STRUCTURAL BONDING
IN CUSTOMER-SUPPLIER RELATIONSHIP:
- THE CASE OF PROSUMER VERSUS CONSUMER -

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ABSTRACT
Structural bonding in a customer-supplier exchange relationship can come with and from economic effects for that relationship. These effects are due to increased efficiency and effectiveness in operations and value-creation shared by both partners. This applies to prosumer-supplier relationships mainly and not or to a lesser degree to consumer-supplier relationships. The nature of the typical bonded prosumer-supplier relationships is value creation with mutual contribution, sharing of gains and mutual dependency. Creating joint gains in a prosumer-supplier relationship can outweigh the loss customers perceive with bonding; that is the loss of freedom to switch opportunistically to better offers of competing suppliers. In contrast to prosumers, consumers may accept being bonded only if they are compensated by the supplier for giving up this freedom of constantly testing the market and of opportunistically switching suppliers.
1. INTRODUCTION

In relationship marketing, practitioners and theorists have contrasted the acquisition of new customers versus the retention of current customers as alternative strategies for suppliers. For markets with no growth they recommend maximising sales volume and share with each existing customer rather than fighting for new customers. Establishing close customer relationships is regarded as essential. However, close relationships may not come for free. Building relationships should be viewed as an investment (Bursk 1966) and established relationships should be viewed as assets that ought to be protected and safeguarded. This can be done by customer-bonding programs’ recommendations for „immunising“ customers against temptations from competitive suppliers and for keeping customers for a long time. The paradigm shift from transaction marketing to relationship marketing (e.g. Parvatiyar and Sheth 1994) with its implied long-term orientation in marketing is used as theoretical underpinning for these recommendations. Here the seller perspective prevails (e.g. Gremler, Gwinner and Bitner 1997).

Retaining customers is nothing new in marketing, however. For example, brand loyalty, vendor loyalty and other forms of customer loyalty have been researched for over 30 years as phenomena. This research was done mainly from out of the customer’s perspective. Relationship marketing and marketers’ desire to prevent customers from changing suppliers have directed current research explicitly on structural bonds that make customers stay in an exchange relationship.

Bonding customers structurally and/or socially has been proposed. Structural bonding can be defined as applying „marketing programs that create value to the customer and either require investments by the buyer that cannot be salvaged if the relationship ends, and/or may be expensive if the buyers must supply this service themselves if they change sources“ (Turnbull and Wilson 1989, p. 233). Social bonds can also be employed in building a relationship between supplier and customer. However, social bonds are weak...
drivers of a working exchange relationship. They may be antecedents of an exchange relationship and they may cause a relationship to continue on the level of a social relationship when an exchange relationship gets dropped in favour of a competitor. Such propositions in the literature are usually developed with the supplier's best interest in mind.

In contrast the customers' first reaction to getting bonded to a supplier may be negative. Their first interest may be to preserve the freedom of switching to better alternatives of exchange whenever they come up. To let themselves be bonded voluntarily, customers must be offered an advantage outweighing the loss of freedom. In other words: The strong bonding must promise „significant gains in joint - and consequently individual - payoffs“ (Dwyer, Schurr and Oh 1987, p. 14) to the supplier as well as the customer to make overall economic sense. The interesting questions are: When do gains come out of the bonded relationship itself to both partners? When does the supplier have to induce gains by buying himself in with customers?

In business-to-business relationships, structural bonds and gains from synergetic effects can commonly be found. Just-in-time production and lean production are examples in which the partners hope to gain efficiency and/or effectiveness. To make a co-operation work, all partners „accept some degree of obligation - and therefore give some degree of assurance with respect to their future conduct“ (Richardson 1972, p. 886). Co-operation and structural bonds in business-to-business are viewed as essential components of supplier-customer-relationships seen as a network (e.g. Anderson, Håkansson and Johansen 1994).

On theoretical grounds, such networks with gains of the partners involved should not be limited to the business-to-business context only. Building such networks in consumer good markets would necessitate that individual consumers are willing to bond themselves to a supplier in a relationship that delivers higher gains to the satisfaction of both partners
as compared to the alternative of a traditional buyer-seller relationship based on simple transactions without specific commitment for the future.

Do individual consumers have a natural desire to be bonded to suppliers? Quite the opposite seems to be true. Customers discontent with institutions they customarily are bonded to seems to be rising. For example the 1996 German Customer Satisfaction Index reports the lowest level of customer bonding since it first established in 1992 (Meyer and Dornach 1996). The willingness of consumers to continue bonded relationships of exclusive character seems to decline. This applies to a broad spectrum of relations, ranging from political parties, churches and specific brands to romantic personal relationships. Some research of consumer behaviour even predicts the coming age of „Autonomous Customers“ and „Smart Shoppers“ (e.g. Grey Strategic Planning 1996), that do not have themselves tied to suppliers or brands but rather switch as they see fit.

The trend seems to be that organisational customers are increasingly willing to become members in networks that imply close and bonded relationships with their suppliers, while consumers are not. To analyse this apparent contradiction about the desirability of being bonded in a relation, we like to work with the following questions:

- What makes it desirable to enter and stay in a structurally bonded relationship in a business-to-business context?
- With respect to the nature of an exchange relationship, what are the fundamental differences between a business-to-business relationship and the relationship between a supplier and final consumers?
- From the customer’s point of view, do such differences have an impact on the customer-supplier relationship and the desirability of bonding?
2. STRUCTURAL BONDING IN A BUSINESS-TO-BUSINESS CONTEXT

In dynamic markets companies must review their value-creation process. They must raise standards of quality and lower costs. They must become faster, more flexible and agile (e.g. Templeman, Toy and Lindorff 1993). To stay competitive, companies concentrate on what they can do best and outsource other activities. Thereby they are becoming customers in a new value-creation process that is to become more efficient (doing things right) and more effective (doing the right things). What holds for the single company, concentrating on what it can do best, must also hold for a network of many companies. The value creation of the network is to increase in efficiency and effectiveness. Necessarily members have to rely on each other. The degree of reliance is determined by the specificity and the strategic importance of the outsourced activity. Network members need bonding as an assurance against opportunistic behaviour of their partners. Thus bonding may become both: a prerequisite for and a consequence of value-creating relationships that strive to be more efficient and more effective than would be possible without bonding. How then can structurally bonded relationships increase efficiency and effectiveness? The following two sections will address this question.

2.1. Structural bonding and cost-efficiency

The literature proposes many concepts to deal with the prerequisites and consequences of close relationships. A widely known concept is the interaction approach, namely the IMP interaction model (Håkansson 1982). Other concepts include the investment approach (e.g. Johanson and Mattsson 1985), the population-ecology approach (e.g. Aldrich 1979) and the transaction-cost approach (e.g. Williamson 1985). The latter explicitly deals with the consequences of alternative co-ordination mechanisms (co-ordination by market, by hierarchy or by an arranged relationship as a hybrid of market and hierarchy) on the costs of transactions involved in the vertical chain of value creation. This approach can serve as
a suitable framework to explain the desirability of structural bonding by gains in inter-
organisational efficiency.

The transaction-cost approach can be traced back to Ronald Coase (1963 [1937]). He compared the efficiency of transactions under market conditions with the same transactions when realised within the hierarchy of a vertically integrated company. Transactions that are co-ordinated via a market rely on the price-mechanism. Differing from traditional economic theory, Coase assumed the price-mechanism not to be free but to cause transaction costs in form of marketing costs. In contrast, „...the distinguishing mark of [the hierarchy within] the firm is the suppression of the price mechanism“ (Coase 1963 [1937], p. 334). An „entrepreneur-co-ordinator“ (Coase 1963 [1937], p. 333) is responsible for the allocation of resources within a vertically integrated company. Co-ordinating transactions by hierarchy within this company would save marketing costs. If this co-ordination came free, one big co-ordinated firm would be the most cost-efficient (Coase 1963 [1937], p. 337). However, hierarchy breeds bureaucracy and therefore causes co-ordination costs as well. The bigger the firm, the higher will be bureaucratic co-ordination costs of internalised transactions (Williamson 1975, p. 117 f.). Therefore a company should internalise transactions as long as the hierarchical co-ordination costs for its last internalised activity do not exceed the co-ordination costs by marketing. In general, „transaction costs are the negotiating, monitoring, and enforcement costs that have to be borne to allow an exchange between two parties to take place“ (Jones and Hill 1988, p. 160). This applies to all co-ordinating mechanisms and to all exchanges, company internal as well as external.

What are the primary drivers of transaction costs? Frequency of transaction will drive the costs. Economies of scale can reduce transaction costs. This reduction is said to be significantly better under market conditions than a bureaucratic co-ordination mechanism would do. The „organizational failures framework“ (Williamson 1975, p. 40) or „market failures framework“ (Ouchi 1980, p. 133) respectively, proposes two additional drivers of
transaction cost: behavioural and environmental drivers. Behavioural drivers come from human beings' bounded rationality (e.g. Simon 1961) and proclivity to behave in an opportunistic way, i.e. "self interest seeking with guile" (Williamson 1985, p. 47). Environmental drivers are coming from uncertainty associated with complexity and from asset specificity. Specific assets are investments required as specific to a particular exchange relationship (Jones and Hill 1988, p. 160). They cannot be salvaged without partial or substantial loss if the exchange relationship ends.

A changing environment of business and technology leads to an increased complexity. Together with human beings' bounded rationality, complexity adds up to a higher level of uncertainty. More complex exchange processes and products require more and higher specific investments. Consequently transaction costs rise with uncertainty and required asset specificity. The transaction cost theory suggests that costs rise with a higher gradient for co-ordination by markets compared to hierarchical co-ordination. This is due to overall system costs caused by bounded rationality and opportunistic behaviour. To overcome bounded rationality and opportunistic behaviour it needs an atmosphere of credibility and trust between the exchange partners. Such an atmosphere is said to be more easily established, governed and controlled in a hierarchy than a market. Arranged exchange relationships can also breed an atmosphere of credibility and trust. Figure 1 compares transaction costs over a wide range of uncertainty and asset specificity by market and by hierarchy as postulated by transaction cost theory. We added a line for arranged relationships.

Transaction cost theory in its original formulation only differentiates between the two antipodes "market" and "hierarchy". But even Williamson (1985, p. 79), one of the "fathers" of the transaction cost approach, later accepted inter-organisationally arranged relationships as hybrid co-ordination form in-between "market" and "hierarchy". Arranged relationships are expected to co-ordinate transactions with a mediating influence on asset specificity and uncertainty somewhere between co-ordination by
market and by hierarchy. This might well lead to optimal ranges of transaction cost for each of the three co-ordination mechanisms depending on transaction-inherent uncertainty and asset specificity.

Figure 1 - Transaction costs under co-ordination by market, hierarchy and arranged relationship

Arranged relationships can mediate uncertainty and reduce the risk of specific investments into the transaction process. Credible commitments operate like hostages; they increase the switching costs of one or both relationship partners. A partner with a credible commitment is less likely to behave in an opportunistic way as he would risk losing his hostage. Thus credible commitments ensure the stability of a relationship to a larger extend than ,,market“, but a lesser extent than ,,hierarchy“.

Credible commitments can bring a positive impact on a relationship’s efficiency: Let the hostage be a ,,special purpose technology“ (Williamson 1985, p. 169). This technology is designed for the special demands of a particular value-creating partnership. Its purpose is
to enhance the efficiency of the value-creation process compared to the use of standard technology. At the same time asset specificity also increases. Structural bonding of the relationship occurs by special purpose technology. The customers’ willingness to be bonded may well be a prerequisite for the supplier to assume the risk of a special purpose technology.

Under market conditions with no mutual obligations, the risk of customers behaving opportunistically would often be too high for the supplier to invest in a special purpose technology with limited salvage value. Thus a higher level of efficiency leading to lower transaction costs over „market“ can be achieved by an arranged and bonded inter-organisational relationship. Ideally, bonded relationships as co-ordination mechanism can bring both: lower transaction costs than „hierarchy“ and lower production costs than „market“. Both effects can be seen as inherent advantages of arranged relationships that lead to organisational customers let themselves be bonded.

2.2. Structural bonding and market-effectiveness

Transaction cost theory explains the cost-efficiency of different exchange mechanisms by focusing on transaction costs, this includes costs of managing exchange and in parallel also production costs. However, business-to-business customers are not only interested in costs. They also want market-effectiveness through higher delivered value to be passed on to their own customers in the vertical value-creating process. Delivered value can be defined as the difference between the sum of the perceived value minus the sum of its perceived costs (figure 2 ).

Transaction cost theory „only“ explains potential gains by cost efficiency (Noordewier, John and Nevin 1990, p. 80). It ignores the market-effectiveness to be gained by of higher value. We therefore have to take another approach, namely analysing the effect of a bonded relationship for value components like enhanced quality, faster time-to-the-
market and greater agility. We will do this analysis from the customer’s view as well as the supplier’s view within the business-to-business setting.

![Diagram of customer value and delivered value]

**Figure 2 - Customers’ delivered value (Kotler 1997, p. 39)**

2.2.1. The customer’s view

We argued for bonding as a prerequisite for a stable relationship between the customer and the supplier. Structural bonds were said to represent some kind of assurance that allow specific investments from the part of the supplier and possibly also the customer. Consider the case of a furniture manufacturer as customer getting into a partnership to a supplier of veneer. Besides low cost, the veneer is to be of superior finish, requiring a specific investment by the supplier. At the same time the furniture manufacturer is required to invest in special material handling equipment to apply this veneer in his manufacturing process. Both partners of this arranged relationship will be bonded by structure of technology. With such a bonded relationship the business-to-business
customer can outsource those value-creating activities that are simply done more effectively by a supplier.

Price being equal, markets will usually deliver standard components with the best quality available for that price. If quality components require special technology to be market effective, no supplier would take the associated risk under market conditions. Then bonding can become effective by applying it to the supplier’s core-competencies of producing better quality leading to market effectiveness in the value creation process.

Gains can also be obtained for faster time-to-the-market with innovative products compared to „hierarchy“ and also to „market“. Internalising exchangeable operations will enlarges customer’s bureaucracy. Producing special quality components through „market“ may prove not viable or time consuming; standard parts without distinctive value-adding character, however would faster be produced through the market. Consider the case of the furniture manufacturer again. Getting that special veneer of high quality finish may be faster in a bonded relationship with the component supplier than either by shopping for it on the market (and not finding it for a long-time) or by internal production.

The same example can serve for agility as market-effective factor. Structural bonding may enable the furniture manufacturer to get any new veneer from his capable supplier faster to stay ahead of other competitors as consumer tastes change.

2.2.2. The supplier's view

Structural bonding can increase market-effectiveness not only for the customer. Compared to his competitors, a supplier can win in a bonded relationship the competitive advantages of being first to market with new value-enhancing components and of accumulating special know-how in developing today’s special products that will be tomorrow’s standard products. As the best available value-offer which delivers a positive
net value to the customer will win the race, "...the benefits of a marketing exchange depend on the ability of each prospective supplier to create and sustain a competitive advantage over all other competitors" (Day and Wensley 1983, p.82).

Structurally bonded relationships build up entry-barriers to out-suppliers. They bring switching costs to the customer and/or the supplier. Moreover specific investments by the supplier would become sunk costs in case the relationship would be terminated and no other customer of equal profile would be found. As sunk costs become irrelevant when calculating least cost offers in a continuing relationship, the in-supplier would offer lower prices than any out-supplier. Compared to the in-supplier, the out-supplier would have to include the costs of initial investments to make an offer he could live by (Gilbert 1986, p. 101). Consequently in a structurally bonded relationship, the in-supplier has an advantage. However in fast growing and technologically fast changing markets, structural bonding can also have a negative impact on the supplier’s competitive standing: If the in-supplier would have to stick to his traditional, bonded customers only, he would leave attractive new customers to his competitors (Farell and Shapiro 1988, p. 123 ff.). If the supplier had invested in first generation technology dedicated to his initial customers, he might be out of cash to invest in second generation technology and will be leap-frogged by competitors.

Altogether, the supplier and the business-to-business customer can profit from joint gains in effectiveness due to - and enabled by - structural bonding. This explains the willingness of organisational customers to let themselves be bonded.
3. TWO TYPES OF CUSTOMER-SUPPLIER RELATIONSHIP

Up to here, the analysis of structurally bonded customer-supplier relationships was limited to the business-to-business context. Here the idea of value-adding partnerships prevails, namely „a set of independent companies that work closely together to manage the flow of goods and services along the value-adding chain“ (Johnston and Lawrence 1988, p. 94). Customers in these forms of relationships actively take part in the value-creation process. They generally do not intend to consume the exchange good but to sell it value-enhanced to their own customers.

Yet it is also possible to think of structurally bonded relationships with customers who do not take part in the value-creation process. They are customers interested in value-consumption only. They are referred to as consumers. Consumers are often - but not necessarily - individuals. Organisational customers as well as individual households can be labelled as „consumers“ versus „prosumers“ depending on their value-consuming or value-creating status. In a way we propose a two stage model of creating and consuming value as symbolised graphically in figure 3.

The customer-supplier relationships may substantially differ by the customer-involvement in the value-creation process. „Value creation refers to the process by which capabilities of the partners are combined so that the competitive advantage of either the hybrid or one or more of the partners is improved“ (Borys and Jemison 1989, p. 241). If the customers do not get involved in the value creation process, we call this relationship a „consumer“-supplier relationship. In contrast to consumers, customers who contribute their capabilities to the value-creation process engage into a „prosumer“-supplier relationship (Yamaguchi 1990).
4. STRUCTURAL BONDING IN A SUPPLIER RELATIONSHIP WITH PROSUMERS AND WITH CONSUMERS OF THE PRIVATE HOUSEHOLD

Section two explains why structurally bonded relationships can gain efficiency and/or effectiveness in the business-to-business context. But are positive effects of structural bonding limited to that context or do they also apply to relationships of a supplier to private households? The differentiation of prosumer- versus consumer-relationship will help to give an answer.

When discussing inter-organisational relationships, we had value-creating partnerships in mind that can contribute to joint gains in efficiency and effectiveness of creating value while requiring (structural) bonding. Such relationships can exist in a great variety
between two or more organisations. However, value-creating relationships are not necessarily limited to the inter-organisational context, although this context provides the most obvious examples.

Examples for value-creating relationships also exist for products and systems at the final consumption stage of private households. Take the example of the Soda-Streamer, a British product which enables its (individual) customers to produce carbonated water in their home. Households buy a system with which they can enrich their tap-water with carbon dioxide bubbles. The system consist of a special appliance and of consumable carbon dioxide cylinders. What happens from the structural bonding point of view? The supplier offers a system to create carbonated water and bonds the households by the appliance to buy his special refills of carbon dioxide. This creates a partnership of value-creation as it is more efficient to the individual customers to produce carbonated water with that system as compared to buying soda in the next supermarket. With that system the individual gets fresh bubbles and saves money. It is also more effective for the customer by not having to carry bottles home from the store or return empty bottles. The overall value-creation process of producing carbonated water for private household consumption becomes more efficient and effective. However, it requires a special purpose technology. If offered by one supplier only or if not standardised, the individual customer - a prosumer in our notion - structurally bonds himself to the technology of that supplier. The presuming household must regard this special appliance as sunk cost if it chooses to terminate the relationship and stop buying the gas refills. The prosumer's alternatives of producing soda are restricted to the Soda-Streamer by the specific investment in that technology.

Consider as counter example for a bonded consumer-supplier relationship the following: A retailer proposed to his customers to become members of a buying club. For a membership fee they are promised certain buying privileges, such as a rebate on cumulative purchases by the end of the year. This also constitutes a structural bond. The
bonded customer is asked for a specific upfront investment, namely the membership fee. However, this type of bonding is superimposed as an artefact by the supplier as are in general all entrance fees or membership fees in return for a promise of preferential treatment. Again, this entrance fee once paid must be regarded as sunk costs by the consumer. The pure consumer, by definition, does not take part in a joint value-creation process with his supplier. The consumer purely wants delivered value ready for consumption. Thus the specific investment asked from the consumer leads to structural bonding but it hardly leads to joint gains in efficiency and/or effectiveness.

Why should a consuming household let itself be bonded? The supplier must offer an incentive that outweighs the household’s upfront investment and also its loss in giving up unrestricted disposition power among competing offers. In contrast to a prosumer-supplier relationship with gains from joint value-creation, this incentive does not come for free for the supplier. The consuming household will demand a price. The supplier will have to pay it over the long run if he wants to keep his reputation and his customers. All other things being equal, the consumer (as well as the prosumer) might well prefer a non bonded relationship with greater purchasing flexibility and freedom to decide future purchases unencumbered by obligations.

The difference between relationships with prosumers versus consumers is the possibility of joint gains in efficiency and/or effectiveness. Such gains concur with structural bonds in a prosumer-supplier relationship.
5. CONCLUSION

This paper raises the question why business-to-business customers seem more willing to let themselves be bonded to suppliers than do consumers. Strategic alliances, just-in-time and lean production provide good examples for voluntarily bonded inter-organisational relationships. Structural bonding is analysed with respect to efficiency and effectiveness in value-creating partnerships. With structural bonds, companies are enabled to outsource strategically important activities and activities requiring specific investments. Structural bonds can have a positive effect on a customer's quality. They can reduce the overall time-to-the-market of a business-to-business customer and raise its agility. Although structural bonds restrict the freedom to switch suppliers, joint gains in value-creating partnerships can overcompensate this loss.

The differentiation between a prosumer-supplier relationship and a consumer-supplier relationship leads to additional insights: Prosumers actively take part in the value-creation process. Structural bonds can make that process more efficient and effective. In contrast to prosumers, consumers do not create value. They consume value. Structural bonds between consumers and their suppliers do not lead to joint gains from value creation. Getting bonded is not attractive from the consumer's point of view unless compensated by incentives or promises of future rewards like preferential treatment.
REFERENCES


