

Knowledge, Transparency and Power in Business Networks

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Abstract

This article explores into the relationship between food suppliers and supermarket-chain retailers in the concentrated and import protected Norwegian dairy market. It aims at developing and discussing analytical constructs to analyze “the dark side of networks” characteristics of such economic systems (Håkansson et al 2009). On the background of ongoing rivalry between the historic agrifood supply regime and the emerging integrated supermarket regime (Bush 2007, Konefal et al 2007), the paper presents and explores into three empirical sub-cases conceptualized as “power-games”. These are “The interdependent production-capacity game”, “The asymmetric mutual dependency game” and “The networked cost- and benefit distribution game”. The paper argues that to focus on power, knowledge and transparency is a useful approach to studies of transaction patterns and economic re-distribution effects across the interacting actors. It furthermore suggests that a potentially rewarding research route would be to move transaction patterns in complex interacted economies to the focus of further empirical investigation and theory development.

Keywords: Business networks, knowledge, power, transparency, food markets, transaction patterns

Introduction

Looking back at the business world over the last few decades, it is striking to note how networked it has become during this time (Castells 1996, Håkansson et al 2009, Marfels 1992). Firmly organised inter-organisational networks have spanned across industries as well as across the globe. Business networks of various kinds have come to represent a dominant share of the international business landscape: a conglomerate of hyper-effective interconnected business systems generating and moving goods, services, input factors, money, people, knowledge, etc. in interacted operations in what appears to be from anywhere to everywhere. The information-, communication- and control technology revolution we have witnessed over this period of time has obviously been a major driver behind this development, by radically expanding capacity for network interaction, information- and governance-controls as well as the organisation of businesses.

These interdependent business networks have not only become more effective and efficient than what may be associated with “independent actors’ competitive market” practices. They have also become extremely

powerful economic and political entities capable of turning traditional economic-political power structures on their heads, reshaping the ways that business and markets really works (Busch 2007, Konefal et al 2007). No country seems unaffected (Håkansson, 2006).

In my view, the IMP research over the last 30 years, through a great number of very detailed and theoretically elaborated pieces of work has offered convincing arguments to explain what business networks are as well as to explain the existence of widespread, dominant interdependent business networks in modern economies. This conclusion seems to be clear. Economies are truly highly interacted. The global meltdown of the financial markets in 2008 demonstrated the argument to the degree that even the blind could see it.

Departing from this, the tradition also returns to the broader picture of economic life that originally led to its own emergence, and asks new and important questions based on the assumption that the dominance of interacted business networks is a given, and that we in broad terms as well as in considerable detail do know how they work and why they have come to dominate over less interacted economic systems. We should consequently turn our eyes to some of

the implications of these observations. What do business networks do to our economies? What are the consequences, and in particular; the potential dangers, of the highly networked business world? What are the actual and potential problems for businesses, for the economy and indeed for our societies that arise due to the domination of these expanded networked structures? What are their internal and external effects, for instance on distributions of governance controls, of economic gains, risks, losses and wealth accumulations? How can these kinds of issues be addressed and analysed?

Håkansson et al touch upon these issues when addressing “the dark side of networks” (2009; pp 253-254). Even though the characteristics of this “dark side” by no means are clearly spelled out and defined, they are in particular associated with the powers of business networks and the lasting impact of their mutual investments into structures that do not easily change or move. It concerns their wide-spread negative effects when they or their products fail to produce sufficient economic returns. But even more importantly, the “dark side of networks” concerns their implications for democracy. It definitely concerns the power-structures of our societies and the patterns of welfare distribution.

Quite obviously: not everybody has become winners in the new networked economy. A few seem to have gained a lot more than the many. “There is no intrinsic fairness in a network. There is no reason to suppose that a network will provide the same opportunities for those who relate to it, that it will operate in some “common interest”, or that its direction, outcomes, or benefits will be apparent to all” (ibid, 254).

Networks represent their own domination in relation to the less networked. Networks are powerful engines that may destroy others. Its interests do not necessarily correspond to the individual interests of each of the actors that it includes. Hence, networks contain internal power structures across conflicting interests.

Furthermore, Håkansson et al points to the important political-economic consequences of the fact that networks are non-transparent and that certain actors will tend to dominate. They suggest as a first conclusion, that there is no justification for leaving networks to themselves. There is a need for politics to develop countervailing forces when the interests of the actors within a network are seriously unbalanced. Strong powers sometimes need to be moderated and weak actors need to be supported. However, as business landscapes are both non-transparent and complex, such political attempts are definitely non-trivial challenges (2009: 254).

Democratic societies seem to rest upon the ability to actually control and direct powerful economic agencies that may otherwise grow to dominate their societies, extract unreasonable rents from others and grow their economic resources into close associations with political institutions. Strong business networks may seriously corrupt democratic societies that truly rest upon the ability of civil society

interests to go between economic resource based powers and democratic political institutions. The dramatic growth of the networked economy represents a particular challenge – in part because network identities are more blurred and their features less understood than the classical forms of economic organisation as represented by unified judicially integrated firms or corporations.

The challenge of dealing with the “dark side of networks” also applies to network researchers.

The ambition of the paper

The aim of this paper is to start exploring into “the dark side of networks” with the ambition of clarifying what this may embrace, and furthermore to outline a few analytical constructs that might be useful tools for further investigations. One way to approach these features is to focus on observable economic transactions, assuming that the “dark side of network effects” is largely reflected in economic transactions between the participating actors. If observable transactions in the form of payments for goods and services represent a medium for re-distributing effects that we may also observe, we may start investigating what explains these re-distribution outcomes. That is, the analytical constructs that we need to develop are those that will permit us to identify and explain the actual mechanisms at work.

Within the economic literature, issues of market power are typically dealt with within a paradigm that assumes the possibility of a “perfect market” represented by numerous sellers and buyers of homogenous products. Power is dealt with as some deviation from this ideal condition, as representation of market imperfections. There is a substantial literature on this topic – within what is commonly denoted as economic regulation and control theory within the broader area of industrial organisation economics. Abstract mathematical models and the use of formal game theory is a core to this kind of analysis. Much has been said about market power problems within this tradition. However, the fundamental appreciation of a networked economy essentially falls beyond the analytical reach of the paradigm, when networked economies are found to be more dominant, more realistic and also potentially more efficient than the alternatives. Hence, we also need to address these issues from a theoretical perspective that acknowledges the fundamental networked characteristics of the economy.

While much is known from the IMP and other business network literature about networked economies and their functions, substances and patterns, less appears to be known about the effects of emergent power patterns they also represent. Even though power is recognised early as an integral aspect of interacted networks (Kinch 1974, Wilkinson & Kipnis 1978, Håkansson 1982) further investigations into power and dominance have not been at the core of later work. There are some discussions of particular aspects of power

such as of Bångens & Araujo (2002), Wilkinson and Young (2003) and Brennan, Turbull and Wilson (2003). However, there is a general absence of empirical research into the possible negative effects of networks on the economy or on other aspects of society and societal interests.

As a point of departure, I hypothesize that three broad features are at the core of this. One is knowledge capacity, understood as the combination of information and analytical capacity that plays such an important role in strategic interactions. The other is transparency, in the sense that a given activity may be more or less sheltered from being observed by those affected or interested. The third is executive network power, which is obviously a rather multi-faceted phenomenon in business network settings. By focusing on these features, I hypothesize that it will be possible to identify some of the mechanisms that more precisely influence the dynamics and the outcomes that have been associated with “dark side effects”. That is, I am interested in whatever mechanisms cause disturbing economic re-distribution effects across actors that have to do with the distribution of knowledge capacity, transparency and executive network power characteristics within interacted business networks. In other words, in addition to the “normal price” of goods or a service, the associated economic transactions are expected to contain additional economic elements that are broadly associated with “dark side of networks” perceptions. Phenomena such as knowledge capacity, transparency and executive network power are obviously real, and to an analysis like this, they may serve as both input and output variables. The explanatory mechanisms will have to focus both on their redistributive effects and on their dynamics across successive transactions over time.

The three features suggested here may be seen as dimensions associated with particular “network positions”, which is a concept that has been used to describe an actor’s ability to influence or dominate in networks (Wilkinson 1979, Gadde and Mattsson 1987, Johanson and Mattsson 1992, Anderson et al 1998, Håkansson and Snehota 2006, Johanson and Vahlne 2006). Network position describes the relations of an actor, a firm or another organisational entity to other entities within the network, associated with the resources it controls. A network position is seen as a dynamic phenomenon developing over time through investments by the focal actor into particular relationships. The exploitation of a network position is argued to vary by the characteristics of the type of network structure, such as the degree of internal network structures, the homogeneity of network positions, the level of internal hierarchy and the exclusiveness of particular actors in relation to participation in other networks. The ambition of this paper is not to go further into this kind of typology, but rather to search for the mechanisms that may explain the emergence of particular economic patterns over time.

To embark on this, I will start by presenting a case study from within the Norwegian food sector. The case study has

been conducted on the background of a long-term research interest in this sector over the last decade, and has more specifically focused on the situation within the meat industry and the supermarket based food retailing networks. It is based on multiple sources of information including interviews had during 2009 and 2010 with corporate managers within the farmer owned meat cooperative Nortura, with other food manufacturers as well as information from the four supermarket chains in Norway.

Case: The Norwegian meat industry and the supermarket chains

Before I get to the actual case analysis, I will present a rather broad background picture of the industry and of the two “counterparts” that represent the major actors in the three short cases that I will present and discuss later on.

Norway (along with Switzerland) has maintained a nationally protected food market policy, whereas other European countries have joined the transnational EU market. The country also has a highly concentrated food market with a small number of suppliers and only 4 supermarket chains controlling close to 100% of the consumer market. The Norwegian food market may then serve as a useful “laboratory” for studying interactions and re-distributive outcomes in highly concentrated networked economies.

Since the 1930s the Norwegian agro-food industry has gradually become dominated by a state-corporate governance system aimed at supporting domestic agricultural production, food production productivity and farmer incomes in the context of rapid growth in overall industrial productivity, growth in consumer purchasing capacity and overall welfare developments. Through this policy, farmer owned supply cooperatives supported by state regulatory efforts grew to dominate not only national markets for agricultural inputs and outputs, but also industrial food manufacturing, marketing and to some degree also distribution to food retailers around the country. This was typically organised through various regionalised organisational systems. Somewhat similar systems also dominated most other Northern European countries at the time.

From the late 1970’s this situation gradually changed as the food retailers and wholesalers moved to form large supermarket chains and to coordinate purchasing and distribution within these new supermarket networks. From having more than 700 small supermarket chains across Norway in 1980, four integrated food-chains gained control over 99% of the food retailing industry by the mid-1990s. This development occurred concomitantly with the global supply-chain revolution at the time, which emerged as an integral part of the revolutions in information and control technologies, the radical lowering of global transportation costs, the new international division of labor and the wave of market deregulations between 1975 and 1995 (Bush

2007, Konefal et al 2007). Gradually agriculture also became influenced by the deregulatory policies as well, and bit by bit the sector also became more directly affected by international trade agreements like the WTO and EU-EEA treaties, which contained the room to manoeuvre for the state-farmer regime in shaping agricultural and food sector policies.

Also the Norwegian supermarket-revolution emerged in the context of these major international drivers of economic change (Olsen, 2010). The centralised organising of the supermarket-chains and their extended governance capabilities into their supply chains gradually shifted the power-structures of the food market systems, pushing the traditional state-cooperative governance system aside. In Norway, centralisation of purchasing functions in nationally integrated supermarket chains inspired mergers among the regionalised agricultural cooperatives to form nationally unified corporations. By 2002-2003 the traditional federative cooperative structures had become hierarchically integrated farmer owned corporations intended to rebalance power positions vis à vis the integrated supermarket organisations. Today, there is one national dairy cooperative, Tine SA, one national meat cooperative, Nortura SA, and one completely dominant grain and feedstock cooperative, Felleskjøpet Agri SA.

Through these moves, the historical state-corporate governance system in part managed to consolidate its regulatory systems in combination with maintaining dominant market shares in the major supply chains for agricultural products – in particular within the dairy-, the flour mill-, and the meat processing industries.

However, following these developments, the owners of three of the food-retail chains are now counted among the richest families in the country (The fourth is the consumer owned cooperative, The COOP-group). All of them are organized on a national level and all of them are connected to different international supply chain collaborations in Europe. Norwegian food retailing has become an extremely densely interacted business network industry.

At the same time, Norwegian agriculture still receives the highest levels of subsidies in the world and is shielded from foreign competition through import barriers. This market protection also implicitly protects industrial processing and marketing as well as supermarkets from direct foreign competition. Despite all of this, farmers' incomes from food production are steadily declining and most processing industries are striving to survive on narrow margins, whereas the three largest super-market chains appear to be able to continue allocating rising profits. The turnaround of the power structures within the sector is clearly reflected in income distribution across the participating parties in the supply chains.

The Norwegian food sector can be interpreted as an arena in which two different economic regimes interact and compete for dominance, the historical state-farmer-owned-

cooperatives regime, and the super-market-supply-chain-management regime. They represent different core positions in the value chains and have created competing networks of power in order to expand their systems and to dominate the terms of interaction with others. These systems interact with each other in productive supply chain operations. However, they are essentially not “on the same team”. They collaborate, but still fight to maintain and to expand their logic of control to suppress the other. Consequently, competition is both systemic and economic. The dynamics of interaction is a complex rivalry that involves all kinds of elements of collaboration, competition, power constructions and strategic games.

The supermarket revolution

The Norwegian “supermarket revolution” can be traced back to 1977 when two different hard discount organisations (Rema and Rimi) started expanding by imitating the business model and the strategies of the German AldiMarkt. They gradually grew through entrepreneurial growth, out of Trondhjem and Oslo respectively, and became nationwide discount chain-store organisations. From the early 1990s the Rimi entrepreneur gradually sold his company which finally in 2004 became fully owned by the Swedish ICA company. The traditional consumer cooperative movement responded to these developments by initiating radical changes in the early 1990s to become a much more streamlined national organisation (Coop Norway) orchestrating and coordinating 4-5 differently branded supermarket chains under a single purchasing office and a unified operational system. A similar restructuring of consumer cooperatives took place in the other Nordic countries, after which all the Nordic Coops moved to form Coop Norden in order to organise joint purchasing in international markets. Finally, a consortium of wholesale distributors in Oslo moved to organise all those small supermarket chains and food stores around the country who were not part of Rema, Rimi or Coop by forming a purchasing cooperative dominated by the wholesale distributors. From the early 1980s, this cooperative gradually picked up each and everyone, while also gradually transforming itself into a much more densely organised corporation under the name “Norgesgruppen ASA” by the turn of the century. Like Coop, Norgesgruppen coordinates several branded supermarket chains under one centralised organisation.

Norgesgruppen currently has a 40% market share in the ordinary consumer market, Coop has 23%, Rema 22% and ICA 15%. Norgesgruppen and Rema, in addition to this, share the entire market for small shops like kiosks and petrol stations, and Norgesgruppen controls more than 60% of the industrial consumer market (Hotels, institutions, canteens, etc.)

The ability to move from 700 organizations to 4 in less than two decades clearly depended on the new information-

and control technology that became available at the time. Computers, digital networks, bar-codes and optical scanners revolutionized the way retailing and supply chain management was being done, increasing analytical capacity dramatically and allowing for data gathering far beyond previous levels. The data systems have become their vital infrastructures offering the completely necessary tools to control and further develop their activities, resources and participating actors. Hence human-machine integrated knowledge has been core to the transformation of the food sector. Expanding these networks has to do with the ability to expand this integrated knowledge into additional activities, whereby directing and controlling them.

The four supermarket chains are – for the most part – competitors. Because they sell more or less the same broad range of products, their overall competitive focus is on market share. Market share represents the volumes that can be sold by a supplier through the centralised organisational gateway of the chain - through which negotiations with suppliers are being forced. The supermarket purchasing office then engages in a double negotiation. On the one hand they negotiate prices that are carried over to the consumers as the prices on the given products in their shops. On the other hand, they negotiate the prices for getting a delivery contract at all, and the price of this contract naturally increases with the market share of the supermarket chain also in terms of the percentage of the price per unit supplied. This results in an exponential income factor with respect to the market share of the supermarket chain. These payments are said to cover various expenses such as joint marketing, but in reality they are mostly lump sums. These funds, accordingly, grow much faster in the supermarket organisation with the largest market share, which will tend to escalate its relative dominance when these financial resources are being directed towards gaining additional market share growth. At the opposite end, the one with the smallest market share will tend to lose even more, as retained earnings per unit sold will be lower, thus limiting its ability to mobilise resources necessary to turn the game around. (True enough; ICA is continuously losing both money and market share, whereas Norgesgruppen continues to grow and increase its profits compared to its revenues.) Powers to control a large share of the mass-consumer market provide opportunities for increasing returns organised through non-transparent contracts and transactions. The re-distributive effects resulting from these transaction systems appear to accelerate developments towards highly unbalanced power structures in self-reinforcing spirals.

The state-cooperative regime in agricultural food

Nortura SA is the farmer-owned meat cooperative that resulted from the mergers of all regional farmer-owned meat-cooperatives in Norway in between 2002 and 2007. As a

result, the traditional federative governance characteristics of the national meat-cooperative system transformed itself into a hierarchical corporation under a unified board of directors and corporate management. Another outcome of this process was that the national egg- and poultry cooperative, “Prior,” merged with the larger red- and pork-meat cooperative, “Gilde,” to form Nortura - a single national farmer-owned unit across all variants of farm based meat production. Somewhat similar processes occurred within the dairy as well as the grains and feedstock area. That is, all the major areas of agricultural production in Norway.

Since the early 1930s, Norway has developed a particular regulatory system to carry out agricultural politics. At the core of this system, there are yearly negotiations between the state (Ministry of Agriculture) and the farmers’ unions over adjustments in the system and payments to farmers. To carry out a fairly large share of the regulatory requirements in practice, the farmer-owned cooperatives have been delegated roles as market regulators responsible for maintaining market balances over time on behalf of the two negotiating parties. The costs associated with these regulations in the meat market are covered by the farmers through a complex system of fees and payments managed by a separate unit in Nortura (in this case), which is subjected to supervision and control by a state regulatory body.

As part of this, the market for meat at the slaughterhouse node of the supply chain is also regulated such that other meat processors are able to purchase raw materials from Nortura at regulated and transparent prices and conditions of trade. These regulations are there to protect the competition in the meat processing industry, where Nortura has an overall market share of around 45%, whereas the rest is shared among several private firms. Nortura has a market share of 68% in the primary meat supply market.

All meat – except poultry – is subjected to such public market regulations, and the costs of regulation are in principle shared among the meat farmers. However, the ability of Nortura to carry out operational regulations of substantial meat volumes is in reality limited because much of these activities actually depend on what it operationally controls, which is not 100%, but only 68% of the primary supply market and 45% of the processed meat market. As a result some of the benefits and some of the costs are maintained in reality on the side of Nortura, ending up as gains or losses to the supplier-owners of the company. In times when benefits outnumbered losses, more farmers became owners. Nowadays, it appears that the opposite is true. Farmers tend to leave the company to avoid parts of the collective regulatory costs. So, how come the market regulator with substantial delegated state powers ends up carrying more of the losses?

Another important element of this historical regime is that it represents a continuous process of historical mergers in combination with closedowns of outdated factories. In the

traditional federative cooperative system, these processes were negotiated, leading to a situation where the organisation was committed to compensate those farmers who faced closures of their local slaughterhouses by paying equal prices to all farmers and compensating them for their added transportation costs. Some of these costs were typically shared with the state, through the yearly negotiations between the state and the farmers' unions.

"Equal prices to everybody and compensation for transport expenses" represent a collective pooling solution which is fundamentally unstable. This follows because if someone can offer a relatively attractive supplier from within the pool a better contract where he can escape from the less attractive suppliers, he would most certainly accept the offer and leave the pool. And so would the next one, and so forth. Hence, stability of a pooled solution depends on external powers to maintain discipline, which, in a rule of law based democracy, in the end can only be guaranteed by the state. As long as the state supplied this kind of authority, it actually worked.

However, since the early 1990's the state has adopted a dual policy by gradually introducing a lot more competition-oriented legislation, aimed at enhancing productivity. As a result, regulatory support shifted to those farmers who chose to leave the pooling system by guaranteeing them the right to leave as well as to return at no expense to themselves. Over time, this has carried over to the present regulatory system within a structure which accordingly is on the move from pooling to separation. Accordingly, the historically negotiated compromises within the pooling system have come under substantial pressure, forcing Nortura to separate its internal pricing practices, or watch all of its best suppliers leave the organisation. Hence, the historical regime is gradually disintegrating.

Three sub-cases: Business network power games

We shall now take a closer look at some of the interactions and confrontations of representatives of these two "power-structures", to see what we may learn about how and why the supermarket supply chain networks expand and appear to be able to obtain major re-distributive gains – in part at the expense of the suppliers that are dominant actors representing the traditional state-cooperative regime. We shall do this by considering what I have denoted as three different "games": "The interdependent production-capacity game", "The asymmetric mutual dependency game" and "The networked cost and benefit distributing game".

The interdependent production-capacity game

In early 2010, Nortura found itself under considerable economic pressures with declining market shares and growing deficits.

The overall strategy of the company has been to maintain a position independent from any of the four supermarket chains, with a capacity on the one hand to market and sell its own branded products through all of them, while on the other hand maintaining its position as a regulator of the meat market on behalf of its farmer-state coordinated patronage. With a number of other independent processors of meat in the market, all supermarket chains were free to purchase a mix of branded products for their shelves.

However, in 2008-09 one of the supermarket chains, Rema, which controls 22% of the consumer market, established a close alliance with one of the smaller meat processors - Nordfjord Kjøtt AS - in a tightly coordinated supply chain for meat products intended to handle the dominant share of future meat sales in Rema. This could be established through a combination of resource integration, highly rationalised supply chain organisation, the ability to ensure maximum capacity utilization in processing facilities under their control. In addition it increased access to a larger share of meat supplies from attractive farmers in combination with execution of the right to purchase additional raw materials from Nortura at state regulated prices.

Following up on this, another supermarket-chain, Coop (23% market share), decided to engage in a similar strategy with another group of meat processors (Fatland AS). All of a sudden, the market regulator Nortura had become completely dependent on the two remaining supermarket chains (Norgesgruppen (NG) and ICA. With 45% of processed meat products at stake, there was nowhere else to go. By default, Nortura became the main supplier for Norgesgruppen. And indeed, Norgesgruppen did not have the option not to cooperate more closely with Nortura. They became dependent on one another as a result of actions taken by others.

Through the new dense alliances between certain meat companies with Rema and Coop respectively, these meat manufacturers expanded their manufacturing capacities, ordered more regulated supplies from Nortura and enhanced their bidding for the most attractive of Nortura's supplier-owners. As a result, Nortura's volumes contracted and its capacity utilisation rates declined. To cut costs, the company moved to restructure its operations, only to find that the factories it wanted to close became takeover targets for their competitors – including Nortura's local suppliers, employees and the support from municipal authorities, etc.

Adding to this, Nortura discovered that it had become the swing producer in the meat processing industry. Through combinations of private label contracts with supermarket chains and the ability to purchase raw materials from Nortura at regulated prices, its competitors had established themselves essentially as base-load manufacturers running at maximum capacity utilisation levels. Both excess and peak-load capacity to an increasing degree had to be managed by

Nortura alone - for the entire Norwegian meat industry. The higher profitability from these stable full capacity productions permitted Nortura's competitors, in close alliance with two out of four supermarket chains to compete more effectively for the most attractive farmers, pushing Nortura back into a more costly and less competitive position in the markets for raw materials.

Being the swing-producer implies that you have to deal with all the non-planned, all the adjustments between expected and actual demand, all the variance that results from actions taken by the supermarket chains themselves to promote certain products over others, variances in the weather-dependent season products like summer-grill products etc. It means being responsible for all the hassle and the ad hoc adjustments. It also results in the need to keep peak load production capacity for a substantial variety of products and production processes. All of this is costly compared to the base-load manufacturer.

Furthermore, Nortura also has significantly higher marketing costs, because through the supermarket networks' control of the shelves and the overall marketing campaigns, the opportunities to discriminate Nortura are substantial. In order to reach the customers across all of this, Nortura has both to pay more for the contract to deliver, and to use more marketing resources on its own budgets. To compensate for all of this, it tends to become the price-leader in terms of setting the upper price-level for the various products such that the others can sell at lower prices with zero additional marketing expenses. Hence, Nortura in fact becomes a generic marketing engine for all meat processors.

Is there anything Nortura can do about this? At least it seems impossible to expand its sales to Rema and Coop, as both of them have in fact become direct competitors in the meat processing industry with the ability to orchestrate sufficient price discrimination in their own shops to guarantee a given volume for their new manufacturing partners. Whatever Nortura does in the given circumstances, it appears that it cannot win the Rema and the Coop games.

The protective sphere enjoyed by private meat manufacturers that was established by the state to prevent them from being exploited or suppressed by Nortura and the strong collective organisations of the farmers is all of a sudden entered into by the supermarket chains who command substantially greater financial resources, organizational capabilities and market powers. The game thereby seems to have been turned upside down in a struggle that also includes placing the burdens of excess capacity and peak-load management costs on the weaker party.

The asymmetric mutual dependency game

During 2010 Norgesgruppen repeatedly invited Nortura both privately and publically, into closer collaboration, with the ambition of establishing operationally integrated meat supply activities similar to the lean structures organised by

Rema and Coop. Nortura, which did not seem to have the alternative to reject the invitation, entered negotiations during the autumn. The fundamental internal argument supporting the move was that Nortura could not afford losing additional market share if it was to maintain its operational capacity to carry out its market regulatory responsibilities.

The negotiations between Norgesgruppen and Nortura ended in an agreement to establish an integrated operation for Norgesgruppen's private label production for its entire national supermarket system. The venture was to be organized at a particular production facility in Hærland located in Østfold county in south-east Norway. As part of this deal, Norgesgruppen committed itself to transfer a number of in-house activities from back stage facilities in the supermarkets to the new facility and to let Nortura conduct these activities more effectively in a new and industrially automated system. Nortura committed itself to make the necessary investments and to arrange for an open-book policy of operation, accounting and control directly connected to Norgesgruppen's data system. Upon signing the agreement, Norgesgruppen also requested an option agreement to take over the new facilities if Nortura for whatever reason, were not able to - or willing - to follow up on the investment in the future.

It is easy to see that the interdependency situation requires mutual commitments as well as enforcement mechanisms aimed at securing future flexibility. The choice of location close to the Swedish border in the south-east corner of Norway clearly indicates that Norgesgruppen in reality forced a hedge against the possibility that import barriers in the future might be reduced to permit for substantial meat import from the EU market via Sweden. To deal with such a situation, the location makes perfect sense: the facility should be used to process imported meat, which is definitely not consistent with the interests of Nortura's supplier-owners. Hence, it appears that Nortura has been forced to organise its new collaboration with Norgesgruppen in such a way as to prepare for its potential future unmaking?

It furthermore seems evident, that Norgesgruppen, with the option agreement, in reality would be in a position to control a future take-over process should it so desire. This follows because it clearly has the capacity to make sure that Nortura loses money on the investment, because while Nortura has sunk considerable capital into the relationship, Norgesgruppen has full access to all relevant information and has the ability to renegotiate the contract, while clearly also having the financial resources to take control of ownership by executing the option. Moreover, Norgesgruppen is certainly in a position to lower costs related to the potential execution of the option, through successive rounds of negotiations over product prices on their private label products.

These positions are clearly understood by Nortura, which accordingly faces the dilemma of making a sure loss of market position right away by withdrawing from the collaboration,

or to engage in a risky contract with the potential of future losses, but maintaining – at least for some time – the market shares needed for the continuous execution of its role as a market regulator.

With this move Nortura enters the role of a private label supplier, by copying the maximum capacity utilisation production model of its competitors – associated with a separated production economy with information access for Norgesgruppen.

However, Nortura still holds much of the swing- and overcapacity problem, which has become even more directly linked to the manufacturing and sales of Nortura's own branded products that will be forced into declining volumes by the expanding private label productions of which it has now itself become a major participant.

The networked cost- and benefit distributing game

Finally, we shall take a brief look at some of the network effects of the competition between the supermarket networks.

In the competition for overall market shares, the supermarkets seek to attract customers to their shops. One important way of doing this is to offer lower prices on certain products which have the capacity to attract additional customers who will subsequently also buy other products. It turns out that there are normally just around a dozen products that really do the trick on a regular basis, with a few more that are seasonal products. Among these, there are quite a few meat products.

What happens is that all of a sudden, one of the supermarket chains will start a price war by dumping its prices on anyone of these products. Soon after, the others will follow. As a result sales will rise as people both buy and consume more of these products. This is all very well, and corresponds to what can be expected in any normal, competitive market. Market competition works.

However, by moving behind the scene and getting to talk to those involved, it is possible to observe a little bit more of what is actually going on. First of all, during these price wars, prices are dumped well below the products' marginal costs, which to the supermarket organisation is equal to the purchasing price they pay to their suppliers. The suppliers typically receive their revenues according to a fixed price one year contract. Secondly, the financing of such price wars is planned for by the supermarket chains well in advance, through the building of internal funds financed through the various supplier contracts. Hence, competition for overall market share is financed by the entire supermarket supply chain network, where a supplier who, for instance might deliver goods to all of the four supermarket organisations actually pays to all of them for the supermarket networks to compete with each other. There is really close to nothing that looks like the classical marginal cost-based price competition on the given product. Rather, what looks like fierce marginal

cost based price competition on individual products, is rather a battle between organized network structures with particular internal distributions of payments, losses and gains.

While the prices for suppliers are not directly affected by the dumping of consumer prices, volumes are. If the given product can be supplied in large volumes in the short run, this is certainly not a problem for the supplier either, quite to the contrary. However, to meat manufacturing this is not the case. Meat production is about exploiting the value of the entire animal by producing and selling an optimal mix of products where relative prices of the products reflect their relative volumes and qualities and their respective demand curves in relation to one another. When a particular product suddenly experiences unexpected high demand due to price dumping decided by others, and the supplier has an obligation to deliver, he will end up slaughtering more animals only to sell a fraction of the meat. The remaining parts will go to storage – which starts a race to rebalance the product mix before product qualities deteriorates. In the end, much of it will go to the market at discounted prices. Hence, the actual costs of the competition will be carried over to actors with no ability to influence the decision to use their products to start a price war – possibly against some of their other customers, who will then add more weight to the problem by acting in their own interests as well.

What seems to be clear from this is that the market competition between the supermarket organisations is based on resource mobilizations that include the entire supermarket supply chain networks, and that the ways that this competition is carried out is certainly not decided by the suppliers. There is no obvious correspondence between who is making the decisions, who is paying the real expenses and who is collecting the gains. Costs and risks are clearly being pushed towards the weaker parties at the periphery of the networks, whereas the gains are allocated to the dominant purchasing units representing the four gateways to the consumer market.

It is obvious that quite a bit of these kinds of costs will tend to end up by the market regulator Nortura, who will handle most of the added storage and then distribute the losses to its farmer-owners. However, it is also clear that all the meat manufacturers involved will suffer parts of the losses, as there seems to be no way that they can avoid expanding their own supplies of the given product in excess demand without storing or dumping other parts of the animal.

Analysis

The three “games” presented provide only snapshot images of what we may think of as “the dark sides of networks” that are associated with particular transaction patterns between the actors. On the one hand, these transaction patterns portray

some of the internal dynamics in the networked systems that seem to be at the core of the broader transformation of societies and markets in the direction of a steady growth of business network domination in market economies. All of them also portray internal activities of networks as power-games over command positions and internal allocations of losses, risks and gains, where transparency conditions, knowledge capacity and execution of network power are striking features of what we observe.

In the interdependent production-capacity game, it is quite clear that the non-transparency conditions of the supermarket network transactions which are legitimated on the competitive horizontal dimension where they compete against one another, represent a striking strategic advantage in the vertical dimension along the supply chains. This is especially so in the confrontations with the regulated and much more transparent primary meat supply market dominated by Nortura and the state-cooperative regime. The ability of the supermarket chains to compete with their own suppliers under non-transparent conditions in reality provides an opportunity for the supermarket chains to gradually force manufacturing capacity under their direct or indirect control.

In the meat supply market, the ability of Nortura to compete with its own competitors in the meat manufacturing industry under conditions of non-transparency would have given Nortura a similar advantage, in which case its competitors in the meat processing industry would have lost substantial ground. In this case, public regulations ensure transparency and provide regulations aimed at balancing the interests of farmers against the interests of the other relatively smaller meat processing companies. With the new organising of retailing and with retailers moving into the supply chains, this balance is tilted – leading to very different transaction patterns.

With two powerful structures at each end of the market in a situation with asymmetrical regulations with respect to transparency and regulatory intervention, the non-transparent business networks will expand and eventually take control over or destabilise the other.

It is also a striking feature of this game that it leaves very limited space for independent manufacturers who are in a sandwich position. To stay independent seems to require that you accept occupying only marginal niche market positions. The competitive market for independent suppliers evaporates under these conditions.

It is similarly striking, that the patterns of the power-games are quite complex and do not only relate to variables like prices and volumes that are a core of market economic theory. The importance of holding contracts in such concentrated markets, and the ability to play the cards in such a way as to pass capacity utilisation problems on to others are vital variables as well. In integrated business networks and supply chain structures, the risks and losses seem to be allocated to

the weaker parties at the periphery of the business network structure, whereas command and profits are allocated to the centre. The more efficient this separation, the more uneven will be the income distributions generated over time by the network. Certain positions seem to be able to both appropriate dominant shares of the gains and to force others to appropriate intended or unintended losses.

The asymmetric mutual dependency game demonstrates that supply chain collaboration needs not be established on equal/balanced terms, even when the two parties entering into such a relationship appear to be relatively comparable in terms of size and market shares in their respective markets. Some nodes and some interfaces seem to be much more important in terms of securing real and substantial powers than do others. In particular, it appears that controlling the interface between the professional supply chains and the mass consumption represented by millions of non-organised amateurs, provides a powerbase which is different from and greater than controlling a dominant share of a particular position within the supply chains where all the actors are professionals and have the capacity to act strategically over time. The result is a negotiated solution which distributes downside risks to the one side and upside options to the other, and where the content of the economic transactions are outcomes of the relative powers of the two sides. In addition to this, fixed cost investments by the weaker party into the relationship provide opportunities for future hold-ups.

The networked cost and benefit distributing game illustrates that the network effects within interacted business networks are extremely important. Some of these effects have to do with the mobilization of resources from the periphery of the networks towards their most aggregated power nodes. These nodes make decisions on behalf of and for the benefit of the organisations they represent – pulling from the entire resource base of the networks. As a result, the gains from the actions primarily go to these organisations, whereas both positive and negative network effects roll through the entire network. In some situations, these network effects may turn out to be mostly positive for the weaker or more peripheral parts of the given business network, in others mostly negative, depending on the characteristics of the particular activities and the nature of the actions taken. Hence, power positions and non-transparency conditions generate highly asymmetrical economic network re-distributive effects.

It seems clear that participation in the network resource mobilisation is not necessarily voluntary. To some it rather appears to be forced, completely lacking relations to their own interpretations of their immediate interests. It is a situation where network participation forces the evaluation of total gains in relation to total losses.

A striking observation from these case anecdotes is that business networks are not only about positive connotations such as “productive interactions”, “shared knowledge”, “learning” and “extended effort to establish more effective

and efficient economic activities,” etc. It also involves a number of power issues that decide on the re-configurations of industries over time as well as on the allocations of gains, risks and losses. It seems to be quite clear that even though Nortura has a much more dominant market share in meat supply than Norgesgruppen has in the food-retail market, Norgesgruppen clearly holds the upper hand in their relationship due to its negotiating position, its financial strengths and its direct interface with the mass-consumer market. Hence, power based on network position tends to dominate the traditional market share based market power argument.

Furthermore, it is evident that these power issues are immensely important for the understanding of how interdependent business networks actually work and how they generate particular outcomes over time that we may for instance observe as expanded business network structures with tremendous capacities to act across organisational interfaces.

It is also evident from the case, that power positions in concentrated business networks may have crucial impact on the distribution of gains across the participating resources, activities and actors, and that these power-based allocations may have a significant impact on the structures that emerge within any particular industry – beyond what can reasonably be derived from economic efficiency arguments or from creative business interaction effects. In particular, “sandwich” positions in between powerful actors, are very problematic. Powers executed within as well as by business networks seem to represent an economic governance problem that extends from the traditional focus on monopolies, oligopolies etc. that for quite some time have been subjected to political- and market regulations. The powers of business networks to concentrate economic rewards in the hands of few and their capacities to execute market power across the network structures create serious challenges to economic regulators and policy makers.

The case presented furthermore illustrates how power positions also decide on the allocation of risks and losses across the networks. The more powerful actors within the networks obviously execute their powers by means of redistributing financial risks, losses and difficult to handle market roles such as peak-load supply and excess production capacity to the weaker actors. It is also clear, that the sources of weakness and vulnerability are multiple, and that the overall exposure depends on the composition of market roles and obligations as well on the outcomes of the ongoing re-configurations of the business networks themselves. Rapid reconfigurations of resources and activities may move actor positions quite substantially, with severe implications for the distribution of gains, risks and losses.

One of the features that represent a particularly important element of power, is the capacity of a given actor to compete directly with its own suppliers or its own

customers. Asymmetrical market regulatory structure seems to substantially influence these power positions – in part by deciding what information should be openly disclosed and what information can be kept secret at the core nodes of the business information networks. Similarly the ability of some of the actors to force others to convey particular kinds of knowledge/information appears to represent an important advantage as well.

Concluding discussion: Knowledge, transparency and powers in business networks – and the role of economic transactions

To conclude this discussion, I will return to the explicit ambition of this paper, which is to outline and clarify a few analytical constructs that might be useful for further investigation into “the dark side of networks”. This focuses on each of the three features “power”, “knowledge” and “transparency”. Adding to this, I will conclude by discussing the implications of this in terms of moving economic transactions to the center of empirical investigation.

The case discussed represents a setting where the number of actors is strictly limited; hence, power as result of concentrated organisational control is present on all sides of the interactions. What is at the focus of this discussion is not the existence of market power, but rather the mechanisms and conditions associated with particular patterns of interaction between actors that have substantial, but different kinds of powers – rooted in different histories of material emergence of business activities, investments, regulations etc.

Power in networks; networked powers in network positions

The kinds of power that I have discussed in this paper have to do with/are powers of particular nodes within networks, where the power is represented and executed in relation to the counterparts it interacts with. In this sense it is both positional and relational such as described by the IMP literature.

However, in order to discuss power in the context of business networks, we need to clarify what we mean by “power” and what concept of power would be appropriate for this kind of analysis. First of all, I believe power should be understood in its classical as well as its everyday meaning, that it is defined by the ability of some actor to force others to do what they would not themselves choose to do (Beethan, 1991). From business network research, we also know that power is represented by established structures, investments and all the material and systemic elements that have been put in place at substantial cost and over long periods of time. Power is somehow baked into the structures and the mechanisms they represent. Furthermore, in business network research the powers we look at should at least have some clearly identifiable economic implications, for instance

in terms of distribution of profits, risks and losses.

As an analytical concept of power for studying the particular powers associated with a particular node within a network, we may apply the construct of power presented by ANT. It suggests that power analytically can be represented by a chain of power elements that are being created, mobilised and linked by those seeking to expand their activities and resources into the world (Latour, 1991). Each of these elements may add additional weight to the linked entity that represents "the power" in such a way that the various elements support the powers of the entire "power-chain". To describe the power is to describe the chained entities.

It furthermore assumes that some of the linked entities are more important than others, and that the failure of important entities may cause the entire power-chain to substantially weaken and eventually to disintegrate. Hence, there is no priori power given in and by itself, only associated entities that are being mobilised to achieve the expansions, stabilisations and persuasiveness of particular actors dominating the network node we are studying.

The advantage of this concept of power is that it is a very flexible construct, which does not associate with conceptions of power where particular powers are somehow pre-given and stable. Power is something that emerges in particular historical settings that may stabilise or dissolve depending on the actual emergence of history. The content and reality of actual power is thereby handed over to be investigated empirically. To us then, the powers associated with business networks are not pre-given in the nature of business networks, but concretely associated with the particular resources, activities and actors of which they are made in each and every instance. As such I think this is quite consistent with the underlying analytical conception of power within the IMP tradition, which however tends to be more explicit when characterising the typical patterns of power that can analytically be observed than it has been about explaining some underlying analytical characteristic of "the concept of power".

A power position is thereby represented by the position from where it is possible to mobilise the chains of powerful elements associated with a given node in a business network. This obviously includes what is typically associated with positional power, relational power, resource based power, political and regulatory powers ,etc.

Knowledge in networks; networked information and analytical capabilities

When calling attention to how companies handle their knowledge in relation to extended business networks into which they are embedded, the role of information technologies can hardly be overstated. When talking about the kinds of knowledge that companies possess, search for and organise, interact with and maybe share internally as well as externally, modern information technology seems to

be even more key. It has radically enlarged the capacity to facilitate extended organising as well as the capacity to act on the basis of massive analytical capacities and capabilities. It has furthermore obviously expanded the role of economic agency far beyond its usual association with ownership control over particular judicial entities/firms.

The role of knowledge has been given substantial attention within business network research, in particular in the perspective that it is a major constituent of what a business network really is and how it works. Everywhere where heterogeneous resources, activities and actors interact, knowledge is a necessary ingredient for generating economic results, for holding the networks together and for improving, changing or otherwise managing within the networked context. It is contained in the very essence and meaning of the term "relationship", as a relationship without knowledge, would obviously be irrelevant in whatever economic context we might think of.

What stands out as particularly important on the background of the case presented in this paper is the way access to information is organised, controlled and distributed, and secondly, how access to volumes of relevant data across the network is channelled into nodes which represent substantial analytical capacities and capabilities. The ability of the supermarket chains to demand access to data from their suppliers, and their capacity to analyse these datasets across multiple supply channels, give them a knowledge capacity advantage within the overall supply chain network, as the reverse flow of data is a lot more constrained. The vital engines of knowledge capacity generation that appear to have substantial impact at the overall level of analysis can be represented as the interaction of particular flows of data into particular nodes of analytical capacity. What these flows are and what these nodes contain can be empirically investigated, provided the researcher gets access.

Transparency in networks; networked transparency and external visibility

When addressing the transparency issue there are at least two different notions that should be kept apart. One is transparency within the network as observed by the actors within the network itself. This we may call relational transparency. The other concerns the ability of anyone with an interest in the matter to observe what is going on. This we may call external transparency or visibility.

From the case presented, we may suggest that external transparency to a significant extent depends on explicit market regulations that are there to ensure disclosure of important information. "The more regulated, the more transparent, and the more competitive the less transparent" - might be suggested as a working hypothesis. However, researchers as well as government institutions and private

consultancy and information service firms investigate, collect data and present such information for free or for a fee. Hence, external transparency varies with externally published data.

Relational transparency on the other hand, is different. This is something that goes on within a relationship where both power relations and knowledge (as I have defined it here) appear to be vital. Relational transparency may be seen as both an aspect of power and as a condition for it. The same goes for knowledge capacity. Because of the complexity and lack of real overview of what is relevant information to know about the other, what matters seems to be the structure of information exchange that results from negotiated agreements, the implementation of particular software based information systems and the inclusion of these data sets into the “knowledge engines” at each side of the relationship. The structure of this, essentially decides the distribution of relational transparency. Hence, the more powerful side will tend to develop its powers through forced access to information flows illuminating the activities of others throughout the network, whereas the less powerful will end up with limited access to information in the opposite direction. To rebalance the relationship, the less informed will have to move much more decisively and with focus in order to expand its “knowledge engine” into those areas that are really important to it. Hence, relational transparency could be investigated by focusing on the information gathering and knowledge developing strategies of the actors at different sides of a given relationship.

Transactions in networks; transaction content and re-distribution of economic effects

When studying what business networks actually do to our economies the focus is moved from the internal features to the aggregated internal as well as external effects at a more meso- or macro-oriented level of analysis, which should be rooted in an appropriate micro-economic approach. As we are economists, the focus of attention should be kept on the economic effects, which also include economic governance and economic policy effects and implications. One possible way to address this is to start with a focus on internal economic transactions.

Transactions in the form of payments for goods and services are the media for many of the distribution effects that aggregate into the kinds of broader implications of the networked economy. Economic distribution effects across actors that have to do with the distribution of knowledge, transparency and power characteristics, involve economic transactions. This implies that power-, transparency- and knowledge effects must be “contained” in the particular transactions within networks. In other words, in addition to the “normal price” of a goods or a service, the associated economic transactions are expected to contain additional

economic elements that result from what, as a point of departure, has been associated with “the dark side of network” effects. By focusing on patterns of transaction and the content of transactions, more of “these dark sides of networks” could possibly be revealed to us as well as better explanations about what mechanisms are involved and what their consequences are likely to be over time.

However, a “pattern of transactions” is nonetheless not a clearly defined thing, that we can easily observe and analyse. It cannot be reduced to a summary of individual economic transactions, because what we need to address is both the major qualitative dimensions of the transactions over time and across interrelated resources, activities and actors. It is a kind of structural pattern where the challenge is to obtain information about it over time – to both analyse its structures and its dynamics. This is not easy, and the accounts that are presented here are obviously only “snapshots”. More work will obviously have to be conducted to improve both the clarity and the usefulness of a research approach aimed at investigating these economic patterns.

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