

Markets and Business Relationships in Supply Networks: Paradoxical or Complementary? - The Case of Supplying Fish from Norway to Japan

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Abstract

The terms “markets” and “business relationships” are interrelated in both academic literature and when regarding business practice. However, the precise nature of this interrelationship of terms became unclear when empirical evidence from a global seafood network was analysed revealing phenomena that may be termed “business relationships” in contexts called “markets”, and features of “markets” were detected in what commonly was regarded as “business relationships”. Based on four narrative excerpts from case studies on seafood supply networks, a view of markets as an economic environment and business relationships as the immediate context of transactions is proposed. This represents a complementary relationship between “markets” and “business relationships”.

Key words: Transactions, Markets, Business relationships, Discourse, Seafood supply networks

1. Background and purpose

During the autumn of 2006 an ongoing preliminary investigation of seafood distribution from Norway to Japan was conducted. Through a series of interviews with practitioners and business consultants involved in physical distribution of mackerel and salmon products from Norway to Japan interest

became directed to the relationship of what the informants called “markets”, and what they termed as “relationships”. Practitioners exhibited a seemingly un-reflected and paradoxical use of the terms “markets” and “relationships”.

The actual aim of this investigation was to contribute to constructing a fruitful research proposal with focus on information connectivity supporting product traceability, to secure quality and safe product supply of seafood to Japan. As often happens in such types of emergent and explorative research designs, the unexpected was encountered. From a practitioner viewpoint product traceability was not evoked as a pertinent research issue. These actors expressed that traceability of seafood export from Norway to Japan was sufficient even though information exchange procedures were manual, and often demanded ad-hoc solutions to secure safe and quality product supply if problems were evoked. Tracing products is an intermittent activity. Both Norwegian and Japanese actors expressed as most pertinent issue was a desire to ‘leapfrog over’ traditional markets in Japan to become more efficient in their distribution efforts. On the other hand, other Japanese informants working on improving the efficiency of traditional modes of distribution in Japan through ICT (information and communication technology) development stated that traditional modes of distribution were better adapted to a fragmented Japanese market consisting numerous small purchasing actors.

The purpose of this study is accordingly to provide a better understanding of “markets” and “business relationships” as institutions supporting product transactions with focus on the nature of their interrelationship.

2. Framework

2.1. Transactions, ‘black boxes’, and discourse

The use of markets or relationships involves at the starting point of discussion seemingly different and comparable contexts for product transactions. Flows of seafood are instigated by information concerning the transfer of title. Quality provision of seafood products, in varying degrees intricately adapted to customer needs, may be regarded as a foundation to business ‘success’. Features of recurring product supply in relation to time, form and place utility (Alderson 1965) as experienced by the customer, plays a central part in evaluating product quality (Anderson et al. 2009). However, business transactions are in many ways, what Latour (1987) describes, subject to ‘black boxing’ in a supply network. In cybernetics ‘black boxes’ are used as communicative tools when something is too complex to be fully explained or represented clearly in a narrative manner. Black boxes replace then in professional and academic discourse a more detailed narrative description of a phenomenon.

In this line of argument, ‘discourses’ represent a key term. Discourses are regarded in line with Foucault (1969) as “...reconstructions of material conditions of thought or ‘knowledge’...” (Hunter n.d.). In this tradition, it is not truth that is sought. ‘Power’ is instead focal. In the francophone tradition represented by Foucault (1969), “power” is regarded as a key to change, a more technical term. This represents also a more technical-leaning mode of understanding product supply-related actors. This is also in line with Latour (1983) that views humans as hybrids as being decisively influenced by the technical realm of existence.

Black boxes are in this picture a tool gradually established in professional discourse to achieve specific organizational solutions. Professionals express sufficient understanding of supply processes through use of black boxes, while at the same time being unable to reveal details regarding effectiveness and efficiencies of the supply policies they advocate. The aim is to open the ‘black box’ of how seafood is purchased and sold in the studied seafood supply chain, to attain a more precise understanding of the different institutional arrangements of product transactions in this

chain. This understanding is attained first through a discussion of “markets”, followed by discussing “business relationships”. This is followed by four case narratives describing seafood product transactions in different forms of governance contexts. Finally, based on the case narratives, a discussion is provided contributing proposing a complementary interrelationship between “markets” and “business relationships”.

2.2. Markets and transactions from the economics perspective

Within classical economic thought markets are primarily viewed as arenas for self-regulating price mechanisms involving rational and thereby optimising actors. According to Milgrom and Roberts (1992) the traditional microeconomic analysis labeled “theory of the firm” is one “...in which firms act like single decision makers guided by prices and costs, buying labour and other inputs in impersonal spot markets, converting them into output via given and largely unchanging technologies, and selling this production in more impersonal markets.” (Milgrom and Roberts, 1992, p. 594) The firms operating in such markets are in neoclassical theory treated as “black boxes”, where rights to residual cash flow accrue to the owners. Despite this obvious caricature of modern firms, neoclassical theory has proven useful both because of its general mathematical formalization and its ability to explain firm’s responses to exogenous environmental changes as well as consequences of strategic interaction between firms under imperfect competition. The weaknesses of the neoclassical theory concerning firms and markets are, however, distinctive. The most prominent are lack of explanations concerning within firm organization, conflict of interests between the various constituencies of the firm, and definition of the firm and its boundaries. All these aspects have, in various degrees, been dealt with in the different developments of the “theory of the firm” within the economics approach labelled *economic organization perspective* (EOP) during the last three decades or so. In the Principal-Agent approach (e.g., Holmström, 1979; Hart and Holmström, 1987), adverse selection and moral hazard problems due to asymmetric (hidden) information within an organization can be solved by making incentive compatible contracts revealing the hidden information. A central result from this literature is that firm integration always is better than non-integration. The owner structure is, however, irrelevant. This is also irrelevant in the transaction cost approach (Williamson, 1975; 1979), inspired by Coase (1937), who treated transactions rather than technology as the basic unit of analysis. In this approach two alternative ways of exchange are illuminated: 1) exchange through the market and 2) exchange within an integrated firm. In the early stage of transaction cost theory (Williamson, 1975) three different perspectives building on these theoretical works emerged; the formalistic economic organisation perspective (EOP), the non-formalistic institutional economics perspective (IEP), and the non-formalistic relational marketing perspective (RMP). In the former approach (EOP) focus has been on effects of ownership on incentive structures – as in the “nexus of contracts” view in e.g., Jensen and Meckling (1976) and Hart (1989) – and various “hold up” problems due to incompleteness of contracts – as in the “property rights” approach of e.g., Grossman & Hart (1986) and Hart & Moore (1990). In recent years there has been a convergence of the different approaches, as can be seen in e.g., Kvaløy and Olsen (2009).

A more subtle weakness of the neoclassical approach, which is not resolved in any of the approaches based on EOP, is connected to the view of markets as more impersonal technical arenas for transactions of products and services. This weakness has only to a minor extent been recognised within the economics tradition, despite early attempts by e.g. Williamson (1975; 1979) to “personalize” market transaction by introducing the notion of *relational contracting*.

Within institutional economics (IEP) focus is directed to learning, bounded rationality, and evolution in economic behaviour. A more fuzzy reality of transactions is accountable within this line of economic thought, where optimisation is not regarded a key feature of transactions. In this view

transactions are viewed as intertwined with social arrangements, very different from the view of economic behaviour held by neoclassical economists.

In both economic organizations theory and institutional economics markets are regarded as institutional arrangements used by different organizations (Williamson 1975; North 1990; Hart 1989). In accordance with North (1990), institutions are regarded as the informal and formal norms that direct action in regards to transactions. Organisations may be regarded as actors that manage and carry out transactional operations in an institutional or cultural context. Institutions are important in structuring activities because they provide rules of conduct including transactions. Within economics markets may accordingly be viewed as technical arrangements (the neoclassical view) or embedded in society (the institutional view). New institutional economics represents originally an attempt to bridge these streams of economic thought. Coase (1937) introduces the concept of “transaction costs” to explain the nature and limits of firms directing focus to how firms economise in conjunction with each other.

This research focus, established by Coase in the 1930-ies, was however largely overseen until Williamson in 1975 published his work “Markets and Hierarchies”. The new institutional framework built upon the contribution of Coase (1937) with more detailed analysis of transactional governance through markets, relations or hierarchy (Williamson 1975, Williamson 1979). A basic contribution of this framework was recognition of transactions involving costs, and therefore organisational arrangements that may be economised. The interaction between firms regarding transactions started to become regarded as an economic phenomenon, an object of research involving organisations and institutions. The importance of this approach to trade is underlined from purchasing literature by Gadde and Håkansson (2001), pointing to how purchasing involves both price and a range of different and very real ‘hidden’ costs. These hidden costs are related to for instance contract negotiations, communicating and information handling, learning to use purchased equipment, and investing in adapted facilities and personnel resources. Price is only the ‘tip of the iceberg’ of total procurement costs.

This notion of hidden costs in transactions is in line with Richardson (1972), who viewed transactions as relatively obscure and messy hybrid of economical and social behaviour. While transaction costs, in accordance with Coase (1937), view may be viewed as the tidy dikes that divide sea from land, an attempt to form linkage to the rational economic behaviour that is the cornerstone of neo-classical economics, Richardson (1972) takes the step further and points to the actors involved in business relationships, how transactions fundamentally take place in a dense network of affiliations. In 1972 Richardson commenced his then largely overseen article “The Organisation of Industry” with the words: “I was once in the habit of telling pupils that firms might be envisaged as islands of planned co-ordination in a sea of market relations”. This seemingly innocent phrase contains however a lot of sublime ‘firepower’. Markets are by Richardson (1972) viewed not as orderly phenomenon such as commonly envisaged in neoclassical economic theory. The transaction is a complex institutional arrangement involving a number of different actors that produces a vital informational element; direction for offerings and supply.

While the classical notion of markets renders actors as faceless technical objects, institutional economics provides actors with culture, they are socially embedded creatures, and linkages between them are equally socially embedded. Inspired by institutional-leaning economics, markets may be regarded as institutional arrangements, the context for product transactions. However, market governance may be regarded as only one of several forms transaction context. In accordance with Williamson (1979), market governance is best suited to situations with nonspecific investment characteristics. On the other hand, when asset specificity increases, other transaction governance forms are needed according to Williamson (1979). In accordance with this view, in more

occasional transactions where asset specificity is high, neoclassical contracting involving trilateral governance is best suited. In case of high frequencies in transactions between two actors, and where asset specificities high, relational contracting is prescribed. When asset specificity increases through investments, and frequencies in transactions increase, two firms become increasingly 'locked in' with each other based on a common history of repeated and eventually more standardised transactions. Markets and relationships represent in the transaction cost framework accordingly two forms of comparable modes of governance; they are alternative institutionalised ways to carry out a transaction. In addition, a possibility exists to eliminate transactions altogether through vertical integration; through hierarchical institutional arrangements. Product supply and value creation through interlinking mainly complementary activities takes then place within a single firm eliminating the need for transactions. Hierarchy is accordingly an alternative way to direct product supply.

2.3. Markets and transactions from the relational marketing perspective

"Relational marketing" encompasses here a wide range of business management understandings (academic and practitioners) that include views regarding transactions; not strictly delimited to "relationship marketing" (Egan 2008). While business relationships within economics are viewed as institutions governing transactions, within the industrial network approach (Håkansson and Snehota 1995), business relationships have emerged to be viewed as a resource or social arrangement distinct from the firm itself. This represents, applying the terminology from economics, a focused type of institutional approach to studying transactions. The business relationship is in industrial network studies regarded as the close context of a transaction, and in business relationships transactions are regarded as recurring phenomena. Transactions are regarded as socially anchored economic events, "institutions", embedded in business relationships. From a network approach, changing sets of business relationships interact impacting also on transactions.

Based on Penrose's (1959) view that a firm is a 'bundle of resources', various resource-based views of the firm (e.g. Barney 1991) direct attention also to how transactions are dependent on what may be regarded as its capabilities or core competencies. In addition, business relationships are studied also from a more long-term innovation-oriented perspective. This is natural since when business relationships are regarded as a resource they also need to be developed. This involves not only accounting for changes in repeated transactions, but also directing focus to learning taking place as bonds develop between actors in their common business relationship entity. Within the industrial network approach Bygballe (2006) points to the importance of learning in an inter-organisational context, primarily as a means to maintain stable and efficient exchange processes. Learning is possibly the most important aspect of business relationships, a means to develop ways to trade.

Integrating the resource-based view of firms with the industrial network approach's view of business relationships as a unique resource component, transactions are embedded in a dynamic and changing knowledge component binding firms together; the business relationship. Transactions represent an expression of dynamically and continuously interacting competencies of actors; a knowledge component. Transactions are carried out in a business relationship context that is not limited to economic transfer of title. They are a complex phenomenon when viewed from an industrial network approach. This understanding provides a higher specificity to Richardson's (1972) views firms as intricately intertwined with each other through social and economic relationships.

Furthermore, an important aspect of transaction complexity evoked from industrial network approaches is the multitude of business relationships each firm must manage and operate. Each business relationship is embedded in a network context consisting of various interacting business relationships (Gadde and Håkansson 2001, Jahre et al. 2006). In physical distribution, products

represent the core value-creating resource object. Following Alderson's (1965) transvection view of product supply, products may be traced from their state at a final-use event regarding transformation of time, place and form utility. A product that is purchased comes from one activity, and goes to another. In physical distribution dependencies are at core sequential (Alderson 1965, Thompson 1967). When regarding the industrial network as an activity structure, two or more activities, when compared with each other, may be complementary or similar (Gadde and Håkansson 2001). Complementary activities involve sequential dependency structures, while similar activities involve purchase choice of potentially competing offerings from different suppliers. Similar activities may also take place in parallel supply chains. When supply chains are highly integrated, frequent and recurring transactions are transformed into routines as a result of a gradual learning process (Nelson and Winter 1982). An activity structure evolves concerned with achieving efficient transactions where only subtle nuances distinguish one transaction form another. This is the case e.g. in distributing fast moving consumer goods through distribution centres to retailers.

Furthermore, transactions are in a network setting impacted by other business relationships. A purchaser has often several choices of supply. From the opposite perspective, a supplier competes with other suppliers. There is usually an element of choice involved in directing supply. A purchaser always has a possibility to switch between suppliers, even in a relatively integrated supply chain. The costs of switching in an integrated chain of activities may be high due to features of relational investments creating seemingly "lock-in" relationships. The nature of transactions is accordingly impacted by the degree of similarity and complementarity in transactional negotiations that aim to link basically sequential activities. This involves varying degree of choice, dependency including also the impact of competition with other supply chains. In accordance with the industrial network view, transactions take place in a network context of in varying degrees competing and cooperating actors.

In a network context, actors may switch between who they do business with, but they still know each other through involvement in continuously developing actor bonds (a vital part of inter-organisational learning). Activities in business relationships should be expected to abide even though frequency may be irregular or intermittent because purchaser choose to trade with a set of competing suppliers. Knowing an actor is not necessarily dependent on regularities in technical product provision such as when purchasers exhibit switching behaviour.

In economics, markets are characterised by "perfect" information and thereby "perfect" contracts may be formulated. Rationality involves creating efficient transactions through the use of information. However, in more institutional approaches, transactions are viewed as carried out through relations where bounded rationality abides (Williamson 1979). This is fundamentally in line with the industrial network approach; that not perfectly rational actor bonds impact on how transactions are achieved and then direct supply.

TCE (transaction cost economics) underlines the impact of opportunism on business relationships. The industrial network approach, on the other hand, views business relationships as settings where development of trust is essential to ensure efficiency. Contracts accordingly play different roles in these two "institutional" approaches. In TCE the contract represents security or an instrument of taming unruly opportunistic actors. In the industrial network approach, a contract represents more an informative guideline, a cultural element, one information component combined with other types of information, directing activities of actors that always have imperfect information regarding the activities they are supposed to carry out. Kvaløy and Olsen (forthcoming) point to, however, that transactions carried out in the context of overly "cosy" business relationships may encounter challenges due to the use of weakly formulated contracts. When a transaction-linked problem occurs, weakly formulated contracts are of less help than detailed and well-formulated contracts,

also in the context of well-developed business relationships. In addition, Feldman (2005) in his study of tuna markets in Japan and USA points to that structures governing transactions are culturally embedded. The Japanese system involves the wide use of written contracts linked with a specialised Tuna Court. Disputes are more evident and frequent at the Japanese market. Solving disputes is, however, efficient in the context of a state-administered specialised court. In the USA, disputes seem not to become evoked to the same degree as in Japan when trading tuna, relying more on informal problem-solving mechanisms. While the Japanese have developed a culture for formalising tuna transactions and disputes related to supplying tuna, Americans prefer that tuna is traded in a more informal and also then more obscure manner. "Obscurity" involves here also cloaking disputes to potential economic scrutiny.

In the case of activities being linked through vertical or horizontal integration, transactions do not take place, since there is not transfer of ownership to be negotiated. Product transformations ("value creation") take place within the boundary of a single firm. Other supply chains to varying degrees compete parallel to a focal chain. Different supply chains are always to varying degrees integrated; they represent unique and often interacting entities in a common supply network. A picture of contemporary product supply in a globalising marketplace evolves. In line with Christopher (2005), focus is in relation to "competition" involves, due to globalisation and an increasingly volatile environment, groups of firms and interactions or integration in chains or networks. This integration represents, applying the terminology of new institutional economics, degrees of hierarchies (ownership-based) and relationships (voluntarily co-operational). This involves also strategic considerations to managing transactions. The role of transactions as an integrating force must be considered at a strategic level by managers in developing supply "chains" or "networks" as competitive entities.

The resource-based view of the firm may be expanded by directing attention to the business relationship as an important networking resource; a knowledge resource, a "relationship competence". Capabilities in transacting may therefore be regarded as dependent on features of a single business relationship which again is dependent on how it is combined with other business relationships. A supply network is in essence a network of interacting repeated transactions in a discernable actor-dyadic business relationship context. If the objective of marketing management is to reduce uncertainty of transactions, a firm's management of its business relationships emerges as task that involves first and foremost interaction with more or less unruly other business actors such as suppliers, customers, service providers, agents and government.

Business relationships are in part technical mechanisms for physical supply and information exchange. They also include an actor layer; social (including the economic aspect) arenas for conflict, trust, growth and contraction. Since business relationships consist of resources used by two identifiable firms, they may be relatively easily studied. It is possible to point out products, facilities and knowledge involved in a transaction taking place in a business relationship context. A business relationship is, however, an entity a single firm never completely controls. Management of business relations is probably better expressed as "management in business relationships". While markets are in a pure manner understood as an arena for rational economic behaviour, from an institutional perspective markets are viewed as unruly contexts of transactions where suppliers and customers use the price mechanism to seek the most beneficial result applying a form of bounded rationality in practice. Business relationships, though often pictured as a more stable realm of institutionalised behaviour, also commonly displays features of unruly opportunistic transactional behaviour. Business relationships are both contexts for developing trust and the emergence of conflicts. The "well integrated" supply chain remains an objective of supply chain management theory, rather than a reality of business practice.

3. Method

The data forming the basis of the case narrative were collected in conjunction with a set of four case studies following salmon and mackerel products in different parts of two different supply networks. Case studies were used as a means to create focus and order in a complex research setting consisting of multiple, different and interacting heterogeneous resource components, in line with Yin (2008). Eisenhardt's approach (1989) was used to shape the case study research strategy, which involved developing an empirically anchored theoretical understanding of seafood distribution.

Inquiry was carried out using a semi-structured interview technique. The final product represented the initial point of inquiry, and then the flow of goods was followed to its upstream raw material state. Interviews and observations aimed to follow the flow of fresh salmon or frozen mackerel, from wild-seafood catch or aquaculture facilities, to Japanese consumers in retail or restaurants. Consumer purchasing behaviour was not included in this study that concerned mainly business-to-business transactions and logistics. Informants were found in a "snowballing" fashion. The starting-point was finding what was initially perceived as an informant with a good overview over the complete chain of supply; a person with a best "sea-to-plate" perspective of seafood supply. Sales managers the salmon and at the pelagic fish (mackerel) exporting firms were found to have the most adequate complete supply network overview. These two informants recommended after the interview was conducted other informants working within each their supply chains, both from the supply side, and the flow towards Japanese seafood consumption. From one informant, the design of inquiries emerged. The following informants also provided in turn still other informants to provide a "complete supply chain picture" of product supply, tracking and tracing. In a manner the design of inquiry resembles to some degree tracing the sequential seafood product flows including its vital supporting information flow.

Both interviews and observations were open, meaning that the true intention of research was communicated to all informants. All interviews were taped and transcribed. An interview lasted on average 1 hour. Interviews were followed up by telephone interviews to clarify data and update information. The data were clarified in discussions with other researchers involved in the project and informants, mainly to reconcile potentially different interpretations of interview transcripts. This involved designing the research process leading to "...observations [that] generated new questions on which further interviews could be based" and eventually "added new dimensions to the subject, which eventually resulted in a new view of the phenomenon itself" (Dubois and Gadde 2002). This design meant that many informants had insight into the development of the research framework, and directly influenced its development.

4. Empirical part

This part provides four different narratives of purchasing and selling embedded in seafood supply networks. These product-focused cases exhibit transactions in different market, relational or organisational (hierarchical) contexts. First transactions securing raw material supply of mackerel to the Norwegian producer are described in part 4.1. This is in part 4.2. followed by the "parallel" narrative of describing supply of fresh salmon in a vertically integrated (hierarchical) network. After these upstream pictures of seafood supply, the downstream part of supply to Japan is described. In this part, first sales of frozen mackerel to Japanese customers from the Norwegian exporting firm are described in part 4.3., followed in part 4.4. by descriptions of transactions at Japanese central wholesale fish markets.

4.1. Supply of mackerel through a sales monopoly

Mackerel fisheries represent a seasonal catch taking place mainly during the autumn months of each year. More than 50% of the value of the Norwegian catch is exported as frozen packed products to Japan. The supply of mackerel to processing in Norway is organised through a government regulated sales monopoly, Norges Sildesalgslag (www.sildelaget.no), which operates a web-based electronic auction. This sales monopoly is a cooperative organisation owned by the fishermen. This form of trade was regulated to secure minimum and sustainable prices for Norwegian fishermen. In addition, catch of mackerel is regulated by a quota system where each fishing vessel has a limited quota they are allowed to catch per season. The total quota is decided upon based on marine research estimates of the mackerel stock in Norwegian waters.

Mackerel is a fish with a very limited durability. Ideally the catch should not be older than 48 hours old when delivered to the fish processing plant. Mackerel fishing is accordingly a coastal fishery. Relatively large vessels using side mounted nets are used in Norway. Scottish fishermen use trawlers to catch mackerel. However the use of trawl damages fish and reduces the durability of the catch. Japanese importers therefore prefer the Norwegian catch. Mackerel raw-material is purchased by the Norwegian exporter who also runs several factories located close to the different fishing waters. The sales office also administers purchase. Using the web-based auction, an overview is given providing the name of the vessel and the amount caught by this vessel. Through a double-blind auction, competing purchasers bid on the catch of each vessel. There is a limited amount of vessels taking part in the fisheries, and the same vessels return to the same factory often several times a year. Prior to purchase there is no direct contact between the purchaser and the catch owner, which is the vessel owner. However after purchase the fishing vessel communicates using mobile phone to the factory to inform concerning arrival more precise time. Fish purchasers reported experience in detecting how different vessels regularly supplied better or poorer catch. Due to features of the vessel combined with fishing procedures, some vessels were known always to deliver excellent quality fish, while others delivered barely satisfactory catch. This knowledge also influenced preferences regarding from which vessel they desired to purchase mackerel raw material from.

When the vessel was in port, in practice the quay at the factory, the personnel on the fishing vessel communicated with factory personnel to unload the fish. Unloading procedures involve using large hoses to such fish out of cold-water storage tanks direct onto production conveyer belts. Therefore the vessel was at dock more or less for the duration of production. If a large vessel took more than 24 hours to unloaded, the catch unloaded the second day had to be given a new lot number since it was considered as of satisfactory, but inferior in quality to the catch processed the first day.

4.2. Supply of salmon through a vertically integrated chain

The supply of fresh salmon was studied in the network of a global corporation that controls 25% of salmon supply from Norway. This volume is government regulated, and one actor may not exceed this share of production. The company has divided Norway into 4 regions with each their processing factory. 90% of production is fresh gutted whole fish or filets, the rest is frozen. This means that primarily high quality "superior" type salmon is supplied. Two facilities breed fish and supply roe to the aquaculture facilities in the four region. Roe is supplied first to freshwater, land-based facilities. Here they are vaccinated and fed in a temperature and light controlled environment. After the fish has grown large enough to tolerate salt water, they are transferred by well-boat to salt water facilities. They are placed into circular nets where they are fed until they are ready for slaughter. Within a period of a few weeks the salt water aquaculture facility is emptied, and then may be cleaned. Logistical planning of the flow of salmon of all four regions is carried by a centralised planning office. Within the 4 regions there are a number of aquaculture facilities where initial supply is varied. Through planning, and the use of the different facilities, an even flow of salmon raw-

material is attempted supplied to fill capacity at the processing factory. The company's sales office is informed by the planning office of the forecasted daily supply from the plant. In addition, fish reported delivered to the slaughter house by the aquaculture facility provided relative precise information concerning the volume available for sale on a daily basis. Each day usually more than 22 and up to 30 fully loaded trailers of salmon products leave the processing plant to destinations informed by the customers. From supply for roe to final processing the value of the salmon product in transformation is registered through cost accounting. This is also the basis for measuring profitability in relation to sales.

4.3. Selling frozen mackerel to Japanese customers

Mackerel is exported together with other pelagic fish species by a sales office handling production at 10 processing locations. The products sold are either filets or round fish that are frozen and packed into standardised distribution level packaging. The most commonly used package size contains 20 kilo of fish. It is common to negotiate sales of fish measured by weight, each pallet of fish containing a specific weight of mackerel. The sales office handles a range of different Japanese customers. These relationships are on average 10 years old. The Norwegian pelagic fish exporter uses standardised contracts that are filled in for each relatively routine transaction. The contract, however, is never signed. Japanese customers are extremely quality conscious, and therefore send inspectors to handle purchasing on location in Ålesund Norway, where the sales office is located. The purchasers also make inspections at processing plants to secure quality. They are well informed regarding the quality variations due to which fishing vessel supplies the catch. They also make sure that the products frozen in the freshest state are purchased. These Japanese purchasers stay at a hotel in Ålesund with a special long-term stay conditions arranged by the Norwegian pelagic fish producer and exporter. The Japanese purchasers vary also in relation to size and what type of activities they carry out. Purchasing mackerel in Japan is restricted by a licence system. In practice, due to low profit margins, the equals exceed product demand. Quotas are therefore purchased for symbolic fees. One studied Japanese mackerel purchaser is a trading house. Within this company seafood trade is one of many extremely varied activities. Mackerel purchased by this company mainly is traded with other Japanese companies. However, the company expressed that mackerel could be resold to customers in other nations. It also could happen that the mackerel was sent to a cold-storage facility in the EU area, such as the Netherlands, and then stored there in anticipation of a European customer. The other interviewed Japanese purchaser was an industrial producer, supplying packed seafood products to Japanese retailers. This retailer used a majority of the goods they purchased in their own production. In addition they operate a trading division that resells unprocessed mackerel products to other Japanese customers. Both companies channel a portion of their goods through wholesale markets.

Prices for mackerel are set on a market. In the past years mackerel prices have been lower due to the return of domestic mackerel catch. This fish is not completely comparable to Norwegian caught mackerel, but prices are substantially lower. Japanese consumers have acquired over time a taste for the larger and fattier Norwegian mackerel, and are therefore willing to pay a premium price for this product. However, the price level Japanese retailers are willing to purchase Norwegian mackerel for is too low to secure a profit for the Japanese importers when the investigation was conducted in 2006. In part due to Japanese business culture, Japanese importers were showing willingness to accept distributing mackerel from Norway to Japanese retailers in order to retain their

business relationships with retailers. In addition, they cannot bargain with the Norwegian suppliers, since when the price becomes too low, other national markets increase demand for mackerel.

4.4. Japanese wholesale fish markets

The fourth case study involved a visit to and interviews at two different central wholesale fish markets in Northern Japan, Sendai and Morioka. Also a third, more superficial type of visit, was made to the large Tsukiji fish market (www.tsukiji-market.or.jp/tukiji_e.htm) in Tokyo, a facility that also represents a tourist attraction. In Japan there are now 88 such central wholesale markets and they play an important role as an intermediary between seafood supply and a fragmented demand. Most Japanese restaurants and retailers are small-scale establishments. Horizontal integration is increasing, but is much less consolidated than in Europe and North America.

Fish markets have been in use since the 16th century from the beginning of the Edo period in Japan. Tokugawa Ieyasu, the first Tokugawa shogun and builder of Edo as is now Tokyo, invited fishermen from Tsukudajima, Osaka and gave them a privilege for fishing in order to let them supply seafood to Edo Castle. The fishermen purveyed fish to the Castle and sold the remains near the Nihonbashi bridge. It was the origin of Uogashi. Then, to meet the growing demand for fish with the increase in population, Nihonbashi Uogashi was reformed and developed into a market. The market was led by wholesale merchants licensed by the Shogunate who bought fish from local ports, sold them to jobbers in the market and thus built up a large fortune, forming their own distributing network (www.tsukiji-market.or.jp). Seafood trade through markets may accordingly be termed as a "traditional" form of seafood distribution.

In August 1918, following the so-called "[Rice Riots](#)" (*Kome Soudou*), which broke out in over one hundred cities and towns in protest against food shortages and the speculative practices of wholesalers, the Japanese government was forced to create new institutions for the distribution of foodstuffs, especially in urban areas. The central wholesale seafood markets are regulated by the Japanese Central Wholesale Market Law of 1923. The Law was intended for minor producers and retailers, but the both producers and retailers have been growing big. At present there are two forms of professional seafood markets in Japan. Seaside markets link Japanese catch with purchasers, while central wholesale markets link supply with regional demand. In addition seafood consumer markets link consumers with seafood traders. The number of consumer seafood markets is falling.

The central wholesale markets are responsible for establishing a link between producers and retailers. These markets are owned and run by local government. The market consists of a building and an organisation to support seafood trade. This includes facilitating payment. We will here concentrate on describing the Morioka wholesale seafood market. In Morioka the facility comprises of both a seafood and fruits and vegetables market. The abundance of seafood species astonishes a European visitor to Japanese seafood markets. It quickly becomes clear that Norwegian Mackerel together with Salmon, represent only one of very many seafood species traded at these markets. However, mackerel and salmon still account for notable volume.

At the seafood market sellers display products in distribution packaging stacked onto pallets on the floor. Each major seller has a specific area where they display a limited amount of goods. This form of selling is carried out for the higher volume seafood species. The lower volume species are traded at stalls where fish are displayed in a manner resembling a delicatessen counter in a supermarket.

Purchasers and sellers need licenses to carry out trade at the wholesale seafood market. Purchasers and sellers wear caps indicating the company they represent. Larger purchasers and sellers operate with several persons representing the company. Purchasers may be larger companies. The smallest retailers or restaurants usually do not take part in the market. They rely on

intermediaries for their seafood supply. There are approximately 100 purchasers licensed at the Morioka wholesale seafood market.

Trading at the seafood markets starts at about 6:00 and lasts not more than 2 hours in the morning at the Morioka facility. The trading process consists of groups of purchasers moving from one place at the market to another. They stand in front of the seafood and haggle over the price. Some boxes are opened, the fish inspected. These traders are very keen to detect product quality failures, a capability acquired through years of experience in the trade. Product traceability is often breached at the market; product safety and quality being guaranteed through sensory control only and the goods often partitioned and packed into new boxes for the smaller customers. Japan is a very quality conscious country in many respects, including food consumption. Food safety and quality is not registered as a common problem in Japan in relation to trading through seafood markets. Faulty products are effectively stopped at this location.

5. Discussion

The four cases exhibit four remarkably different transaction contexts. These transactions are, since the case narratives together contribute as components of a complete supply network, impacted by the fundamental sequential dependencies of activities in physical distribution. A picture of sequential dependencies in seafood distribution is evoked involving a common goal of economic, safe and quality seafood supply. This quality in supply includes the informative aspect of supporting transactions, directing and controlling flows of seafood, tracking these flows, and finally enabling complete product traceability ("chain traceability").

5.1. Transactions and Mackerel Supply

The supply of wild-caught mackerel in Norway is channelled through a highly government-regulated and technically advanced trading system. In this system supply uncertainties are buffered through volume quota regulations regarding sizes of catch and which actors are allowed to supply this type seafood raw-material. This initial mackerel supply exhibits variations both on a seasonal and daily basis. These variations are organised into a neatly structured into a highly regulated government-supervised market construct where the price mechanism is set free as long as it remains above minimum price. Due to overcapacity in the processing sector in the pelagic seafood industry in Norway, there is always a shortage of raw-material. This drives the prices up. The number of industrial producers of pelagic fish is limited to one dominant actor created through a recent merger with approximately 40% market share in 2008 measured as landed volume. This company is currently aiming to reach a 50% market share. The remaining volume is shared by a number of medium-sized and smaller actors. In 2006 36 vessels had permits to catch mackerel¹. Interactions between purchasers and suppliers are channelled through an electronic marketplace where the double-blind auction seemingly cuts relations between all actors in order to facilitate transactions. Norges Sildesalgslag (the operator of the monopolistic marketplace) remains mediating actor both suppliers and purchaser must relate to. Informal horizontal contacts still abide between the fishermen. They e.g. often radio each other when at sea, and the fishermen socialise when on land. In the same manner the seafood processing industry retains horizontal interaction through membership in common industrial organisations that represent this industry at a generic level in relation to government, suppliers and society in general. In addition, the auction, although web-based, automated, and therefore seemingly completely impersonal, is highly embedded in a historic context. The transaction itself is relatively automated. Furthermore, the degree of automation is increasing as fishing vessels invest in broadband connections to the auction. It is a virtual community where no-social interaction or culture should be evident, but still people interconnect

¹ http://www.ssb.no/emner/10/05/nos_fiskeri/nos_d394/tab/tab-6.html

both in formal work tasks, and some develop bonds in their leisure time. This is because the number of actors that actually interact is limited in the first place by a small number of purchasers and suppliers operating through the auction. In addition, since this is coastal fishery, where processing should take place within short time of catch, vessels are for practical reasons confined to a small geographical area during the season, further limiting the actual numbers of vessels that call at ports of the different processing companies. The limited actual “market population” leads to recurrent interactions between the same suppliers and purchasers. The factory administration of the purchaser needs to communicate with the vessel to coordinate delivery. In addition, the purchaser learns through experiences of recurrent supplies for individual vessels, which vessels they in the future may prefer to purchase from. Competing purchasers, of course, also have a same learning experience regarding quality of mackerel raw-material supply.

5.2. Transactions and Salmon Supply

Supply of fresh salmon that is destined for the Japanese sushi market is sourced (from the Japanese perspective) through a range of different suppliers. The studied supplier has a 25% global market share of salmon supplies, and represents a vertically integrated chain of activities that transform roe to a packed salmon product that may be air-freighted to Japan. In this integrated chain a series of technical goods transforming activities are coordinated in order to enable a transactions with customers. The salmon supplier plays also a role as purchaser of services and products facilitating salmon aquaculture production. The case narrative exhibits how prime concern is to regulate the daily volume supplied from the factory where the salmon is processed and packed, and match this volume with a daily demand communicated based on orders created communicated through the sales office. There are a number of supply uncertainties embedded in this supply network that to some degree may be controlled. Through vertical integration a complex series of complementary production and transport activities are sought efficiently coordinated. Vertical integration creates a context that enables use of coherent information systems enabling managing and operating the entire supply of salmon spanning the time scope of several years from roe to finished product. Within this chain of activities no formalised transactions need to be undertaken. Instead an overall information system is used to plan and control costs in transforming the salmon. In this manner a perception of the value of the product emerges between supply of roe to freshwater facilities, supply of fry to seawater facilities, and supply of salmon for processing. This registration provides the salmon supplier with a comprehensible picture of supply profitability. This form of hierarchical governance provides a rich breeding ground for technical investments and complex institutional arrangements. Investments in ICT (information and communication technology) are expectedly more difficult if the different business units were managed by different companies. In addition, this context of different business units within the firm evokes how business relationships are encountered not only between firms, but also may be used to describe how different business units in a same firm coordinate activities contributing to supply.

5.3. Transactions and Mackerel Export to Japan

Mackerel export to Japan was studied from the dual perspective of the largest Norwegian pelagic fish producer and two of its most important Japanese customers. The Norwegian exporter has experience in trading mackerel that dates primarily to the time Japanese domestic mackerel catch vanished in the late 1990-ies due to overfishing. However with the domestic catch on the return, mackerel export is being challenged due to the higher price of Norwegian Mackerel compared with the smaller and leaner Japanese mackerel species. The Norwegian exporter markets a frozen and packed mackerel product. This product is due to freezing durable enabling storage. In addition, the

fish are either frozen round or as fillets. Both product-types are in practice undifferentiated commodities. This product is sold on a global marketplace where Japan represents a major customer. This pattern of demand is culturally embedded, Japanese having acquired a taste for treated mackerel as a part of their sushi-eating habits. In addition mackerel is prepared in other types of Japanese cuisines, and is used as an ingredient by the Japanese processed foods industry. Mackerel is a relatively high-volume and low-value product. As the Japanese market has long been in a state of low economic growth or recession, Japanese importers have experienced dwindling profitability as prices on their mackerel products downstream have stabilised or even decreased, while prices of raw-material have increased on the global market, where Japanese purchasers perceive a threat that more mackerel may be supplied to other nations. Japanese importers have in many cases chosen to import shipments of mackerel at an economic loss to avoid a “loss-of-face” experience in front of their own customers. Actor bonding is not limited to economic considerations. Refusing to supply products would be regarded as highly impolite within Japanese supply networks. This is an important aspect of Japanese business culture. Business relationships between Japanese actors are long-term oriented and involve developing group communications crossing firm boundaries. Due to this long-term nature, Japanese seafood supply networks exhibit a high level of trust. Contracts are negotiated, but left unsigned. James (2002) states that “.. evidence that extrinsic incentives “crowd out” intrinsic incentives (Frey and Oberholzer-Gee, 1997; Frey and Jegen, 1999), suggesting that attempts to foster trust via incentive mechanisms may ultimately undermine trust.” This leads to a notion that a signed contract may undermine trust. In other words, the unsigned contract may be viewed as an expression of trust developed in a context of recurring sales and developing actor bonds. On the other hand, as Kvaløy and Olsen (2009) point to, informal arrangements may from a formalistic economic perspective be measured as inefficient when taking into account occurrences of intermittent disputes. Even though the Norwegian exporter may choose to sell the product to any customer they wish on an established global market, the Japanese customer is simultaneously influencing Japanese values towards their Norwegian supplier. Specific Japanese trading arrangements includes the presence of purchasers in Norway during the season. This presence seemingly exhibits low trust since they demand insight into the supply process of purchased salmon from supply from the vessel to the transaction. However, interviews also detected that travelling to Norway and taking part in this quality control and purchasing activity was regarded as a very rewarding aspect of their work, a sort of bonus. Norwegian business life is far more relaxed than the Japanese equivalent. The export of Mackerel to Japanese importers, representing about 15-20 different firms represented in the main Norwegian fishing port, has gradually developed into a set of institutional arrangements. The Norwegian exporter is involved in organizing the stay of the Japanese importers, as a part of this institutional arrangement. In addition the Norwegian exporters marketing manager visits his customers several times each year. Over time the Norwegian exporter has through close interactions with many different Japanese customers developed competence in Japanese business culture and understanding of the Japanese market. The Japanese customers have on the other hand, developed horizontal bonds between the different Japanese from competing firms when in Norway, in addition to business relationships with the Norwegian supplier. A commodity-type market with fluctuating prices is found integrated with a network of well developed business relationships.

5.4. Transactions and a Japanese Wholesale Seafood Market

The immediate impression when a person first visits a Japanese seafood wholesale market is the complexity of product offerings. In a limited amount of space within a building traders display a large range of seafood products. Some vendors specialise in selling small quantities designated to individual retailers or restaurants. Other suppliers specialise in supplying larger quantities. The Japanese seafood may well be described as a building, a location with a minimal organisation,

facilitating transactions. In this manner this is a traditional form of transactions, the actors in the immediate presence of each other regarding quality features of the products and haggling over the price. Since this is a traditional form of distribution, direct distribution represents accordingly a “modern”, and therefore potentially expected by practitioners to be more efficient mode of distribution. However, this view does not account for the efficiency of Japanese whole sale seafood market in facilitating transactions involving a number of different suppliers meeting a number of purchasers of different sizes and with different needs, to trade an overwhelming number of different product types. At the time of investigation in 2006 there was no support of product traceability through the market. This was, however viewed as a challenge to further develop information systems. Since no safety and quality discrepancies had been encountered, and since investments into ICT systems represents an investment cost, it is expected that traceability systems only would come in place to satisfy government legislation. The traditional market form proves efficient in handling this form of diversity related to transactions and also has an excellent record in supply safe and quality seafood. The marketplace is in a fundamental manner organised in the same way as the Norwegian pelagic fish sales monopoly. These are institutional forms founded on government legislation. In addition, the participants in the trading procedures are regulated though a licensing system limiting the number of actors involved in trading. Since trading takes place each day, buyers and sellers may potentially meet every day to negotiate process for specific products located in front of them. The trading represents accordingly a combination of horizontal and vertical interaction. The market organisation provides payment and registrations services. Daily interactions between purchasers and sellers, and interactions with the marketplace facilitators may be regarded as business relationships. These interactions may be analysed in relation to actors bonds, resource ties and activity links. Recurring sales are never guaranteed, but recurrent transactions occur intermittently.

6. Concluding remarks

A complete network perspective evokes how transactions vary depending on in what part of the supply network a transaction takes place in. In the upstream part the product is closer to its raw-material state, and the business context is adapted to organizing actors, resources and activities in a specific manner. The downstream Japanese market may in the same way be regarded as an institutional arrangement adapted to handling complexity of numerous actors with different needs and an abundance of types of seafood products. Furthermore, in a supply network transactions are embedded in a system of interdependent transactions. Viewed from a systems perspective, a series of transactions in a chain of activities directs supply towards a Japanese end-user, the flow of chain of goods-transforming activities. All transaction events described in the four cases may be described as embedded in a market environment. The studied product supply is global in nature, and involves a sequence of different activities, one of which is the transaction. A picture is evoked of transactions as an activity that needs to be closely coordinated not only with preceding and following transactions, securing transfer of title to direct the flow, but that transactions also need to be coordinated with other activities such as production, logistics, marketing, payment, and developing actor bonds. In the vertically integrated salmon supply case, transactions rather become the purpose of planning and managing an efficient flow of goods lasting several years; transactions an activity describing the borderline of a series of vertically integrated complementary product-transforming activities. The case narratives of mackerel raw-material supply and the Japanese wholesale seafood market show that even when trading in what is often labelled by actors as “markets”, business relationships are easily accounted for. This is accordingly the unit of analysis proposed applied when studying factors with close impact on trading.

In addition, a actor part-takes in multiple business relationships. In stronger business relationships, such as the case when exporting mackerel to Japanese importers, knowledge concerning trading is

embedded in the business relationship, but this knowledge is never confined to use in a single business relationship. In what is commonly termed as “market trading” knowledge embedded in business relationships is nonexistent or weak, and the actor must rely on own knowledge or relationships with other actors in the supply network, for instance when asking logistics service providers, banks and government agencies for assistance to determine an appropriate level of risk in trading with a relatively unknown customer.

Transactions or anticipations of transactions produce the informational basis to assign goods through a series of activities towards the end-user. Orders together with forecasts create operational-level documents directing flows of products. Transactions are therefore an integrated part of a “value chain”; a component in system providing utility through the provision of offerings. The nature of a transaction is dependent on the immediate business relationship context it takes place within. Transactions are therefore an institutional arrangement, culturally embedded, facilitating transfer of product ownership. The empirical evidence exhibited through this study does not reveal evidence of pure formalized markets as depicted in classical economic thinking.

The case narratives exhibit transactions as institutional arrangements whether these take place in what is termed by the users as a “marketplace” or though “business relationships”. Markets show features of relationships, while business relationships show features of markets. This is seemingly a paradox. In “markets” actor bonds develop parallel to market mechanisms. It was at the time of investigation, however, not investigated how these actor bonds could influence trading at a market. In “business relationships”, even though products are traded mainly in the context of established relationships, trading is always impacted by competing supply networks. For instance the overfishing of Japanese mackerel was the instigation of mackerel export from Norway top Japan. In addition there is a continuous change of the actors involved in the network, the actors themselves change regarding their features, and a single actor may leave one network to become a member of another supply network.

An alternative use of the terms “markets” and “relationships” is therefore proposed. Markets are proposed regarded as the overall environment of transactions. It then represents the network of both potential and actual transactions. Markets may be regarded as the environment of transactions. This does not exclude that markets have network characteristics, however, descriptions of markets as environments denotes that the level of detail in these descriptions is reduced. This interrelationship is illustrated in figure 1 below:

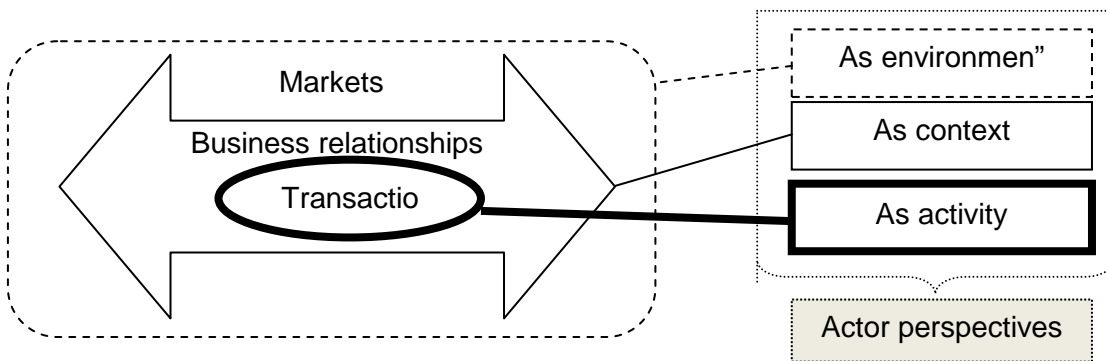


Fig. 1. Markets, business relationships and transactions from the perspective of an actor

When transactions, business relationships, and markets are viewed as fundamentally different in nature, actor perceptions of interdependency between these phenomena becomes complementary in nature. This has implications regarding strategic planning and daily trading in networks. Business relationships are in fig. 1 viewed as the close context of transactions, institutionally consisting of

greater perceivable detail and perceivable complexity than markets; an entity the actor may knowledgably interact within but never able to perfectly control. A business relationship (one of many each actor must manage) is then again embedded in one or several markets; an environment that may be perceived as more or less fuzzy since an “environment”, conceptually-speaking, never demands “tight” interactions. In contrary to marketing relationship thinking (e.g. Egan 2008), no demand of recurring transactions is laid in this understanding of “business relationships”. It is a contextual entity of even potential transactions that in time may prove never to be fulfilled. When transactions recur, this may indicate a “successful” business relationship. In “successful” business relationships communication is complex and the business relationships may be described as strong. Business relationships are accordingly when viewed as the context of transactions predominately knowledge (weak or developed) resources indicating a capability to trade. This capability is used to manage and operate purchasing and sales and is interdependent with the strength of the relationship. This strength of a business relationship impacts accordingly on the actual ease of trading. In a weak business relationships customer knowledge is weak, and accordingly how to relate to this customer is weak. In weaker forms of transaction business relationship culture is a prospect of development. Furthermore, from this view, actors will in weak relationships depend rather on an overall and obscure market culture and capabilities developed within other business relationships to conduct transactions. “Markets” are accordingly proposed conceptually to denote not a type of transaction or relationship, but rather an environment of trading; an institutional transaction-oriented entity resembling a dynamic business structure combined with its culture. It is the structure within which product, technology, economy, society, politics and legislation, and nature interact to create rules, values, norms, and a language of trading.

Fundamentally, this study aims to impact on academic and practitioner terminology within purchasing and selling. Further research may based figure 1 be directed towards more detailed understanding of “markets” as 1) culture or atmosphere, 2) structures and 3) processes or activities, determined by resource ties (regarding products, facilities, knowledge), activity structure and actor bonds; as a network. In addition interaction between the layers (business relationships and transactions) proposed in fig. 1, markets may be studied.

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