CONTRACTS FOR CO-ORDINATION: CLASSICAL OR RENEWABLE?

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INTRODUCTION

A closer co-ordination of the activities in the food value chain has been observed by a number of authors, for instance Boehlje and Scrader (1998), as practices such as the just-in-time and "efficient consumer response " (ECR) (King and Phumpiu, 1997) have been gaining ground. At the same time, retail chains have achieved market power in many countries. For instance, in Norway four chains control close to 100% of the retail market in food.

The purpose of this paper is to investigate what governance mechanisms emerge between supplier and customer in this situation, and to explain why the specific mechanism is chosen. It is straightforward that closer co-ordination implies the need for predictability in the relation, and therefore, greater dependence between the parties. Due to high switching costs (Klemperer, 1987), this may lead to what Williamson (1975) called a lock-in situation. When the customer is locked in to the supplier, the danger is that the supplier acts opportunistically, and thus demands a higher price than a given market price. Thus, the problem of closer co-ordination of the activities in the value chain is opportunism. The task is to find a governance mechanism that alleviates or removes the problem.

The companies can make a choice of governance mechanism among a number of discrete alternatives. In this paper, these alternatives are summarised as different forms of contracts. First of all, the retail chain may choose to buy on spot contracts, it may integrate upstream to achieve vertical integration, or it may enter into some form of long term relationship with a limited number of suppliers. This last mode Hennart (1993) called "the swollen middle", indicating that some form of repeated, long-term relationship is the most common transaction

mode in most Western societies. Williamson (1991) characterised the middle ground as the «hybrid forms», because they were neither pure market transactions nor exchanges between supplier and buyer organised within a company, although they lent some specific features from both.

In this paper, a closer focus is put on the swollen middle as well as vertical integration in the analysis of the choice of governance mechanism of the exchange relationship. Four different modes are identified. These are the classical long term contract; internal contracts, or vertical integration; long term, renewable contracts; and lastly, implicit contracts or networks. Evidence from the Norwegian food market is presented that indicate that some form of long term transaction mode is indeed the preferred mode among retail chains, and it turns out that the classical and the long term, renewable contracts are the most common.

Why is a specific governance mechanism chosen? This is the question of the second part of the paper. An investment perspective is taken in the comparison of the classical and the long-term renewable contract, so that the companies maximise the value of the current contract plus the expected value of the contract in the next period. It turns out that important differences between the two contracts emerge. The long-term renewable contract shows that at least some of the interests of the supplier and the customer may be aligned. Thus, the theory attaches greater importance to the mutual benefits that a closer co-operation may bring and less to the avoidance of its adverse effects.

Empirical material on the food sector in Norway is used illustratively. The data is mainly qualitative, stemming from interviews with managers of food manufacturers and of the retail chains (Strøm, 1998), secondary data as well as observations of the food chain.

The paper is organised as follows. First an overview of various governance mechanisms is given, secondly, the prevailing contracts of the Norwegian food sector is presented, and lastly, a brief discussion on the difference between the classical and the long-term renewable contract is presented.

TYPES OF CONTRACTS

"The swollen middle" covers a number of different modes. These are given different names in the literature. For easier reference, contracts are used as the common denominator of the transaction modes. The spot transaction mode is excluded from discussion. It will become apparent why this is not an interesting case in the Norwegian food chain.

The classical contract

This type of contract has the following characteristics:

1. It is a formal contract.
2. The contract is supposed to be comprehensive, that is, covering all contingencies that may occur during the contract period. In this sense, the contract will never need to be revised or complemented (Holmström and Tirole (1989)).
3. In case of disagreement over the contract, the court is the prime conflict resolution medium.

Of course, the great challenge of this kind of contract, is to foresee all the contingencies that might occur. Dixit (1996) has noted that writing such contracts may be very costly, or impossible, for three reasons:

> ...(1) the inability to foresee all the possible contingencies, (2) the complexity of specifying rules, even for the numerous contingencies that can be foreseen, (3) the difficulty of objectively observing and verifying contingencies so that the specified procedures may be put into action.

In many cases, the cost of writing such contracts, as well as the costs of its monitoring probably prevents the use of the comprehensive contracts in many business situations.

Furthermore, the classical contract has unfavourable incentive effects. The supplier knows that the contract extends for only the specified period. After that, a prolongation of the contract is usually put up for an auction. Being uncertain whether the contract will be renewed or not, the supplier does not make relation specific investments, but in general assets instead, which may be used for other customers as well. Also, the supplier may "work to contract",

that is, make no extra efforts beyond what is required by the contract. On the other hand, the supplier may instead invest in relation specific assets and fulfil the contract in the best interest of the customer so as to increase the probability of renewing the contract, may be in the end becoming an indispensable supplier. If this situation occurs, the supplier may act opportunistically by raising prices or lowering the quality level.

In both cases, the relationship is characterised by gaming, that is, each party tries to come into a position which brings advantages to him at the expense of the of the other party. Mudambi and Helper (1998) called this a close, but adversarial relationship.

The internal contract – Vertical integration

The impossibility, or great expense, of writing and monitoring a comprehensive contract led Williamson (1975, 1985) to suggest that "hierarchy" replaced the "market", or that former market transactions were performed within the company. In the case of a supplier-customer relationship, this means that two (or more) stages in a value chain came under the same ownership. The new company was vertically integrated. Williamson further pointed to repeated transactions with the same supplier as well as the need for investing in relation specific assets as causes of vertical integration.

The question of vertical integration may be seen as a question of the limits of the firm, starting with Coase's article in (1937). Lately, this has been followed up by among others Grossman and Hart (1986).

The long-term, renewable contract

Of course, the "myriad mixed of intermediate modes filling the range" (Williamson (1985), p. 16) between spot transactions and vertical integration were recognised. Here, particular attention is put to the long-term, renewable contract. The contract is specified for a number of years. As we shall see, contract lengths of 10 years have been entered into in Norway. Furthermore, the contract is renewed, if the supplier has performed well in the previous period.

Other aspects of the long-term, renewable contract may be summed up as follows:

1. Less formality than the classical contract. Thus, all imaginable contingencies are not specified within the contract, but uncertainties are resolved as they occur through negotiations.
2. Rules for information disclosure. The contract may specify the disclosure of information on a number of aspects, including pricing and cost data. This is done in order to reduce the scope for opportunistic actions.
3. Co-operative attitude. The attitude of the parties is important. Willingness to change, and generally to "work with" the customer is seen as important determinants of a successful contract. A problem-solving and collaborative attitude is fostered.

This kind of contract is known in the Japanese car industry (Nishiguchi (1994)). Taylor and Wiggins (1997) have contrasted the "Japanese system" with the "American", which comes closer to what we have called the classical contract here. In particular, the contracting period was shorter in the "American" system, and contract renewal was not made contingent on the performance of the last period, but was decided in an auction.

The contrast between the two types of contracts has other aspects as well. In the classical contract, the supplier has a fairly specified order to fulfil, which will increase its predictability. However, it is not certain that another contract will be landed after the current is terminated. Therefore, the supplier will not invest in relation specific assets, The contrast to the supplier in a long-term, renewable contract is evident. The supplier usually has to accept some flexibility as to deliveries, both in terms of volume and mix. However, a customer is assured for a rather long term. The contract may be renewed. This aligns the interest of the supplier with the interests of the customer.

The "strategic network" concept of Jarillo (1988) comes close to the description of the long-term, renewable contract. He describes this as "…long-term, purposeful arrangements among distinct but related for-profit organizations that allow those firms in them to gain or sustain competitive advantage vis-à-vis their competitors outside the network." The term "purposeful" indicates that some form of contract is basic to the network. Also, Jarillo insists that the network has a "hub firm". As will be apparent, the retail chains may be seen as such a hub firm.

The implicit contract – Networks

In this case, the contract between customer and supplier is not spelled out in a formal contract, but the parties transact with each other on a long-term basis. Two reasons for the implicit contract may be specified.

The first is that implicit contracts arise because of social embeddedness. Granovetter (1985) maintains that personal relations based on trust uphold complex transactions in the market, thus obviating the organisation of the transactions within the firm. In this case, the transactions between firms are «embedded» in personal relations. When transactions between parties are embedded, this means that norms and inter-personal relations determine from whom the customer purchases, as well as the manner in which the transaction is conducted. Social relations substitute for explicit contracts.

The second is that the implicit contract is a simple continuation of a former relationship which had been set down in a formal contract. With the implicit contract, one would expect long-term relationships being conducted without any formal contract. Gulati (1998) found this to be the case, as business relations developed from one based on contract to one increasingly based on trust between long-standing business partners. Thus, transactions will be renewed with the suppliers within the network, although no contract has been set out to specify such a renewal.

Bradach and Eccles (1989) have identified trust among companies as a governance mechanism in addition to the price mechanism of the market and the authority mechanism of the hierarchy. Trust is taken to be the central differentiating variable in the networks literature. Thus trust replaces a formal contract, and transactions are performed according to some implicit contract.

Thus, the parties hold long-term prospects for the relationship, although no formal ties bind them to continued transactions within the network.

GOVERNANCE MECHANISMS IN THE NORWEGIAN FOOD SECTOR

It is possible to speak about "the" Norwegian food chain, as the overwhelming part of the internally produced agricultural goods is consumed domestically, and at the same time, imports of competing goods are in practice close to zero due to high customs barriers.

Furthermore, parts of the food sector are heavily concentrated. As already noted, four retail chains have nearly 100 per cent of the sales to the domestic consumer. The dairy sector has been a monopoly until recently, dominated by Norske Meierier, a farmers' co-operative. In the meat sector, another farmers' co-operative, Norsk Kjøtt, holds about 70 per cent of the slaughtering business (excluding poultry) and an increasing share of cut meat. Aside from Norsk Kjøtt, a number of meat processors are to be found. Only one major actor, Fatland Skjeggerød, integrates slaughtering as well as processing. In addition, in the dairy and the meat sectors the co-operatives are given the responsibility of regulating the market. In the poultry business, a fully integrated farmers' co-operative is rapidly gaining market share. A privately held food processor, Orkla Foods, has a strong position within its segments, for the most part beverages.

Although important parts of the food processing is strongly concentrated, leaving little choice to the retailers, the retailers nevertheless buys from one or two suppliers even when there is a choice. Thus, buying on spot is not an alternative. Furthermore, the ongoing transactions are regulated within a contract. Therefore, the implicit contract is excluded as well. Let us take a closer look at the remaining contracts, the classical, the internal and the long-term and renewable contract.

The internal contract – vertical integration

Four chains dominate the Norwegian food retailing business. These are NorgesGruppen, Hakon Gruppen, NKL and REMA. NKL is a consumers' co-operative, Hakon Gruppen and REMA have been established by young retailers, while NorgesGruppen is a merger of the smaller retailers that remain. Each chain has created its own distribution channel from the manufacturer to the retail outlets, that is, also including the wholesale function. Only one of

the chains has rather extensive production facilities for its own outlets. Thus, contracts are the most important vehicle of transferring goods from manufacturer to retailer.

Two cases illustrate the situation, one dealing with the fruit and vegetable sector, the other a merger of a wholesaler and a retail chain. In the fruit and vegatable sector, Gartnerhallen, a farmers' co-operative, had a major part of the wholesale distribution of fruit and vegetables. Its position was being undermined by privately owned wholesalers, such as Norgesfrukt and Bama. The customer of Norgesfrukt was the retail chain REMA, while NorgesGruppen was the main customer of Bama. Norgesfrukt sold its shares to Hakon Gruppen, who thereupon terminated its contract with Gartnerhallen (which was up for renewal). Suddenly, Gartnerhallen had lost a major part of its market. In this situation, Norgesgruppen stepped in for rescue operation of Gartnerhallen. It took over the wholesaling function of Gartnerhallen as well as is production facility. After a year, the wholesaling and production had been consolidated with Bama, and NorgesGruppen sold its controlling interest in Gartnerhallen.

The same pattern was repeated in a merger of NorgesGruppen and its major wholesaler, Joh. Johannson. The wholesaling function was integrated within NorgesGruppen, while Joh. Johannson's production of coffee and and other consumer products was kept separate.

On the other hand, NKL has quite extensive production facilities, of jam, other preserves, coffee and it rents production facilities with Norsk Kjøtt, the farmers' co-operative in meat processing. However, the internal supplier is preferred only if its prices match those of external suppliers.

The conclusion is then that only one retail chain follows a strategy of vertical integration. The other chains have integrated upstream to the factory gate, so to speak, but has shied away from taking an active responsibility of production.

The conclusion is that vertical integration has only in a small measure extended beyond the distribution function and into the production function. This may seem surprising, given the evidence on vertical integration found especially in the United States (Frank and Henderson, 1992; Hennessy, 1996) as well as in other industries characterised by repeated transactions (Joskow, 1985; Levy, 1985; Monteverde and Teece, 1982a, 1982b).

The classical and the long-term, renewable contract

Transactions between supplier and retailers are regulated within contracts. Thus, the implicit contract is ruled out here. The contracts may be categorised according to longevity, prolongation and specificity. We look at these in turn.

Longevity. The three chains interviewed had all three year contracts as their norm. However, NorgesGruppen has entered into contracts of considerably longer duration. One was done with Bama/Gartnerhallen, lasting for 20 years, that is, beyond a likely date for the repeal of import restrictions in the fruit and vegetable market. With two meat packers, Gilde (Norsk Kjøtt) and Fatland Skjeggerød, it has signed 10 year contracts. Beyond this, the one year contract is still in use, but it seems to be on the decline.

The contract usually has termination clauses. The contract may be terminated during the contract period with a gestation period of three months. This may interpreted so that the contract is for only three months. However, the point is that if the supplier is competitive, he is assured a market for his products in the contract period. This makes it a long-term contract.

Prolongation. The contracts are more often than not prolonged. Often a supplier is declared to be the number one or number two supplier of the chain. If the supplier lives up to expectations, the contract is prolonged.

Gartnerhallen may be said not to have lived up to the expectations that the retailers set. As a consequece, it had lost market share for a number of years. Hakon Gruppen terminated the contract and switched to another supplier, and as we have seen, gained control of the distribution chain in the process. The general opinion of the interviewees was that Gartnerhallen had lost its competitive edge by insisting on its old ways of doing business, and had not been willing to adjust to the requests of the retail chains. Also, this had been evident for some years, still Hakon Gruppen stayed with Gartnerhallen. Probably, high switching costs (Klemperer, 1987) can explain this.

Specificity. In contrast to the classical contract, the contracts are not specified down to the last detail. In fact, during the interviews the importance of the contract was downplayed, while the importance of co-operating underlined. For the suppliers, the ability to serve its customers was seen as far more decisive for future work for the same retailer than the contents of the

legal document. For instance, flexibility was highly valued. Norske Eggsentraler, the poultry producer interviewed, had invested in several parallel lines in order to meet this desire for flexibility.

Furthermore, the importance of information exchange during the contract period was stressed. In all three chains interviewed, meetings are held at all levels with the corresponding level with the supplier. The chief executive officers meet, the sales manager and the purchasing manger meet and so on. The meetings are held at regular intervals and when the need arises. The chief executive officers tend to discuss broad, strategic issues, while operative issues of different generality are on the timetable for other managers. In these negotiations, the suppliers are required to document the need for price increases, and these costs are compared to costs in other companies and the costs last year. This procedure is followed towards the monopoly dairy company as well. In fact, this implies the emergence of a negotiated, cost-plus pricing policy.

Together with the contract's long-term nature as well as the renewal of the contract, this is evidence against the classical contract. Should the classical contract prevail, the participants would have stressed other aspects, like contract fulfilment, conflicts over alleged breach of contract and so on.

WHY CHOOSE THE LONG-TERM, RENEWABLE CONTRACT?

The interesting feature is to contrast the classical with the long-term renewable contract. We'll do so by first viewing the two contracts as investments under uncertainty, and then discuss the incentive effects of the contracts.

Uncertain investments

Both a classical contract and a long-term renewable contract may be terminated, and both may be prolonged. They differ in the way this is done. The current contract period may be seen as an investment period, the later period or periods as pay-back periods, for simplicity. Assume that the cost of capital is zero, and that the companies are rational, risk neutral maximisers.

The companies may invest in either relation specific capital or in general capital. The customer next period may be either the current customer, assumed to be one for simplicity, or some other customer. There is competition for the contract from other suppliers, but the contract is constructed so that the "winner takes all", that is, the company winning the contract gets the whole contract. There is a probability for winning the contract, and therefore, the companies maximise the value of the current plus the expected value of the next period's contract. Should the supplier win the contract, he cannot at the same time deliver to another customer.

Let us now examine the effect on investment in relation specific assets in this set-up has applied to the classical contract. A supplier under such a contract will:

Maximise[The value of the current contract
+ (The probability of winning a renewal)(The value of the renewed contract)
+ (The probability of winning a new customer)(The value of a new contract)]

The supplier may assume that the probability of winning a renewal is rather small, because the new contract will be put up for an auction, and may be the customer does not want to be tied to the same supplier for too long. On the other hand, the supplier may try to improve the probability of winning a renewal by investing in relation specific assets, and to reap benefits from the increased dependency in the following period. The customer will see through this strategy, and the supplier will know that customer does. At the same time, should the supplier invest in relation specific capital, he will diminish his chances of winning a contract from other customers.

The upshot of this is that the supplier will invest in general capital in order to hold other options open. By investing in general assets he is diversifying his risks.

In the long-term renewable contract the supplier will:

Maximise[The value of the current contract
+ (The probability of winning a renewal | The performance in the current period)(The value of the renewed contract)
+ (The probability of winning a new customer)(The value of a new contract)]

The crucial difference lies in the probability. It is now a conditional probability, conditioned on the performance the company has shown in the current contract period. In this case, if the performance is up to the expectations set, the contract will be renewed. The company can influence the probability of winning a renewed contract by investing in relation specific assets in the current period. Thus, both in the current and in the subsequent periods benefits from this specialised equipment will accrue to both supplier and customer.

Thus, the long-term renewable contract may be seen as a case of incentive alignment.

Incentive effects

Other incentive effects may be noted as well. Given that the supplier under a classical contract has a low probability of renewal, he will maximise the value of the current contract. This means that he will act opportunistically in areas not regulated by the contract. The flip side of this is that the customer needs to install a number of control mechanisms in order to make sure that the supplier does not take advantage of the situation. The supplier may not be willing to show a collaborative attitude on emerging issues, thereby slowing down decision processes. Lastly, the conflict resolution mechanism is slow, to a large extent relying upon third party intermediation or judgement.

In the long-term renewable contract the supplier has an interest in the relationship extending beyond the current contract. By acting opportunistically he will improve his chances of contract renewal. On the other hand, he will have an incentive to collaborate on for instance promotion of his goods or implementation of cost-reducing equipment, because this will make the supplier-customer relationship to which he belongs more competitive in the marketplace.

CONCLUSION

We have discussed the choice of governance mechanisms applied to the Norwegian food sector and found that a long-term renewable contract was the most common. Compared to the classical contract, the long-term renewable contract reduces the extent of opportunism and assures the investment in relation specific assets. The contract's incentive is to nurture a

problem-solving, collaborative "atmosphere" in the relationship between supplier and customer.

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