people provide for social support, knowledge sharing, information transfer, and links across organisations (Feldman and Rafaeli 2002; Dyer and Singh 1998; Lam 1997). Employees transfer knowledge in adapting to the supplier or customer organisation, and actively develop shared understandings of the counterpart, and hence the relationship. In other words, experience through day-to-day interaction generates tacit knowledge for individuals in the respective counterpart organisations (Araujo 1998; Håkansson and Johanson 2001; Sobrero and Schrader 1998).

Partner-specific experiences result in adaptations to inter-organisational routines as individuals in two organisations develop specific knowledge about the counterpart organisation (Zollo et al., 2002). Thus, the sequence in performing an inter-organisational routine may appear to be standardised. Yet for an iteration of that routine, there is some adaptation for a particular customer or supplier. Some extent of specialisation within the inter-organisational routine is a feature of the tacit knowledge of individuals enacting that routine, from both counterparts. Hence, as Feldman and Rafaeli (2002) note, individuals learn from and adapt to other individuals. In this way, some of what is known about the counterpart organisation is embedded into the routine, and therefore both the structure of the routine, and the people enacting that routine, influence relationship development.

Therefore suppliers and customers practice and become experienced in how to co-ordinate over time (Nelson and Winter 1982; Nelson 1991; Håkansson and Johanson

2001; Araujo 1998). What is it that is being co-ordinated? Routines co-ordinate the linked activities and combined use of resources between supplier and customer organisations in business networks (Håkansson and Johansson 2001; Dyer and Singh 1998; Håkansson and Snehota 1995; Ebers 1997; Grandori and Soda 1995; Grandori 1997).

A performative perspective of inter-organisational routines

The most recent empirical studies within the organisational routines literature adopt a performative perspective in order to investigate the dynamics of routines and their micro foundations (D'Adderio 2008; Feldman 2000, 2003; Feldman and Pentland 2003, 2005; Pentland and Feldman 2008; Howard-Grenville 2005). In this perspective, organisational routines consist of three parts: the ostensive, performative and artefact respectively. It is important to note that it is not possible to analyse the dynamics of routines by focusing on just one of the three parts (Feldman 2000, 2003; Feldman and Pentland 2003, 2005).

The ostensive part describes the structure of a routine in abstract or ideal form. It is recursively related to and combined with the performative part of routines, which focuses on agency in practice, or "the specific actions, by specific people, at specific times and places, that bring the routine to life" (Feldman and Pentland 2003, p.95). Both parts are collective and distributed because multiple individuals are involved. Furthermore, while artefacts might commonly be viewed as 'proxies' for the ostensive dimension, they are not the same (D'Adderio 2008). The performative perspective therefore allows for fine-grained analysis of routines, their evolution and how contextual features impact the inherent capacity of routines for change (Pentland and Feldman 2003; 2008).

The design and use of artefacts attached to the performance of a routine influence the ostensive and performative parts of routines (Feldman and Pentland 2005). As Pentland and Feldman (2008:241) suggest, "...software and computers are very common kinds of artefacts. In an organizational routine, artefacts are often used to try to ensure the reproduction of particular patterns of action..." This builds on previous work which emphasized how knowledge utilized in routines may be held in technical objects that guide individuals in teams (e.g. Tsoukas and Vladimirov 2001).

In an inter-organisational setting, artefacts could be software and IT related tools (as mentioned above), contracts, etc. The ostensive part of a routine that incorporated some inter-organisational elements on either the supply or customer counterpart sides would be a shared understanding of how a routine should be performed. In other words, what is the ideal shape of the interaction between two counterparts on some specific co-ordination point, e.g ordering. The collectively understood design of this structural part of the routine would take place as a relationship developed. Alternatively, an inter-organisational routine would be designed in an 'ideal' form from outside of the boundaries of that relationship. In terms

of the performative part of routines, formal and informal interaction takes place each time an iteration of a routine involving customers or suppliers is performed by the agents involved. The day-to-day repetition in co-ordinating with counterparts is based on and further generates interaction.

The next section of the paper analyses customer and supplier routines in the day-to-day organising of Global Fish's resource collection in a particular catching season. First the supply side is covered in discussing the auction-based buying system. Secondly, two routines related to quality control and to price setting between and across Global Fish and their customers are discussed. The richness of the case provides an uncommon example of the performative perspective of routines at the inter-organisational level. The interactions in place in the designed auction system clearly show the presence of the performative dimension in the buying processes. On the customer side, the routines between Global Fish and their respective customers are connected, which requires adaptations.

4. Analysing routines on the supply and customer sides

The case described how on the selling side there are 'thick' interactions with some customer groups (in particular the main Japanese customers) yet not with others (to customers in Eastern Europe). For each fish catching season, several units within Global Fish undertake a series of interactions within their relationships with customers. This can be summarised as the sequential use of the fish processing resources. In terms of the supply side, Global Fish staff buys fish via the use of a blind auction system. Here, there is a purchasing routine (or nest of routines) designed by the regulator for the purchasing of mackerel in the Norwegian context. The co-ordination between the company and its suppliers should be non-interactive or non-relational. However, informal interaction takes place due to knowledge of the catches, boats and captains developed by the Global Fish staff over time.

Supply side

Here the interactions between Global Fish and their suppliers of fish have been formalised in a certain way. That is, regulations regarding the co-ordination of the sale of mackerel fish in Norway are embodied in artefacts such as the software for the auction system, which is accessed and utilised by the bidding process. The latter is a carefully designed activity flow in which mackerel is to be purchased.

All of the fish used in production is bought in these supposedly 'blind' auctions. A part of the Global Fish network is therefore (classically) market-based, at least in terms of the ostensive part of the routines. In order to purchase mackerel, Global Fish employees interact with the Bergen auction organised by Norges Sildesalgslag. The auction process is controlled by the fisherman's organisation.

All of the participants involved have a collective, shared understanding of how the bidding process for the buying of fish should work. In other words, there is an ostensive part of a (nest of) purchasing routines in place which provides clear guidelines as to how those involved should behave. The ostensive part of the routine is underpinned with a normative view held by some of the participants of how the market for fish 'should' be.

The performative part of the buying routines is equally clear in the case described above. The numbers of individuals involved is both limited and transparent: interaction is inevitable. Global Fish's experienced staffs are able to place one price quotation for each auction. The placing of a bid will depend upon aspects such as the weather, estimated production for the day, and information received from ship captains regarding the quality of the catches, the dimensions of the fish, etc. The result is that Global Fish bids are 'informed' and often involve purchasing catches from the same trawlers.

The case outlines the divergence between the ostensive part of the routine which has been formally designed by those outside of the performance of that routine. Processing companies such as Global Fish enacted both the ostensive and performative parts of the routine, which is underpinned by informal understandings. The buying is based on the knowledge and experience of the agents involved.

The design of the auction system, supported also by the design of the fishermen's organisation and the regulations supporting these, illustrates the importance of powerful policy actors such as the Norwegian state. The supply side routines are also influenced by nature, in the sense that natural variations in the qualities of the mackerel product have an impact on quantities and time periods when purchasing takes place and prices to be paid. These policy and natural features have led Global Fish managers to develop knowledge which is stored in routines despite the existence of an unpredictable feature (nature) and a designer (the State via the auction system) which should mean that interaction is maladaptive. The attempts and efforts of policy makers to avoid interaction are smoothed via the buying routines in place.

Customer side

The other network context described in the case involves multiple customer relationships. Two central nests of inter-organisational routines on the customer side are those of 'quality control' and 'price setting'. Each of the important customers discussed in the case above has its own internal routines relating to both quality and price, as does Global Fish. These customers' routines are indirectly related via Global Fish in that each dyadic customer nest of routines is indirectly related to the other customer dyads. In other words, if one of the customers was to pull out, or find another supplier, the other dyads (involving another customer and Global Fish) would be affected. In other words, on the

customer side the recurrence of the interplay between the ostensive and performative parts of the routines takes place both within a particular customer relationship and across the customer relationships sequentially as the catching season plays out.

Routines related to quality control (Global Fish-Tsujino and Global Fish-Ukrainian customers)

As described in the case, during the peak seasons each of the large Japanese customers places its own inspectors at Global Fish's processing facilities. These are key agents in the performance of the quality control routines. Only the Japanese customers perform these inspections. If the inspection is successful, Global Fish starts production processing for that customer, e.g. Tsujino.

A decision to reject a load of fish beyond a certain time period results in the switching of processing for one customer to another customer group. There is a shared understanding of the ostensive element of the routines relating to quality control by the Global Fish staff, in that to manage unpredictability from one customer, other customer relationships need to be activated. The production facility has to handle variation by utilising the products and facilities for a different customer / customer group. One group of customers – in the Ukraine – comes with a different set of quality standards of the product per se, and hence a short-term switch to utilise the production facilities can occur. These different quality standards represent a key artefact allowing Global Fish staff to handle inconsistency in the quality of the raw materials.

Routines related to price setting (Global Fish- Dolphin and Global Fish-other Japanese customers)

Dolphin is an important customer from Global Fish's perspective because they purchase all of the fish caught in August, the so-called "early fish" pre-season. Global Fish set the prices for the season with Dolphin. In this way, the relationship acts as a price leader /setter by accepting a NOK 2.25 margin on top of the auction price paid for the mackerel. Indeed, without this relationship Global Fish would not gain revenue from any of the early season production. Secondly, the risk-taking role of the Dolphin relationship simultaneously leads to some subsequent predictability with other relationships in terms of pricing. Without the existence of the relationship with Dolphin, price setting would have to be handled in a different way. The ostensive and performative parts of the routines for price setting within this relationship become connected to the subsequent price setting routines with the other customers that buy fish later in the season.

The natural properties of the fish result in different product features which appeal to different customer groups and within groups. Global Fish is required to manage this and thus acts as an interface between the buying system and the customer system. Routines are also a vital part of the

smoothing of the interaction interfaces across the customers, here described in terms of price setting.

5. Discussion and conclusion

This paper has further explored the operation of inter-organisational as opposed to intra-organisational routines. The richness of the case has provided an uncommon example of the performative perspective of routines at the inter-organisational level. The paper also clearly links routines and the utilisation of resources, which lends an economic dimension to the debate. The case shows how one small company organises parts of the ongoing and varied interaction with both supplier and customer counterparts. In sum, the routines on both the customer and supply side are interactive, even though one set has been designed by those outside of the day-to-day performance of those routines.

The knowledge needed for handling variety in resource use (based on both quality variations in the fish and those required by the actors involved) is embedded into routines over time on both the buying and selling sides. The informal and indirect interactions taking place around the designed auction system clearly show the presence of the performative dimension in the buying processes. The performative element of the policy-designed ostensive routine becomes a way to handle externally imposed buying systems via - technically at least - maladaptive interaction. The ostensive understandings of how to operate in the auction system vary between the policy makers and the agents involved in day-to-day buying. The market designer's 'ideal' ostensive form aims to downplay the agency of those involved. The auction system artefact is used but supplemented with indirectly obtained knowledge regarding, for example, the features of the boats and their captains.

The embedded knowledge learned over many trades adds an interactive richness to the designed-in auction-based organising. Day-to-day buying requires knowledge to be developed to make economic trades even if such relational knowledge has been 'designed out' by the formal buying process. This divergence highlights again how designing and changing routines by those outside their performance is rather difficult (e.g. Edmondson et al., 2001; Harrison and Bygballe 2006), which the performative perspective explains in terms of it being impossible to understand routines by only having one of the three parts in place.

On the customer side, the same physical resources are used by the focal company in each customer relationship, but in sequence not simultaneously. This sequential element in the use of resources has been worked in through time as the company developed new relationships. Interaction takes place as the routines are performed; it is both necessary and part of the renewal of the routines. The result is that the customers all affect one other via their differing quality requirements. Specifically, the Dolphin customer relationship is pertinent

in this regard.

The routines between Global Fish and their respective customers are thereby connected, which requires adaptations to be made across individual dyadic routines. That is, the empirical fact of the connection across dyads is in itself insufficient. Thus we have adaptations across connected Global Fish-customer routines for co-ordination and problem solving. There appears to be a closer alignment between the ostensive and performative aspects on the customer side. This is perhaps because these are held only by those agents which are actually involved; there is no 'outsider' here performing a designer role.

It is clear from the case example that routines are one way to systematise the handling of multiple relationships. The findings from the customer side might most apply in network contexts based around buying and selling 'natural' commodities, such as in the case reported here. Routines are a way to encourage standardised interactions but also have to be able to handle variation in the knowledge required to manage different customer relationships. In other industries, the challenge of handling standardisation and variety cannot be massaged through interacting with customers sequentially. On the supply side, the findings can be related to other industry contexts within which policy makers have clear ideas about the appropriate way in which to conduct business exchange

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Debbie Harrison, Associate Professor of Inter-Organisational Relationships, Department of Strategy and Logistics, BI Oslo, Nydalsveien 37, 0482, Oslo, Norway, Email: debbie.harrison@bi.no