

# Below the surface: How (seafood-)networks work – and how they change

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## Abstract

The objective of this editorial is to provide a broader context for five papers presenting different aspects of seafood industries, distribution networks and markets. It also discusses in brief some of their propositional contributions to industrial network theories, focussing on three areas of discussion; the evolution of distribution networks (Gadde, 2010), the roles of network ideas in network change processes (Håkansson and Waluszewski, 2002) and the character and dynamics of network interface management (Ford et al., 2003; Ford et al., 2010). The included papers present interesting theoretical contributions as well as detailed case illustrations to these three areas of theory discussions.

*Key words: Distribution networks, interface management, network identity, network agency, seafood*

## 1. Introduction

This special issue of the IMP Journal is dedicated to the presentation of five different studies of seafood industries and markets. These have all been associated with the “Newmark” research programme organised at BI Norwegian Business School in Oslo in collaboration with a number of international researchers from 2004 through 2009. The aim of this editorial is to provide a broader context for the five included papers from an industrial network perspective, and to discuss in brief some of their propositional contributions to three different topics in contemporary IMP discussions; the evolution of distribution networks (Gadde, 2010; Grisprud, 2004; Gadde & Ford, 2008), the roles of network identity and agency in industrial network formation (Håkansson & Waluszewski, 2002; Abrahamsen, Naudé & Henneberg, 2010; Mouzas, Henneberg & Naudé, 2008), and the character and dynamics of network interface management (Ford et al, 2003; Ford et al, 2010).

The objective of the Newmark research programme was characteristically Norwegian. It aimed at improving our understanding of how international seafood markets actually work and have developed over the recent years. The driver behind this particular orientation is the fact that seafood represents a major Norwegian export industry. However, the programme actually emerged out of a much more general research initiative by the involved research group, aimed at studying the “interacted real-market-economy”. While this

theory-oriented initiative and ambitious research grant application did not receive the funding it aimed at, the Research Council nevertheless suggested merging the initiative with the keen political interest of Norwegian policymakers in learning about global fish-market developments. In this way, the general interest in market research and theorising was merged with seafood as a distinct field of investigation.

Output from the programme has been reported in several forms (Håkansson, Harrison & Waluszewski, 2004; Cantillon et al., 2006; Følgesvold, A. & Prenekert, F., 2009). It has produced four PhD theses and quite a few academic articles, of which three have previously been published in the IMP Journal (Cantillon & Håkansson, 2009; Abrahamsen, Naudé & Henneberg, 2011; Huemer, Håkansson & Prenekert 2009). The Newmark studies have all analysed fish and other seafood markets and aspects thereof in countries as diverse as Japan, Chile, Portugal, UK, Poland and Norway. They have followed the distribution networks from a variety of seafood activities in the North Atlantic to the markets as well as to some of their production activities elsewhere. On this background, I will use the opportunity to return to the original research agenda to discuss aspects of what we may learn from the seafood sector regarding how the real-market-economy actually works “below the surface” of competitive market images.

Compared to a large number of industrial network studies of business interactions, of technology, distribution, and of marketing developments in a variety of other industries, the North-Atlantic seafood industry is an example of a business

with deep historical roots and rather extended export activities. From a technological perspective, the industry is apparently quite simple, even though technological changes and improvements in all parts of seafood industrial and marketing activities have been quite remarkable over the last few decades. It is also an industry characterised by its resource base, of which a dominant share is based on catch subjected to natural stochastic variation and regulatory interferences. The other share of the industry is based on seafood farming, which in particular depends on its related international feedstock-, breeding- and animal health- and -pharmaceutical industries and sciences. The Newmark studies stretches across these differences and jointly present images of a rather complex industry that interacts with very different national-historical business landscapes across five continents.

## 2. The contributions to this volume

One important topic in industrial network theory has been to analyse and explain how business and distribution networks change, and how different network forms shift or transform within and across international industries and markets. How does one networked market system emerge so as to be dominated by another shape - or be overtaken by it? Or, is this what is actually happening? This issue is addressed by Abrahamsen and Håkansson in a study of market transitions in the Japanese seafood industry, where market structures are observed to evolve from a traditional, rather complex fish market based system with multiple intermediaries to a direct partnership system between major suppliers and large, vertically integrated retailers. Their study provides support to other studies that suggest a general tendency towards more direct collaboration between dominant suppliers that are able to serve large, organised retailing systems on their own (Gadde, 2010). Their study also gives support to Gadde's argument that the roles of logistics and marketing are closely linked and highly strategic to the involved actors. Cantillon and Håkansson (2009) offer a similar argument based on a study of UK fish market developments, which is also supported by Haugnes (2010) in her study of Norwegian-Portuguese bacalhau networks. The observed shifts in distribution-marketing forms seem to represent a general trend across otherwise rather different seafood markets.

However, Abrahamsen and Håkansson also argue that the very same actors tend to participate in both kinds of distribution and marketing networks - in rather different ways. We may in fact regard these different trade systems as two parts of one and the same interacted trade system - gradually expanding their structures of interaction into a pattern of more diverse and interdependent specialisations and distributions of work. These specialisations feed the emergence of additional business operations that become possible as a function of the new specialised activities that

emerged at the earlier stage. In this way, they argue that market transformations like these may more productively be seen as a network expansion process in which additional layers of more specialised as well as more interacted logistics and marketing operations evolve.

Holmen and Pedersen address a related topic, namely the impact of resource heterogeneity on the organising of distribution networks. Their study of fish-feed distribution to salmon sea-farms along the Norwegian coastline is a detailed study of material circumstances that force distributors to differentiate their operations and to develop highly specialised interfaces to their customers. What is a market for fish-feed when the natural, the infrastructural as well as the operational resources of the customers are very different? Their study seems to indicate that the managing of these differences is a very important aspect of what is in fact offered to the customers. The important observation is that distributors need to invest in capabilities of managing heterogeneous resource interfaces to their customers. Suppliers compete in their ability to address material and economic differences, specificity and variation over time among their customers by committing long term resources to resolve these complex and variable interface problems. As a result, transactional deals must be organised in a system that is durable, variable and flexible in order to create and operate appropriate and effective supplier services. The variable physical conditions of and investments in logistics operations cannot really be separated from the terms of trade of the products. It becomes very clear in this case that strategic integration of logistics and marketing is a fundamental requirement for effectiveness and competitiveness, and that the consequence thereof is a strong requirement to specialise in relation to the material and economic circumstances. The case is also a beautiful illustration of how economic value depends on how networks combine particular resources in relation to customer needs (Gadde & Håkansson, 2008).

A rather different challenge to industrial network theory is represented by the role of "meaning" or "identity" in networks, which is addressed in the article by Lars Huemer. The topic is somewhat similar to what has been addressed by Håkansson and Waluszewski (2002) and by Abrahamsen, Naudé and Henneberg (2010) regarding the roles of (network) ideas in business network formation. Huemer analyses sense-making, standards, conflicts and interactions between multinational seafood companies and organised indigenous people in Chile and Canada. By focussing on the very different representations of meaning in those contexts, his study indicates that the meaning-dimension may perhaps be under-emphasised in industrial network theory. He argues that the building and expansion of networks may typically be formed by sense-making processes that shape efforts to interact resources, activities and actors in particular ways, in order to represent and materialise particular meaning and purpose. In this case, the "identity" of the

network itself is both shaped by and represented by the given meaning-carrying identity that stands out as in opposition to other networks that are represented by different or rival interpretations as well as objectives. Hence, the subjects of the narratives presented by Huemer are not just structural entities as represented by some interacted resources, activities and actors, but they are networks holding particular identities. Interacting across such networked identities necessitates dialog and mutual influences and adjustments of those identities – in order for them to connect to others in meaningful ways, and on this basis at least potentially to advance their different objectives through collaboration. The inclusion of others into a given network of the AKA-model type accordingly requires a mutual inside-out and outside-in sense-making and identity adjustment process, not only a simple, material re-combination of resources, activities and actors. This argument leads towards a conception of industrial networks in which structural characteristics and identity are simultaneously created and represented. This would imply that network change may result from either structural or identity sources in a non-discriminatory sense – both leading to simultaneous structural-identity changes. Huemer illustrates this point when arguing that one implication of this understanding is that subsidiaries of multinational companies will tend to modify their operations in different contexts, in order to influence and interact with local networks with very different identities and standards.

A fourth contribution to this volume is offered by Thomas Hoholm and Håkan Håkansson, addressing the problem of business interaction in face of product innovation. Fundamentally, this concerns how we perceive of requirements for actual productive interaction across business to business interfaces – in face of substantial changes in the substance matter. They suggest that innovation challenges in networked settings may be interpreted as “a need for bridging gaps”. Rather than focussing on the meaning-dimension similar to Huemer’s approach, which essentially addresses qualitative differences across networks, they maintain a more physical “distance - gap-bridging” conception that represents a more “distance” based quantitative characterisation of the interaction challenge. The paper discusses a case of a fairly radical innovation in which a dairy company engages in developing a fermented fish-based sausage product, similar to a traditional meat-salami, for the consumer market (Hoholm, 2011; Hoholm & Olsen, 2012). The innovation is radical in several respects, in the sense that fish is quite distanced from dairy products, that fish has never before been used as the basis for a salami-like fermented product, and that the category “fish-salami” did not really associate with any existing product category familiar to consumers anywhere in the world. The authors present the case and show how the inventors managed to overcome the many technical challenges involved in stabilising the product. It nevertheless did not become a marketable product. Instead, what finally

emerged was rather a very different fish product that succeeded because it was able to bridge over to established categories and marketing networks, while at the same time representing enhanced product quality and marketability that made use of new technologies and knowledge which emerged through the innovation process. In this sense, they argue that bridging the gaps within the networks that eventually would have to be connected to perform the entire marketing operation is easier, the “closer” the innovation is to what is already there.

One may suggest that the two concepts “bridging gaps” and “adjusting identities” could productively be seen as two dimensions of the same interaction problem, as the identity change of the fish product was obviously important, whereas for instance “the distance” from dairy products to fish products remained the same for the successful as well as the non-successful product launch. Hence, while some bridges may be more crucial than others, it also seems clear that the structural change associated with “distance-bridging gaps” and the identity change from “fermented fish sausage” to “superior fish loin” can be interpreted as two aspects of one and the same process.

Finally, the last contribution written by Harrison, relates to a different twist of this discussion about networked business management challenges. She discusses the roles of inter-organisational routines in a relatively small but globally oriented fish trading company in Ålesund, Norway called “Global Fish”, who is interacting closely with Japanese customers, among others. Harrison asks questions such as: How do trade routines get established? What are their roles in facilitating business operations? How may they change or adapt in response to variations in resource and market conditions?

The underlying issue in this case is the ability to deal effectively with business network partners in situations where the supply of resources are subjected to substantial natural stochastic variations over time. How may companies organise their network relationships so as to maintain stable and productive relationships in such situations?

She argues that inter-organisational routines seem to be core to how this case of interacted real-economy works, by stabilising and simplifying interactions across complementary roles, resources and activities that need to co-emerge over time in order to be economically effective as well as efficient to the partners involved. The argument expands from the appreciations of contracts to the level of actual material operations to explain what it is that makes interacted economies work better than the alternative. Harrison shows how inter-organisational routines – including decision-routines – may have important performative capacities that work in addition to contracts. These are developed and put in place to improve flexibility as well as economising at the very detailed levels of activity. A number of such routines are there to deal with variations that are typical to the fishing industry

– for instance due to the dependency on highly variable catch. Hence, inter-organisational routines may be seen as structured bridges across a large set of micro “network gaps” through which the different participating networks are able to adjust and to improve their mutual exchange of benefits in stabilised, yet still flexible ways.

### 3. Evolution of seafood distribution and marketing forms

International markets for North-Atlantic fish and other seafood indeed have deep historical roots. They also stretch across markets with vastly different characteristics around the globe. Parts of the oceans are particularly rich on seafood resources – such as the North Atlantic, and the fishing industries associated with these have naturally come to represent global knowledge and industry hubs for seafood export and fish market interactions across the world. One of those hubs is the city of Ålesund at the northwest coast of Norway. Another is Seattle at the US west coast of the Pacific Ocean. These places have developed capabilities to interact with those different and distant markets – such as the large and complex Tokyo fish market in Japan and the traditional bachalau markets in Portugal, Brazil and Italy. Hence, fish markets of the kinds studied in the Newmark programme have been global for centuries, yet they seem to be in a general situation of “neo-globalisation” caused by the present wave of global market expansion and industrial specialisation and integration. These emerging structures seem to expand new business integration models across the world as actors find ways to both specialise and integrate large retailers directly with exporters and industrial processors – thereby circumventing traditional fish market intermediaries and trading institutions.

Following Holmen and Pedersen, one may argue that not only can the market for fish-feed at the Norwegian west coast be characterised as highly resource heterogeneous. Also the international seafood markets in general seem to mirror tremendous heterogeneities across regions and countries. These differences are rooted both in their natural resource bases and in their particular historical combining of seafood-related resources, activities and actors through centuries. In the perspective of Ålesund based seafood exporters, business is fundamentally about managing and influencing these heterogeneities across the globe. It is about benefitting from the ability to cross fertilise learning and adaptability across this variety in order to for instance advance new models of interaction into markets where strong historical networks obviously represent substantial obstructions to or constraints on such initiatives – such as in the case of Japan.

Studies of the real-economics of seafood and seafood markets reveal images of an industry with strong network patterns stretching from complex industrial clusters located close to particularly rich natural resource habitats, to diverse

seafood markets across the globe. What is striking is not only the dynamic and complex interactions within local industrial “clusters” in such places as Ålesund. Even more so, it is the global extendedness and diversity of the networked operations circulating in and out of Ålesund companies, and their ability to influence the dynamics of those many seafood market systems on which these companies depend and with which they continuously interact. In this broader picture it becomes clear that it is the complex knowledge base and the industrial and marketing capabilities built over time that result from these extended networking operations which provide “clusters” like these with their value creative competencies and capabilities. Experiences from one market are brought over to another through local interactions in the “fish metropolis”. As such, the seafood case offers a critical argument against the traditional focus on internal and local explanations of the successes of industrial clusters such as represented by Porter (1990) and Krugman (1991), as opposed to an argument underlining the functioning of clusters as highly specialised geographical hubs for extended business network operations across the globe.

Several studies conducted within the “Newmark” research programme support evidence and illustrations of the general trend in the evolution of distribution networks of our time that has been discussed and analysed in broad historical perspective by Gadde and Ford (2008) and Gadde (2010). This trend describes a shift towards a much more direct retail chain to integrated supply chain interaction system. In particular the organising and integration of retailing that has occurred over the last three decades, and the parallel dramatic changes in global transportation and supply chain organising, have led to the emergence of networked actors that are more than large enough to establish direct industrial supply systems on the outside of previously dominant historical market institutions. They can reach consumers in large numbers on their own, such as shown by Abrahamsen and Håkansson in the Japanese case - thereby circumventing the dominant and powerful Tokyo fish market system.

Gadde also explains how logistics and marketing during the 20th century gradually divided into separated areas of theory as well as of business thinking and organising, where marketing gradually obtained a leading position whereas logistics gradually declined to a status of secondary importance. This image has changed rather dramatically over the last couple of decades, and all the different studies of seafood industry distribution networks presented here convey the image that logistics and marketing have become closely and strategically interconnected. Marketing strategies depend on logistics strategies and the two cannot really be separated. Through the conflicts between historical distribution networks and new networked forms, it also becomes apparent that this has indeed always been true as the traditional forms of logistics networks have become more visible to us through the emergence of new and different

forms.

These changes are fundamentally driven by creative business interaction aiming for more effective specialisation and more integration, in combination with some of the major technological innovations of our time, in manufacturing, in farming, in inter-global transportation, information and control technologies, etc., where those in position to take advantage of many of these have gradually gathered the capacity to rearrange the distribution network structures, information systems and management to control it. As a result, we may interpret fish markets as battlegrounds between historical distribution networks across the world with their traditional market arrangements and power structures on the one hand, and the emerging integrated retail chain to supply chain seafood networks on the other. However, what we also observe is that both forms will seemingly persist over time, and that a new pattern of interaction and specialisation is developing between them. Hence, the new networked forms both change and adapt to the historical market forms that are already in place. The new standard will never be completed, but remains locally dependent and negotiated – still leaving suppliers in places like Ålesund with complex differences across their markets. As such, the heterogeneity argument, put forward by Holmen and Pedersen in this volume, continues to hold at the overall industry level of analysis. To master resource-, activity- and actor- heterogeneity across global seafood markets is core to the business of seafood trading.

#### 4. Network identity and network agency

The role of ideas and meaning-formation in relation to industrial network theory has also been a debated topic within the IMP. Håkansson and Waluszewski (2002) suggest dealing with this issue by focussing on the interplay between actual real-world activated structures and mentally contained idea structures. The activated structures are seen as the set of actor bonds, activity links and resource ties that exist in the physical world. The idea structures are seen as patterns of logic and knowledge of possibilities, problems, goals and ambitions (ibid: 820). As such, idea structures can be seen as part of actors and actor bonds in the ARA-model framework, and refers to a particular capability for mental thinking and communications that of course is a core characteristic of human actors. This perception obviously includes potentially very influential roles for ideas in relation to the networks studies, without assuming any particular relationship between the activated and the idea structures in terms of defining the identity of the given network. Any given network will typically contain multiple identities, in which case the relevant networked subjects will typically not be identified with particular idea structures but rather with their material and economic activated structures. Abrahamsen, Naudé and Henneberg (2011) use this approach and elaborate on it

based on their study of the Japanese fish distribution systems by arguing that if particular idea structures shall be able to influence and change the actual activated structures, they must interact with or somehow mobilise alternative actual structures that are consistent with the ideas. They illustrate this point by showing how a major company does this by drawing on their knowledge from elsewhere of how things may be done differently, and then move to establish a different distribution system. As soon as particular idea structures and particular activated structures are connected in this way, the subjects of the narrative tend to change into networked actors that are identified with their idea structures, with their particular intents. As a result, they argue that “battles of ideas” are particularly important in relation to how networks change (ibid: 131).

Lars Huemer argues that meaning and sense-making processes associated with networked entities are highly important to understand business interactions and their outcomes. At least implicitly, he suggests that industrial network theory should somehow include the dimension of “particular meaning” to its conception of what a network is, in order to properly account for it in studies, analyses and theories. The network may then be seen as directly representing an agency capable of acting on the basis of its own understanding and interest. To me, this is similar for instance to the concept of a network in Actor-Network Theory (Latour, 1987, 1991, 1993; Callon 1986; Callon & Latour, 1981). This would imply that the subjects of our narratives become associated with those that represent different meaning – or different “standards” in Huemer’s wording. For instance, the Salmon industry and the First nation communities will represent two different networks to be distinguished by their different cultural interpretations and opinions about salmon farming. This naturally leads to an analysis that focuses on “battles of ideas”.

On the other hand, the two end up collaborating, in which case they must be seen as parts of one and the same network in the usual IMP perspective (Håkansson 1982, Ford et al 2010). Their resources, activities and actors obviously interact in an ARA-networked mode. Hence, if the meaning dimension should be included into IMP theory, we may need to reserve a different vocabulary to networks that are to be identified with their particular meaning, as opposed to those that actually interact in the more material and economic perspective that is the hallmark of IMP theory. They could perhaps be seen as “intentional networks” as opposed to “activated economic networks”? The arguments represent an interesting challenge to IMP theory, however, perhaps it would be better to refer it to the ANT-approach where these aspects are already well conceptualized, in order to maintain methodological approaches that are distinct and differ in ways that call for both approaches to be applied when relevant to the research issue at hand? Increased methodological complexity is not necessarily the most promising route to more productive

theory development.

## 5. Network interface management

Another challenge to IMP theory is related to the conceptualisation of network interfaces with respect to how change and variation is managed. In IMP theory such as outlined by Ford et al. (2010: 84-85), interaction between companies is seen as a fundamental mechanism that “enables each to take advantage of an economic world characterised by continuous change, but with many potentially cooperative or at least mutually beneficial counterparts. Continuing interaction with others provides some kind of stability in a world of unpredictable outcomes and unknowable influencing factors. In this way, interaction is both a dynamic and a stabilising force”. Two of the papers in this volume have a particular focus on such interaction processes across company-to-company interfaces. One addresses how we may conceptualise analyses of situations where a particular project – despite substantial efforts – is not able to interact with the partners it needs to materialise in a real-economic way. The other addresses the role of routines in performing the combined dynamic and stabilising interaction processes across company-to-company interfaces.

Hoholm and Håkansson suggest using the notions of a “gap” and “bridge” for this first objective. As noted, this wording tends to associate the interaction problem primarily with the quantitative idea of “distance in space”, where qualitative difference may be at least as important. The idea of “fit” (or “fitting”) may perhaps also be useful to describe the adjustments required on both sides of a dyad for an innovation to be adopted by both, thereby representing also the qualitative dimension of whatever is involved? Bridging gaps and fitting relationships to one another in response to major change processes seem to be widespread kinds of managerial activity. These observations are hardly new to IMP theory, however, as always, theory development requires debate over which analytical concepts are the most useful and productive when applied to complex empirical studies and extractions of theoretical contributions. As such, both terms “bridging gaps” and “fitting” may prove useful and productive to such efforts.

Finally, I find that Harrison’s argument about the role of inter-organisational routines is core to why networked markets may be more efficient and effective than arms-length market interactions. Organising and stabilising decision-making processes and complex interaction patterns in collaborative, adaptive routines is a mechanism at intense work in the networked real-economy presented by Harrison. Economising through routine changes and adaptations in relation to new experiences should similarly be seen as a mechanism to stabilise the value of “learning by doing” in the context of interacting with partners, competitors, regulators and opponents that are interacting with a huge variety of

resources, complex activities and diverse actors. Routines make activities manageable at the local level, and permits for a sequential process of experimenting and improving of practice. To the Norwegian company “Global Fish” in Ålesund, these routines are at the core of their Norwegian operations. More interesting perhaps, the very same routines are at the core of the Japanese customer’s operations in a country at far distance from its home base in Japan. Hence, also to the Norwegian seafood exporters, the mastery of routine formation and practice at the far ends of their global markets should be seen as representing a core, yet very distant activity that – just as in the Japanese case – may require local on-the-spot participation.

## 6. Concluding comments

The contributions included in this volume may be grouped into three areas of debate within recent IMP literature. One of those regards the evolution of distribution networks and new forms of organising within an industry where the products are neither technologically sophisticated nor particularly complex, and where international trade stretches far back in history and into very distant markets with rather different marketing forms. This topic is in particular addressed by Abrahamsen and Håkansson and by Holmen and Pedersen. A second area of discussion concerns network identity and networked agency formation, which is discussed by Huemer. The third area focuses on the issue of business interaction management, addressing particular challenges in relation to product innovation and the role of collaborative routines in performing stable and flexible business operations. These issues are addressed by Hoholm and Håkansson and by Harrison.

In the broader perspective of business and distribution network theory, the seafood case throws illuminating light on the relationship between industrial interactions in geographically concentrated areas such as those associated with “clusters”, “industrial blocks” or “knowledge hubs”, and the extended production and distribution networks that stretch from these geographical spots across the globe. If we bring all the three discussions above into this broader perspective, they may all be seen to contribute to an understanding of the real-economy at the micro level of interaction where companies struggle to find ways to overcome their material and cognitive differences, in order to bridge their heterogeneous resources, activities and actors as well as their ideas and interests, in ways that may serve their diverse and sometimes conflicting economic objectives better. The processes of interaction that follow from successful bridging of these kinds, are what economic activities are basically about – also in the seafood sector. In this volume we will be presented how this works in feedstock distribution, in business interaction routines, in innovation processes, in supplier-to-retailer restructuring processes

and in Chilean salmon farming controversies. However, these observations of and theoretical extractions from the micro-level of activity also bring interesting perspectives and theoretical propositions to discussions at the macro level of analysis – in analysis of industries, distribution networks and market forms. The interactional processes that we observe at the micro-level seem to represent the basis as well as the potential for processes observed at the macro-level, for instance with respect to in the evolution of distribution and marketing networks and networked agency forces. This seems to follow simply because these micro-processes are what macro-structuring processes are made of. There is no separation of micro and macro in the real economy. They are one and the same.

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