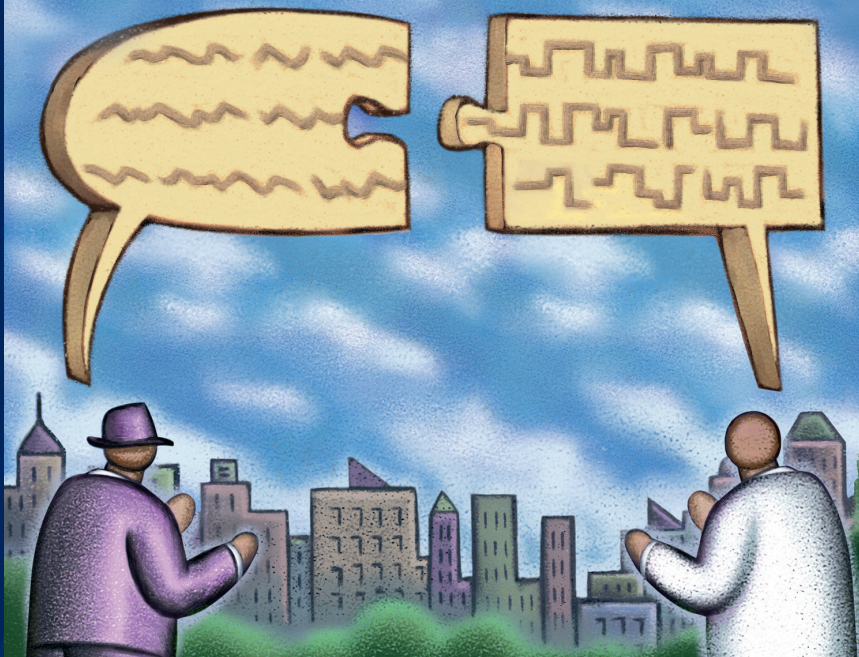


WILLEM SMIT

Market Information Sharing in Channel Relationships

Its Nature, Antecedents, and Consequences



**Market Information Sharing
in Channel Relationships
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Delen van marktinformatie in distributiekkanalen:
De eigenschappen, antecedenten en consequenties

Proefschrift

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The main philosophy behind market information sharing in channel relationships is that both retailer and supplier can achieve much better results when providing each other with their latest observations of consumer market developments. Observing consumer market developments and trends in buying behavior started for me when I was very young. Very young actually means “from the age of 0”, because the baby years of my life I have spent playing under the cash register of my mother’s shop, the Smitmode Ladyshop at the shopping center “De Schoof” in Hendrik-Ido-Ambacht. At that time, while my *winkelier*-dad and -mom were expanding their fashion retail company, they choose to have me nearby and so I was brought to their work. Perhaps, we may conclude that having my cradle on the shop floor must have destined me to write this thesis.

It was Gerrit, one of my promoters, who noticed this destiny and my interest into this subject and he suggested investigating retailer-supplier information sharing in more depth. His proposal meant the start of a trajectory that would not have succeeded without other valuable sharing experiences.

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Willem Smit

Lausanne, January 2006

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CHAPTER ONE INTRODUCTION TO MARKET INFORMATION SHARING IN CHANNEL RELATIONSHIPS

1.1 Introduction

Wal-Mart, Carrefour, Metro Group, Home Depot, H&M, Inditex/Zara, and Tesco. What do these retail heavyweights have in common? Is it their sheer enormous size and that each of these firms operate over more than 1,000 stores? Is it that they have impressively internationalized and entered different continents of the globe? Is it the fact that all of them have been miraculously unstoppable in multiplying their total sales in the last 10 years? Yes, each of these facts is true; but foremost these companies have become the legendary icons of the *Retailing Revolution* (cf. Bleustone et al., 1981; Kumar, 1997; Kahn and McAlister, 1997; Seth and Randall, 1999; Spector, 2005). Rather than the term “revolution” would suggest, this event was not a sudden shake-up but actually a widely-observed uninterrupted trend for more than 30 years involving many aspects of the industry. The Retailing Revolution has turned the originally fragmented dormant and unsophisticated retail trade into a consolidated hyper-competitive and technology-savvy industry. By forging horizontal alliances, pursuing merges and acquisitions, many retailers have built up enough critical mass to create extremely efficient logistical systems and to develop their own excellence in marketing and branding capabilities. The quality of their consumer marketing capabilities was particularly demonstrated by creating strong store brand names, introducing competitive private label products and successful shopper-loyalty cards programs, launching new innovative retail formats, and incorporating the opportunities provided by the Internet into their multi-channeling strategies.

With their economies-of-scale and their investments in the latest ICT-technology (e.g., barcode-scanning, EDI-connections, point-of-sale (POS)-systems, shopper-loyalty cards), the more powerful retailers began to figure out innovative ways to make the most from their advantageous positions of being close to the consumer (Blattberg et al., 1994). Through collecting and analyzing their sales and customer loyalty data they can build a very valuable asset: real-time market information (Glazer, 1991; Bucklin and Gupta, 1999; Leenheer, et al. 2002). They subsequently started leveraging their size and information on shopping behavior to increase their bargaining power when dealing with their *suppliers*, *the manufacturers* (Corstjens and Corstjens, 1995; Wileman and Jary, 1997). Because,

from the perspective of the Retailing Revolution, the *suppliers/manufacturers* were considered to be the “ruling establishment” against which these retailers stood up.¹

In this dissertation we focus on retailers and their relationships with the formerly dominating players in the arena of the consumer marketplace: their suppliers. While the early periods in the Retailing Revolution had featured the retailers’ professionalization of internal processes (concentration, economies-of-scale, efficient logistic operations) and of front-office operations (i.e. interfaces with consumers), a new era has now dawned on the industry: the *Back-End Revolution of Retailing* (*BusinessWeek*, April 15, 2002). Thanks to the advances in information communication technology, new software with high speed connectivity, product coding standardization, and especially the rapid diffusion of web-based tools to communicate with suppliers, totally new opportunities for retailers have emerged to rethink their supply chain relationship management (Lancioni, et al., 2000; Weber, 2001; Easton and Araujo, 2003; Brown, et al., 2005). Retailers can choose from a wide range of strategies lying on a continuum from *competing head-on with suppliers*, on one extreme, to *collaborating side-by-side with suppliers*, to the other extreme. Nowadays, innovative retailers are pioneering with strategies from either side of the “hard-soft” spectrum in restructuring their relationships with suppliers. With regard to *head-on competition*, retailers joined forces in designing e-marketplaces (Grewal et al., 2001; Skjøtt-Larsen et al., 2003; Eng, 2004). Two of such examples are Worldwide Retail Exchange (WWRE) and GlobalNetXchange (GNX) which can increase competition for commodity purchases (Hansen, et al., 2001); by, for instance, aggregating demand across multiple retailers to organize reversed auctions aiming for the best possible deal (Jap, 2003; Smart and Harrison, 2003; Pinker et al. 2003).

As the opposite and more “soft” alternative to squeezing suppliers for lower prices, retailers are also exploring strategies from the other side of the spectrum: *collaborating with suppliers side-by-side* (Buzzell and Ortmeyer, 1995; Mentzer et al., 2000; Corsten and Kumar, 2005). Suchlike retailer-supplier collaborations ought to make the channel fulfill consumer wishes together, better, faster, and at less costs. Engineering the channel to be more efficient and more market-responsive is not an easy task, because consumer demand is continuously changing and is getting ever more difficult to predict and still many

¹ The many reports from practitioners about the power shift from manufacturer to retailer have been subject to a lot of academic debate. Several marketing scholars have tried to look for empirical evidence for this alleged shift in power (see Farris and Ailawadi, 1992, and Messinger and Narasimhan, 1995), but their longitudinal econometric models could not detect a negative effect of the growing retail concentration on the profitability of manufactures. Ailawadi (2001) gives explanations for why manufacturer profitability has not worsened relative to retailers: sales promotions are just as beneficial for manufacturers as for retailers and a competitive national brand assortment is still necessary for retailer profitability. For us, the important bottom-line here is that retailers have developed into good consumer marketing organizations like their counterparts, the suppliers/manufacturers (hereafter named: supplier).

channels structurally contain a lot of restrictions and suffer long time-lags to react to these consumer changes. With the help of new technologies like private virtual marketplaces / retail vendor portals, Wal-Mart's RetailLink and Tesco's TIE, retailers are more and more strategically using their collected real-time market information to cooperate with their suppliers (*Information Week*, May 21, 1999) in order to make the channel more demand-driven. Illustrative in this respect is Wal-Mart's announcement to stop selling its data to market-research companies (such as A.C. Nielsen and IRI) and to give emphasis to sharing its POS-data with channel partners (*CBS.MarketWatch.com*, May 12, 2001). The collaborations with suppliers in the channel are not only restricted to the *retailing revolution icons*, but also many other retailers have begun to share market information with their suppliers. Across various retail industries, these retailer-supplier collaboration efforts are often labeled differently and decorated with acronyms like ECR, VMI, CRP, CPFR, QR, EDI, CM, RFID.² Ultimately, the aim for all of them is very similar: "reinventing the traditional retail supply chain in order to create a successful demand chain" as "a consumer-driven change" (Blackwell, 1997; Blackwell and Blackwell, 1999), and the channel parties should be able to "offer the right products in the right place at the right time for the right price". This four-edged objective is also considered to be the "Holy Grail of Retailing" (Fisher, et al., 2000), and is an idealized result supposedly attainable through an *information-integrated channel* (Abernathy et al., 1995) that quickly absorbs market information and moves it upstream in the channel to suppliers.

If retailers decide to pursue channel collaborations with suppliers, they may as well benefit from their suppliers' consumer and market information, because suppliers are traditionally the players in the channel having invested time and money in consumer and marketing informational resource, and in brand building (Corstjens and Corstjens, 1995). Suppliers have a strong reputation of being the experts on consumer habits and product preferences. Plus, through their dealings often more than one retailer, these players occupy in an excellent place in the chain to oversee market developments across retail channels. Even throughout these past years of upcoming retail power and increases in store brand penetration, brand manufacturers have maintained and increased their brand's equity by means of frequent and effective advertising and other equity-enhancing strategies. Consumers evidently are still willing to pay extra for manufacturer brands (Sethuraman, 2000). Keeping their more advantageous position in the consumers' minds, brand manufacturers embrace new communication technologies to stay in-sync with diverse

² The acronyms stand for Efficient Consumer Response (ECR), Vendor-Managed Inventory (VMI), Continuous Replenishment (CRP), Collaborative Planning Forecasting and Replenishment (CPFR), Quick response (QR), Electronic Data Interchange (EDI), Category Management (CM), Radio-Frequency Identification (RFID); most of these concepts will be explained in detail further on in this thesis.

consumer target groups, like through virtual communities of consumption (e.g., Kozinets, 2002; De Valck, 2005). Hence, brand manufacturers also possess market information which is valuable to their downstream trading partners and most of them have acknowledged the need to engage into ways to collaborate with retailers in a more intelligent way, rather than competing with their retailers head-on and having difficulties to keep their brands available for their consumers and to secure their market reach. Manufacturers are increasingly looking at ways to support the retailer in local marketing efforts (Van Dijk, 2004; Kotler, et al, 2002; *micromarketing*, Hoch, et al, 1995).

To sum up, both retailers and suppliers possess valuable information resources about consumers and the marketplace. The idea of market information sharing is that retailer and manufacturer might learn from each other's information and the channel relationship of the sharing parties may become more responsive to changes in market needs. Thanks to their mutually broader insights into the marketplace, channel partners are better capable of monitoring customers' needs and behavior real time and they can evaluate the effectiveness of their marketing instruments, acquire market knowledge, improve the quality of marketing decisions, and ultimately transform the market channel relationship in to demand-driven chain, that is able to "deliver the right product in the right quantities at the right time".

Despite the promising benefits of constructing a more transparent *information-integrated channel* and trying to find this "Holy Grail of Retailing", it does not mean that retailers and suppliers automatically start to share their market information with each other. For instance, it is surprising to see that a recent study among 500 most technologically-innovative US firms shows that only 10% makes it an occasional or standard practice to share information with suppliers (*InformationWeek*, October 7, 2003). The hesitations from channel members may come from conflicting interests between them and perhaps associated with lack of trust, because both of them somehow compete for shares in the same end-consumer market (Corstjens and Corstjens, 1995), because the two parties need to increasingly compete for scarce physical access to consumers (shelfspace), but also for limited brand loyalty of consumers (mindspace). A retailer may develop lucrative private labels that compete with the supplier's brands, and a manufacturer may develop its own direct selling channels to consumers (forward vertical integration). To make things worse, often both parties may deal collaboratively with each other's biggest rivals: a retailer also does business with competing suppliers and a manufacturer supplies other retailers. So, all of this raises many questions requiring further investigation. This dissertation's purpose is to understand three critical issues surrounding market information sharing in channel relationships. The first interesting issue is to learn more about the specific nature of market information sharing. What type of information is actually exchanged between channel parties? How frequently do channel members contact each

other to update on market developments? Is higher management involved in these contacts? Do companies formalize their market information sharing arrangements?

In addition to knowing the actual nature of market information sharing, the second appealing issue to get more knowledge about is the specific circumstances in which channel members do share their market information. Especially, since market information sharing is yet portrayed as very promising and but not self-evident, it is important to discover factors stimulating or inhibiting channel members to share market information. Would it be a lack of trust between them? Perhaps their conflicting interests? What would be the factors stimulating a channel member to provide with access to their market information? Would it be the information processing capabilities of a channel member to cope with the abundance of received market information? Or would top management support to collaborate in the channel be critical to enhance information sharing?

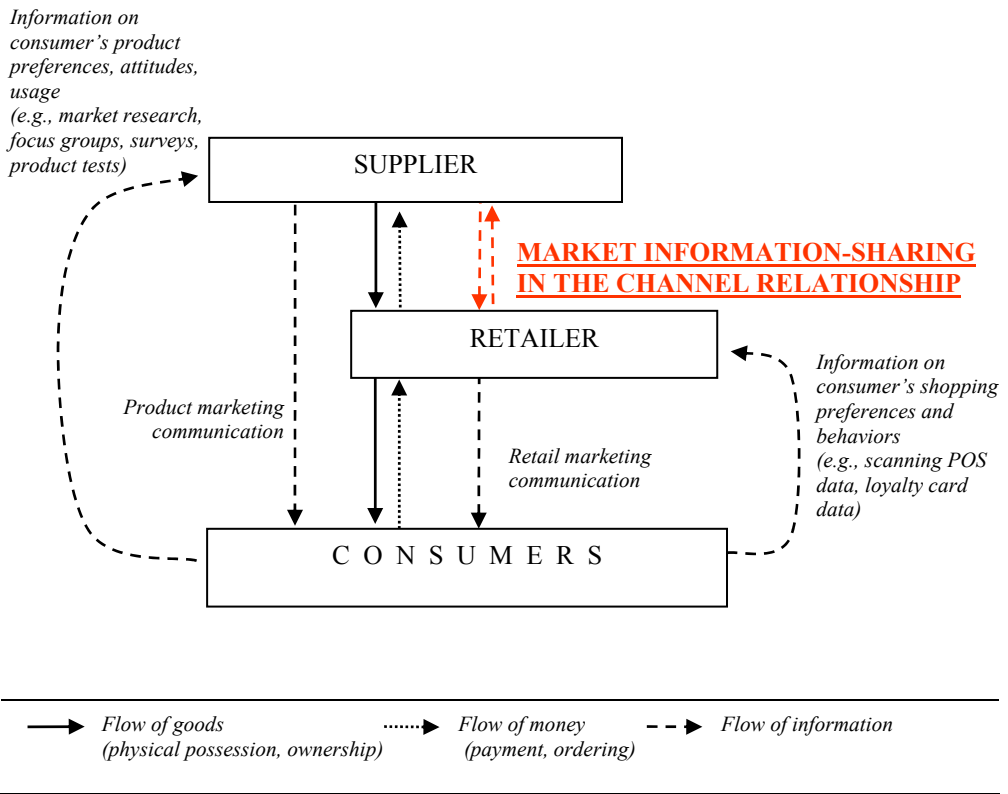
The third issue is to find out whether or not market information sharing channel members do outperform the channels without information sharing. Do information sharing channels learn better about the marketplace? Do they generate more joint profits? Do they create strategic revenues for the involved channel parties? Is their working relationship of a better quality? Or perhaps, are the information sharing channel relationships awash with data and fail to outperform non-information-sharing channels?

Before discussing our main research questions further in paragraph 1.3, it is important to give a sketch of the landscape of *market information sharing in channel relationships* by giving terminology definitions, the concept of indirect channels, optimal channel performance, and exemplary cases of information sharing (paragraph 1.2). We then give the motivation for this study by addressing the scientific (paragraph 1.4) and managerial relevance (paragraph 1.5), and we end this chapter with an explanation of the structure of the thesis (paragraph 1.6).

1.2 Market Information Sharing in Channels and its Windows of Opportunities

Elementary is to introduce the terminology used in the thesis and to illustrate the context of the subject of this dissertation. First of all, we introduce the context of information sharing between a retailer and a supplier: the indirect marketing channel. Second, we will not only explain the collaborative channel philosophy behind market information sharing but also the list of symptoms revealing inefficiencies and ineffectiveness in the functioning of marketing channels. And third, we briefly describe different types of market information sharing arrangements in channels.

Figure 1.1 An Indirect Marketing Channel with 1 Supplier and 1 Retailer with the Thesis Topic Highlighted



1.2.1 The Indirect Marketing Channel

A marketing channel is “a set of interdependent organizations involved in the process of making a product or a service available for use or consumption.” (Coughlan et al., 2001). The type of channels we center on in this thesis is the *indirect marketing channel* viz., a supplier selling his or her products to consumers via retailers. Figure 1.1 depicts an indirect marketing channel and shows the dynamism of different *flows* (cf. Coughlan, et al., 2001; Alderson, 1965; p.5; Bucklin, 1970) within the channel connecting supplier, retailer and consumers. The most visible part of this channel dynamism is the flow of goods going downstream (together with the flows of physical possession and ownership). The goods need to be requested and paid for; so, consumers request them and pay retailers and retailers order and pay suppliers; meaning that the flows of orders and money go upstream. The *flows of information* permeate all of the other flows in the channel and actually facilitate the movement of goods (Alderson, 1965; p.95) in the following way. In order to make the produced products wanted by the marketplace, the supplier investigates

consumer needs by conducting market research (think of focus-groups, interviews, surveys). Likewise, the retailer examines consumers' shopping and assortment preferences by studying the feedback obtained from the marketplace through another wide range of available market research means: scanner data, observed buying behavior, shopper focus group discussions, loyalty card data, etc. Based on the continuously obtained market information, each channel member formulates a product marketing communication plan or a retail marketing communication respectively, and subsequently makes attempts to influence consumer preferences, attitudes and behavior and to promote their products or stores. Consequently, both channel members receive feedback from the marketplace in the form of renewed market information. Accordingly, both parties verify this new information with their marketing plans and if appropriate an update follows; and the market information feedback loops start over.

Owing to its position in the indirect marketing channel, every channel member possesses its own specific market information about the flow of goods (logistics), the shoppers' and user's preferences and their behavior (consumers), and about what happens in other indirect channel relationship through their dealings with each other's competitors (competitors). Having unique information about the marketplace from different sources, there are three windows of information sharing opportunities illustrated by Figure 1.2. For example, the retailer has information about the logistics status-quo at the retail operations, while the supplier has insight into the inventory status at the production facilities. The retailer has a good view on consumer purchase behavior in its own outlets, while the supplier knows more about the product use in the whole marketplace. Furthermore, both channel members have access to different aspects of competitive intelligence: a retailer can compare the performance of the supplier to its competitors, whereas the supplier can benchmark the retailer's performance against the other retail customers. The sources of market information held by one channel member are complements of the other and thus they can be marked as interesting windows of opportunities for information sharing. If channel members make use of these windows of opportunities and pool their information resources, they can assist each other in creating a complete picture on the actual marketplace.

Figure 1.2 *Windows of Information Sharing Opportunities: Who knows and is able to share What?*

What?		Who?	
		Market Information Possessors	
		Retailer	Supplier
Logistics	Retail operations	<ul style="list-style-type: none"> Inventory status of supplier's products Out of stock of supplier's products 	<i>Opportunity for retailer to share with supplier</i>
	Production facilities	<i>Opportunity for supplier to share with retailer</i>	<ul style="list-style-type: none"> Inventory status Product capacity Expected delivery times
Consumers	Store shopping behavior	<ul style="list-style-type: none"> Consumer transactions Product Sales (through time) Cross-category buying (shopping basket) Shopper characteristics (loyalty card) Geographic spreading of product purchase (local markets) 	<i>Opportunity for retailer to share with supplier</i>
	Product usage behavior	<i>Opportunity for supplier to share with retailer</i>	<ul style="list-style-type: none"> Product habits Product preferences Consumer attitudes Product market trends Buyer characteristics
Competitors	Benchmarking performance within channel	<ul style="list-style-type: none"> Sales of competing products Effectiveness of sales promotions by competing products 	<i>Opportunity for retailer to share with supplier</i>
	Benchmarking performance in other channels	<i>Opportunity for supplier to share with retailer</i>	<ul style="list-style-type: none"> Sales of competing stores / channels Effectiveness of sales promotions in competing stores

To illustrate this idea better, consider a marketing channel selling a certain product in a local market. The supplier/manufacturer has good knowledge about the product's technical specifications. And it may have learned from market research that consumers in different segments, those who buy for self-use and those who buy for gifts, will respond differently to these specifications and to marketing efforts. However, to make the demand forecast in the retail market, the supplier/manufacturer needs information regarding the distribution of local consumers across the two segments, but such local level of information is generally only accessible to the retailer. On the other hand, the retailer would not be able to predict the future product sale either, even though it is about the distribution of local consumers across the two segments, unless it acquires the information about the different response patterns of different consumer segments to the product.

This thesis concentrates on the flow of information between the two channel members, irrespectively whether this flow is made routinely or in specialized ways. In particular we focus on the sharing of market information that helps to construct a more complete picture of the consumer marketplace. As such, our research will include the exchange of information in all three “windows” of information sharing opportunities: logistics, consumers, and competitors.

1.2.2 Efficiency and Effectiveness in Demand-driven Marketing Channels

The collaborative channel philosophy behind market information sharing in channels departs from the fundamental understanding that the total performance of an indirect channel is largely dependent of each other channel members' functioning. In order to have its products sold, the supplier needs a well-performing retailer to ensure a timely availability to consumers. Likewise, the retailer needs a well-performing supplier to produce the right products needed by its consumers. But when do a retailer and a supplier have a joint channel relationship that optimally performs? The question is then when does a channel succeed in fulfilling consumer demand effectively and efficiently? Ideally, the channel performance should maximize the difference between the total of value delivered to their end-consumers and the total of supply chain costs (see Table 1.1). There are two complementary options to increase this difference. One step is the maximize the total consumer value is by expanding the reach of consumers and increasing the value delivered to them by ensuring the variety of products that come to the marketplace perfectly reflect what consumers want to buy, and delivers “*right products in the right amounts at the right time for the right price*”. The second step is to minimize the total costs made by the channel members to physically supply the products. In reality, channels seldom reach such a perfect point of maximizing channel performance, and the actual performance is less than optimal. The obvious next question to ask: how can channel members observe that their channel performance is less than optimal? The idea behind sharing of market information

is that by means of comparing and confronting each other’s propriety market information leads to more transparency in the channel assisting both channel partners to detect the discrepancies between ideal and actual channel performance (see McBeath, 2003; www.globalscorecard.net). By identifying these discrepancies between (more) ideal and actual performance, channel members are able to improve the quality of their decisions with regard to the two main functions of their joint marketing channel; i.e. optimal physical supply and optimal consumer value or *market mediation* (according to Fisher, 1997). The physical supply function in the retailer-supplier relationship is readily apparent and includes producing the finished goods, and transporting all of them from one point in the marketing channel to the next; warehouse and retail stores. Less immediately visible but equally important is market mediation, whose purpose is to ensure that the variety of products reaching the marketplace matches with what consumer want to buy (see Table 1.1).

Table 1.1 Collaborative Channel Philosophy: Joint Challenges for Maximizing Total Channel Performance

<div> <div> [Channel Performance] ≈ { [Market Reach × Consumer Value,] - Σ [Supply Chain Costs] } </div> <div> </div> </div>		
Joint Challenges	Cost-saving efficiency opportunities	Demand-enhancing opportunities
	Improvement in efficiency (by reduction of Physical Supply failures)	Increase in effectiveness of marketing efforts (by elimination of Market Mediation mistakes)
Symptoms	<ul style="list-style-type: none"> • High transaction costs • Errors in ordering, handling, delivery • High shrinkage • Low customer service / poor order fulfillment • Excess of pipeline inventory in the channel • Amplifying variations in product flow from down- to upstream 	<ul style="list-style-type: none"> • Low success rate of new product launches • Obsolete retail inventories • Markdowns to clear inventory • Failure to offer large product variety • Product recalls
Type Demand Forecast Error	Inaccurate quantity of products	Inadequate fit of products with consumer demand

Adapted from: Marshall L. Fisher (1997); What is the Right Supply Chain for Your Product?, in: Harvard Business Review, Vol. 78 (March-April, 1997), pp. 105-116

Improving the physical supply efficiency in the channel; the primary purpose of the physical supply function is to supply goods to retail customer's demand efficiently at the lowest costs. These supply chain costs are the sum of cost of production, handling, transportation and inventory storage from the two channel members combined. There are five symptoms signaling room of improvement in the functioning of the physical supply in a channel relationship. First, inefficient transactions between two channel members make the supply chain to make unnecessary costs. Second, many errors in the flow of goods like ordering errors, handling errors, and/or delivery errors cause the supply chain costs to rise needlessly. Third, low customer service can lead to out-of-stock situations in retail outlets and subsequently to lost sales (opportunities) (ECR Europe/Ronald Berger Strategy Consultants, 2003; Corsten and Gruen, 2003; see also research on consumer reactions to stock-out situations, Campo et al., 2000; Sloat, et al, 2002). Fourth, relatively high inventory levels in the channel can be attributed to a lack of coordination and channel partners want to avoid the risk of having an out-of-stock situation. And finally, a fifth symptom but less directly visible symptom of physical supply inefficiency is the large variations in product flows in the whole supply chain. This is also referred to as the bull-whip effect (Forrester, 1958, 1961). The demand order variabilities amplify in the marketing channel as they move up the channel, due to the supplier's lack of information about consumer demand, delayed reactions by retailers, or forward buying practices by retailers (Lee et al., 1997). The primary cause for inefficiency in a channel is a forecast error in terms of predicting the wrong *quantity* for a certain period by at least one of the channel members. A successful business case in reducing their supply chain costs is US retailer Hannaford Brothers who managed to lower its inventory levels by 30% and reduce logistical lead-times from 2 weeks to 4 days by collaborating with their suppliers and giving them more market information (Schiano and Clark, 1995).

Increasing the effectiveness of marketing efforts of the channel; mistakes in the market mediation function occur when the quality of goods supply does not match with the quality of consumer demand. Ideally, a well market-mediating channel maximizes the delivery of consumer value by producing the desired service outputs to the targeted and reached consumer segments (cf. Bucklin, 1966, 1970) and by offering the appropriate assortment of products the channel is associated with (Inman, et al., 2004); however, when service and assortment offerings mismatch with the variety and change in consumer demand, then the channel incurs costly mediation mistakes. These market mediation mistakes are recognized by different symptoms, such as mark-downs of obsolete retail inventories when supply exceeds demand. Other typical mismatches in market mediating are *unwanted* lot sizes (smaller-sized consumption bundle; a mismatch in bulk-breaking), too far-away retail outlets (lack of spatial convenience), too limited and unattractive assortments (e.g., De Vries-van Ketel, et al., 2004; failure to offer a large variety of products), not consumer-

minded organized assortments (Morales, et al., 2005), too long waiting or delivery time, and/or delivery of inadequate service to consumers during and after their purchases.

In addition to that, the offering of unwanted service output or products by the channel to the target market is also an indication for a poorly market-mediating channel. Another evident symptom of ineffectiveness is a low success rate of newly introduced products; many new products fail because they do not satisfy existing consumer needs; and a lot of retailers regularly have to resort to markdowns to clear unwanted merchandise. In contrast to the forecasting error leading to inefficiency, the primary cause for ineffectiveness is a forecasting error in terms of inadequately predicting the desired *quality*.

1.2.3 Types of Market Information Sharing Arrangements

Through sharing their market information, the two channel members are better able to identify the opportunities for efficiency and effectiveness improvements, and to allocate their resources to resolve any symptoms of inefficiencies and ineffectiveness, as a result leading to consumer-driven innovation in the channel and creating a competitive advantage over other channel relationships. We define a market information sharing arrangement as *an arrangement between two vertical channel parties to share market information with the intention to strengthen the performance of the channel for their mutual benefits*.

The management philosophy behind market information sharing strives for an idealized situation where the channel perfectly functions in delivering consumer value better, faster and at less costs. Apart from the theory on information sharing in channels, it is interesting to see how information sharing arrangements are put in practice. It is hardly possible to enumerate all existing types of information sharing arrangements between pairs of channel members, because every channel relationship develops its own configuration of information sharing rooted in the realities of competitive markets, past relationship episodes, and anticipated requirements for results. Table 1.2 presents therefore only a selection of exemplary cases in order to give an illustration of real-life market information sharing practices. In different industries, information sharing arrangements carry different names and labels. In the following we will discuss these examples of arrangements that have been developed in practice and compare them on their information sharing activities.

The key word for information sharing in the fashion industry is *Quick Response (QR)*. In the mid 1980's, US retailers like Wal-Mart and Dillard set up *QR*-arrangements with their domestic apparel suppliers. *QR* involves on-line electronic communication of sales data from retailers to merchandise vendors, with the vendors promptly supplying retailers with the merchandise needed to levels previously determined cooperatively by the retailer and the vendor (Fiorito, et al., 1995). In essence, retail buyers reserve production capacity

Table 1.2 *Examples of Market Information Sharing Arrangements between Retailers and Suppliers: QR, CRP, VMI, CPFR, CM*

<i>Type</i>	<i>Channel partners (retailer + supplier) [starting year]</i>	<i>Industry</i>	<i>Description channel collaboration and objective</i>	<i>Market information shared</i>		<i>Reported Performance</i>
				<i>By Retailer</i>	<i>By Supplier</i>	
QR	Wal-Mart + American Trouser + Milliken [1985] ¹	Fashion	Supplier American Trouser receives POS sales data and order information from retailer Wal-Mart electronically, and uses this information to synchronize production and inventory with textile mill Milliken. The retailer still prepares individual orders, but the POS data is used by supplier to improve forecasting and scheduling.	POS sales data Order information	Delivery (advanced shipping notice)	<ul style="list-style-type: none"> • 31% increase in sales, • 30% increase in inventory turns • Lead time from order receipt at textile plant to retailer was reduced 18 weeks to 3 weeks.
CRP	25 retailers + Campbell Soup [1992] ²	Food	Participating retailers send order via EDI-connections to Campbell Soup. Manufacturer's system predicts the consumer demand for each retailer and ships forecasted demand accordingly.	Aggregated movement data daily	Delivery (advanced shipping notice)	<ul style="list-style-type: none"> • Above 50% average sales growth with CRP-retailers compared to non-CRP retailers
VMI	Hannaford Brothers + 16 vendors [1993] ³	Food	The supermarket chain, Hannaford, provides manufacturers with movement data, and manufacturers make decisions about quantities to ship. This arrangement frees retail buyers from routine reordering decisions.	Movement data from DC to stores	Delivery (advanced shipping notice)	<ul style="list-style-type: none"> • Reduced retailer inventory levels by 30% • Saving 250,000 overhead costs • Lead-time from order to warehouse delivery reduced from 2 weeks to 4 days.
VMI	22 national department stores / 3 discounters + VF Corporation [1989] ⁴	Fashion	VF Corporation (manufacturer of jeans brand names like Wrangler, Lee) currently handles 40% of its production through an automatic replenishment scheme. VF receives POS data from individual retail stores via EDI. Based on the POS data, VF prepares the appropriate replenishment orders and sent them to the retailer's stores, within 5 days.	POS Store inventory status	Delivery (advanced shipping notice)	<ul style="list-style-type: none"> • Consumer sales increase from +5% to +240% • Discounters show better performance with VF VMI program
CPFR	Wegmans Food Markets + Nabisco [1998] ⁵	Food	US Supermarket chain Wegmans and food producer Nabisco test the CPFR concept and related practices. They worked together to manage the retailer's sales of the Nabisco-brand Planters Peanuts.	Category intentions Sales Promotion plans Demand forecasts	Marketing plan Sales Promotion plans Demand forecasts	<ul style="list-style-type: none"> • 13% increase in category sales • 53% increase Brand sales (+53%) • Reduction inventory • Less spoilage

Continued

Table 1.2 Continued

Type	Channel partners (retailer + supplier) [starting year]	Industry	Description channel collaboration and objective	Market information shared	Reported Performance
CM	Giant + Procter&Gamble Giant + Coca-cola [1994] ⁶	Food	Giant and two brand manufacturers test the Category Management principles and both suppliers become <i>Category Captains</i> .	POS data of the total product category	Consumer research <ul style="list-style-type: none">• 16% Coca-Cola Company unit sales• 8% total category sales
CM	Carrefour + Colgate [n.a.] ⁷	Food	Carrefour and Colgate partner in the oral care category. Based on consumer studies, Colgate suggested that Carrefour restructure the display in the oral care category so as to merchandise toothbrush products above toothpaste products, as opposed to merchandising them next to each other.	Total Category performance	Consumer research <ul style="list-style-type: none">• 6-16% sales increase in the oral care category
CM	Real,- (Metro AG) + Kraft [2000] ⁸	Food	German hypermarket chain Real,- initiated a category management arrangement with Kraft for the cheese product category.	Total Category performance	Consumer research <ul style="list-style-type: none">• 25% items reduction• 6% sales increase in the category
CM	Toys 'R Us + Little Golden Books (RandomHouse) [unknown] ⁹	Books	Publisher of children's book Little Golden Books manages the book section for category killer Toy's 'R Us including the inventory from suppliers other than Western Publishing.	POS data of the total product category performance Inventory status of competing publishers	Delivery Orders to competitors <ul style="list-style-type: none">• Extra Sales for both parties• Increased (managing) costs for Little Golden Books Marketing plan category for Toys 'R Us.

Sources: ¹NCES Conference (2002) presentation on July 25, 2002, Washington DC, USA; ²Clark, T.H., J.L. McKinney (1994); Campbell Soup Company: A Leader in Continuous Replenishment Innovations, HBS case 9-195-124; ³Schiano, W.T., T.H. Clark (1995); Hannaford Brothers: Leading the Grocery Channel Transformation, HBS case 9-195-127; ⁴Buzzell (1993); Vanify Fair Mills: Market Response System, HBS case 9-593-111; ⁵Grocery Manufacturers of America, KJR Consulting (2002), CPFR Baseline Study - Manufacturer Profile, 42p.; ⁶NACS Online (2003); Stock Tips: The Growing Trend of Category Management. January 22, 2003 ⁷Greenwood, Anita, and Sebastian Levy (2004); Brushing Up the Oral Care Category, ECR Europe Conference Brussels 2004; ⁸Marzian, Rita and Martin Eckhardt (2004); ⁵ to Drive: Five Key Factors to Develop Joint Business Successfully, ECR Europe Conference Brussels 2004; ⁹Simchi, et al., (2003); Strategic Alliances, presentation

at their vendors, but they wait to finalize the specification of their orders for the total product production time until closer to the time of delivery (Birtwistle, et al., 2003). By bringing smaller quantities of merchandise in the stores to identify the fast-movers (in color, style, size), the retail buyers first test the consumer preferences, and then they can later specify the rest of order based on the most-wanted products to complete the booked production time. The early QR-initiatives proved to be very successful: over 30% sales increase, inventory turns increase, sharp lead times reduction (NCES, 2002). Consequently, the popularity of QR rose and many apparel firms have adopted some form of QR (Birtwistle, et al., 2003 [in the UK]; Azuma, 2002 [in Japan]; Shin, 2002 [in Korea]; McMichael et al., 1997; Perry et al., 1999; Perry and Sohal, 2000 [in Australia]) rose tremendously.

The buzz-word for information sharing in the food industry is *Efficient Consumer Response (ECR)*. In the footsteps of the fashion industry, the food industry started in the early 1990's with ECR. ECR is a grocery supply chain management strategy aimed at eliminating inefficiencies, and excessive or non-value-added costs within the supply chain, thus delivering better value to grocery customers. It is designed "to re-engineer the grocery supply chain away from a *push* system in which manufacturers *push* products into stores, towards a *pull*-system in which products are *pulled* down the supply chain into the store by consumer demand information captured at the point of sale" (Kurt Salmon Associates, 1993). ECR can be thought of as an umbrella name for a container full of improvement tools (management practices, enablers and integrators) to make the supply chain more effectively and efficiently demand-driven. Besides the improvement tools of "enablers and integrators" which technically facilitates product identification (product code standards, scanning technology), and communication standards (electronic/EDI messaging standards, data synchronization) and making paperless information sharing possible, the ECR philosophy distinguishes two categories of information sharing in channels: *supply management* and *demand management*. Supply management aims to streamline the logistic flows and make the channel relationship more *efficient*. Improvements can comprise the entire flow of goods: from the supply of raw material, packaging, producing, storing, transporting, storing at the retailer's side, to putting it on the shelves and handling in the store. A type of information sharing arrangement belonging to supply management improvements is *Continuous Replenishment Planning (CRP)* (Vergin and Barr, 1999). Campbell Soup's CRP-initiative (Clark and McKenney, 1994) pertains that their retailers share their aggregated inventory data (movement data) (at distribution center level) about the supplier's own stock keeping units with a supplier. The manufacturer sends delivery notifications to the retailer as soon as orders are shipped. The main benefit for Campbell is that they are able to synchronize production based on the inventory-movement data. For the whole channel, CRP discourages forward buying by retailers; dampening demand

fluctuations in the chain and that results in savings for both parties on costly production overtime and unnecessary inventory holding-costs. On average, CRP lowers inventories by 32% and reduces stock-outs by 55% (Vergin and Barr, 1999).

A logical extension of the CRP-arrangement is to hand over authorization to the supplier to restock the retailer's inventory. In such an information sharing arrangement *Vendor Managed Inventory (VMI)* arrangement, the retail buyer is then freed from making routine reordering decisions and allows the supplier to assemble the order. In addition to the information about stock movement in the retail organizations, the retailer gives the supplier extra insight into logistic policy parameters (service-level targets, required stock-levels). An example of a VMI-arrangement is US retailer H.E.Butt Grocery Company (Schiano and Clark, 1995), which authorized a number of their suppliers to manage the stock. The benefits of the VMI-arrangements to H.E.Butt's are that warehouse inventory levels dropped, order lead-times shortened significantly, and out-of-stock levels minimized. Benefit to the suppliers was the ability to optimize their production planning and logistics operations and economize their truck-loads capacity.

Next to supply management, ECR includes tools to understand *demand management*. In jointly managing consumer demand for products and services, the two channel partners assess in a collaborative process the effectiveness of their marketing actions toward their target consumers and shoppers, and then identify solutions creating value of these groups of consumers. Subsequently, given these strategies both channel parties optimize the store assortments, and launch relevant promotions and product introductions, which add value to the consumer. All of these cooperative retailer-supplier commercial activities aim to provide an optimal offering to consumers and thus are directed at improving the *effectiveness* of the marketing channel relationship. The two information sharing arrangements sprouting from demand management improvements are *Collaborative Planning Forecasting and Replenishment (CPFR)* and *Category Management (CM)*. Especially sales promotional activities can disturb the orderly supply and production of the supplier; it is very difficult to anticipate the enormous demand spikes as a result of temporary consumer price reductions or other forms of sales promotions. CPFR aims to smoothen the supply during these extraordinary sales periods and to improve physical supply by a co-managed planning process and information sharing (Seifert, 2002; VICS and "A Guide to CPFR Implementation" from the ECR Europe). On top of the market information provided in a VMI-arrangement, channel parties give more clarity to each other on their sales promotional plans and share each other's demand forecasts. An exemplary case for applying CPFR has been the pilot by regional US supermarket chain Wegmans and US manufacturer Nabisco, in which they tested the normative CPFR/VICS collaboration model for the Planters Peanuts brand. In a short time, the Wegmans-Nabisco

tandem achieved extra performance in terms of 13% extra category sales, 53% Nabisco-brand sales, and a reduction in inventory.

Category Management (CM) is an information sharing arrangement, where the retailer discloses comprehensive marketing information about the whole product category to the supplier. This information includes POS-data from the competitor's brands in order to provide the full picture of the retailer's market developments in the entire product category. The supplier in turn gives insight into his product category expertise to the retailer. By receiving total insight into the category performance at the retailer, the supplier gets entitled to compose the store assortment, pricing, and planning of sales promotions. One successful example in this case is the first industry-sponsored CM pilot project at US supermarket chain Giant in 1994. Coca-Cola and Procter & Gamble were chosen to be the "category captain" for their respective category and to help select the products that would get shelf space in the Giant stores. In those two categories, Giant reclaimed market share that had been taken by their competitor Wal-Mart. Another CM example is German retailer Real,- (a Metro Group subsidiary) who initiated a category management arrangement with Kraft for the cheese product category. By sharing their market information, they optimized the store assortments. Still, by deleting 25% of the items from their assortments, channel parties increased the sales of the total category by 6%.

The promise of ECR in the US grocery industry is to eliminate the total sum of inefficiencies in the marketing channels and supposedly amounting to savings of US\$30 billion (Kurt Salmon Associates, 1993). This could be achieved by a 41% total-chain reduction of inventory by speeding up cycle time from originally 104 days to 61 days. Eventually, the full implementation of exemplary ECR-partnerships like Walmart-P&G could reduce the consumer prices by approximately 11%. Similar to the adoption of QR, ECR was received with great enthusiasm by many practitioners, partly due to the good results of early pilot projects. Yet in spite of its initial popularity and diffusion to other parts of the world (Harris, Swatman and Kurnia, 1999 [Australia]; Lohtia and Murakoshi, 2000 [Japan]; Dupré and Gruen, 2004 [Germany], Arkadar and Frossard Ferreira, 2003 [Brazil])³, ECR adoption has come to a stop (Kotzab, 1999; ECR Australia, 2002) and only few firms structurally embrace all parts of the ECR-philosophy (Gilmour, 2004).

³ National and ECR platforms to promote collaboration between retailers and manufacturers have mushroomed outside the US in the 1990s. It started in Italy (1993), followed by Canada (1994), Greece, Spain, Germany (1995), Australasia, Austria, Finland, HongKong, The Netherlands, Norway, United Kingdom, Sweden (1996), France, Philippines (1997), Poland, Denmark, Ireland, Singapore, South Africa (1998), Belgium, Malaysia, South Korea, Switzerland, Taiwan (1999), Czech Republic/Slovakia, Hungary, Portugal, Turkey (2000), Brazil, China (2001), and Iceland (2002). ECR Europe was founded in 1994.

Table 1.3 Types of Market Information Sharing Arrangements

<i>Label</i>	<i>Market Information Shared</i>		<i>Prime Objective</i>
	<i>By retailer</i>	<i>By supplier</i>	
QR / EDI	Order	Delivery	Efficiency through inventory turn increase, lead time reduction, transaction error reductions
VMI / CRP	Stock and movement	Delivery and lead times	Efficiency through inventory reduction, lead time reduction
CPFR	Demand forecast and promotion calendar	Demand forecast and promotion calendar	Effectiveness through category sales increase, less spoilage
CM	Category performance and plans	Consumer research	Effectiveness through brand and category sales increase

If we compare the market information sharing arrangements discussed above, it is obvious to see that the extent of market information shared varies a lot. Table 1.3 organizes the different information sharing arrangements along the dimension of information shared. In QR, the information shared is mainly confined to transaction data; whereas ECR/VMI practices add logistic information on stocks and movement data in the arrangement. Ultimately, in demand-side practices of ECR the channel members go a step further and share consumer insight. In this line, we therefore rank order these arrangements into four groups:

1. *Sharing of order and delivery information (e.g. QR and EDI)*; the prime objective of QR- or EDI-arrangements is to reduce supply chain costs by eliminating transaction errors. The retailer and the supplier electronically exchange order, purchase order confirmation, advance notice of shipment, and delivery information. This automated ordering process gives the supplier access to sales information (often aggregated at distribution-level) from the retailer and can be supported by idiosyncratic EDI-connections, but increasingly happens through Internet protocols (so-called web-EDI). In the fashion industry, these arrangements are labeled QR. Thanks to web-based EDI the investments for channel members have dropped to adopt this type of arrangements. These practices are not only bound to retail industries like Fashion or Food.
2. *Sharing of logistical information (e.g., CRP and VMI)*; the main motivation of CRP or VMI arrangements is to improve logistic operations, to streamline operations and product flows, logistical information is exchanged between channel members. The retailer gives insight into sales information and stock policy and the supplier has the obligation to fulfill the orders within a certain limited time frame. The main benefits for both channel parties are that they are able to improve the quality of their replenishment and inventory allocation decisions and thereby lifting their warehouse

productivity and reduce transportation costs. Not only limited to the food industry, VMI is increasingly practiced in other retail industries (like VF corporation, see Table 1.2; and department stores, in: Buzzell and Ortmeier, 1995).

3. *Sharing of Forecasts and Sales Promotional Activities (e.g., CPFR)*; the reason to the exchange of sales promotion activities plans and share demand forecasts is not only minimize the extra channel costs in these events, but also to optimize the sales during these extraordinary sales period. In managing such events, both channel members incur extra costs and still the success of remains highly uncertain. With these arrangements, the channel members first coordinate their sales promotion calendar and develop a contingency plan to act on. In the execution of the arrangement, retailers then pass on actual sales-performance information on supplier's brands and where both parties jointly plan sales promotions. The names for such arrangements vary: "collaborative planning, forecasting and replenishment" (CPFR), "event management" (Tesco with its extranet TIE), "sales promotions management" (Sainsbury's extranet SID). Examples of CPFR are not solely restricted to the food industry. In the fashion industry, WalMart and Sara Lee are experimenting together to optimize sales promotional activities.
4. *Sharing of Consumer and Competitive Intelligence (e.g., CM and CCRM)*; the objective of Category Management or Collaborative CRM is to maximize the consumer value of the channels offering and subsequently to maximize its sales potential. In the most far-reaching extent of information sharing arrangement where the retailer discloses comprehensive marketing information about the whole product category to the supplier. The shared information includes POS data from competitor's brands, and in CCRM-arrangement the retailer shares customer-loyalty-card data. The supplier in turn gives insight into his product category expertise to the retailer. By receiving total insight into the category performance at the retailer, the supplier gets entitled to compose the store assortment, pricing, and planning of sales promotions. According to a recent study by Cannondale Associates, Category Management is not just for grocery anymore, more retail channels is now embracing the practice (Cannondale, 2004). A case outside the food industry is category killer Toy's R Us in cooperation with a publisher of children books, Little Golden Books. The supplier was charged with optimizing the planning of children's book assortments at Toys'R Us stores and even managed the ordering of books from competing publishers.

1.3 Main Research Questions

The *Back-End Revolution in Retailing* means that channel members are increasingly going to vary their information sharing arrangements. It is expected that they will implement these different arrangements more and more in a strategic way. That subsequently raises many interesting questions for all of the players involved. Retailers need to explore new ways to restructure their supplier relationships. Suppliers are trying to find adequate answers to benefit from this new purchasing reality. Concerning the emergence of a multitude of various channel collaborations between retailers and suppliers, this dissertation specifically addresses the sharing of market information in channel relationships.

In examining all of the four above mentioned types of market information sharing arrangements between channel members, it would be interesting to find answers to the following questions: what types of market information are actually being shared between retailers and suppliers? Do they refrain themselves to logistical information? Or do they exploit also other windows of information sharing opportunities? What market information is rarely shared, and what is shared more often? And how do the channel members exchange their market information? What is their contact frequency? Are higher level managers with marketing responsibility involved in the exchange? Do channel members formalize their information sharing? And do they share equally with all of their channel members? Hence, our first research question is:

1. *What is the actual nature of market information sharing of channel members?*

Despite the growing availability of new information technological advances to share information in the channel, and all of the wonderful promises of QR, ECR and consumer-driven channel relationships, there is still no guarantee that retailers and suppliers will automatically begin to share their market information with each other. There remains a discrepancy between the generally held views among managers “that firms ought to share their information with channel partners” and the widespread observation that many firms still withhold market information from their channel partners (*Information Week, October 7, 2003*). It is well known that many factors foster or inhibit channel members to hand over such a strategic asset as market information is, to each other. Is it a matter of a sufficient amount of trust in the channel relationship? Is information sharing subject to the dependence structure between the retailer and the supplier? What about the turbulence in consumer demand? And does the extent of inertia in the channel relationship play a role? It would be interesting to discover which antecedents are the most important factors for channel firms to share market information. Therefore, our second research question is:

2. *What are the antecedents of market information sharing in channel relationships?*

After analyzing the antecedents that drive the sharing of market information in channel relationships, it would also be interesting to examine whether or not channel relationships that share more market information outperform the other relationships. Do market information sharing arrangements really contribute to the success of transforming the channel into a more consumer-driven demand chain? Do market information sharing channels learn better about the consumer marketplace? Does market information sharing pay off in terms of joint profits and the attainment of competitive channel advantages? We would like to know also whether sharing of market information materializes in improvement of the relationship quality. Is the information sharing party economically and socially more satisfied, and committed to the relationship? For that reason, our third research question is:

3. *What are the consequences of market information sharing in channel relationships?*

1.4 *Scientific Relevance*

Empirical studies on the nature, antecedents and consequences of market information sharing in channels are very much opportune. The need for knowing more about these subjects has considerably risen in both groups: scientists and practitioners. As for the scientists, the relevance of this research is four-folded. This work aims (1) to be responsive to explicit calls from other scholars (i.e., customers for academic research), (2) to regard the channel relationship as its sphere of activity, (3) to integrate findings from different perspectives, and (4) to use a variety of methodologies to look at the matter.

Responsive to calls. This dissertation is responsive because it answers to various calls for research from different marketing scholars. Ever since a description of a best-practice case in market information sharing in an industrial channel in *Industrial Marketing Management* in 1986 (Reddy and Marvin, 1986), no detailed empirical study on market information sharing in channel relationships had been conducted in the field of marketing. This is rather strange, for Reddy and Marvin (1986) concluded “the most crucial and sensitive element in developing [a channel] partnership: sharing and use of market information”. Yet, repeated calls for researching this specific topic came much later and from two different corners. The call from the first corner is in fact an extrapolation of the established idea that a source of competitive advantage increasingly lies in a firm’s ability to use market intelligence accurately (Menon and Varadarajan 1992; Moorman, Zaltman, and Deshpande 1992; Raju and Roy, 2000). So far, the use of information is promoted by a proper dissemination *within* the firm's boundaries (e.g., Maltz and Kohli, 1996). In the context of retailer-manufacturer interactions, it is appealing to investigate whether or not it

is possible to extend these established research findings to the dissemination of information *across* the boundaries of individual channel members: as is advocated by Day (1994), Dyer and Singh (1998), Frazier (1999) and Van Bruggen (2001).

The call coming from the second corner stresses the importance of empirically study channel partnerships (Mentzer et al., 2000; Weber, 2001). A specific demand for examining the subject of information sharing within channel partnering in more detail was made by Frazier (1999, p. 229). He shared the observation that “the sharing of intelligence is virtually ignored” and urged that “research is needed in identifying factors that facilitate the sharing of intelligence between channel members, both upstream and downstream.” This dissertation does address the sharing of market intelligence, and makes a clear distinction between what information is shared and how it is shared. Concerning the “what” information is shared, we will develop a new measurement on the information shared content.

Analysis at the level of the Channel Relationship. This dissertation regards the channel relationship as its unit-of-analysis. Like market information sharing, this research looks at the dynamics within a channel relationship, and considers this level as the appropriate unit-of-analysis to investigate the information sharing phenomenon. Thus far, most studies empirically investigated the subject at the firm-level (Kulp, et al, 2004; Myers, et al, 2000). The disadvantage of such a level of analysis is that they then realistically disregard a firm’s variety in its information sharing activities within its portfolio of channel relationships. Furthermore, it is difficult to say whether the collected data in such a case refers to a “fuzzy/non-existent” average of the firm’s channel relationships, or perhaps to a specific salient relationship. Investigating market information sharing at a relationship-level is further justified since there are strong indications (including anecdotal evidence from managers; *Chain Store Age*, June 2003) that relationship characteristics like trust and dependence play an important role. We therefore intend to make a considerable contribution in the explanatory power by investigating the phenomenon at the relationship level.

Integration of different perspectives. This dissertation integrates insights from different perspectives. As channel information sharing by definition means to incorporate observations from others; so does this research by blending in lessons from various research approaches. In this thesis we compare three research perspectives: (a) the supply chain optimization approach (e.g., Lee, et al., 1997) and (b) the game-theoretic approach (e.g., Siedmann and Sundararajan, 1997; Niraj and Narasimham, 2003), with (c) the behavioral empirical approach on marketing channel collaboration (e.g., Anderson and Narus, 1990). While the first two research perspectives simulate the potential benefits and outcome from channel information-sharing, the empirical perspective primarily concentrates on the actual state of information sharing in channels; notwithstanding the

fact that this perspective examines information sharing through four different conceptualizations: information sharing as power use (e.g., Boyle, et al., 1992), as communicative behavior in the relationship (e.g., Mohr, et al., 1996), as a relational norm (Heide and John, 1992), or as motivational investment in the relationship (e.g., Gundlach, et al, 1995). This dissertation develops a research framework based on the insights from all three research approaches.

Variety of research methods. Another way in which the dissertation integrates different perspectives is to employ a variety of research methods: a survey and an experiment. We contribute to exploring the same phenomenon by different means of collecting data. We collected data by means of a survey and by an experiment. The survey collected data from retail buyers from Dutch retail organizations. The laboratory experiment collected data from subjects in the role of a supplier dealing with a retail organization. In this last empirical study we primarily concentrate on the consequences. The survey collected data on all three research questions: nature, antecedents and consequences.

1.5 Managerial Relevance

In the early 1990's, when pilot projects of ECR and QR reported very promising results and highlighted the importance of the *information-integrated channel* to find the "Holy Grail of Retailing", it became clear that retailers and suppliers cannot maximize their channel performance without sharing information, because it "is the lifeblood of channel collaboration" (Martin, 1994). Now after 20 years' of experimenting with information-integrated channel collaborations, the advances in information communication technologies and the wide-spread adoption of web-based communication tools pushes retailers and suppliers into the new stage of the retailing revolution, the *Back-End Revolution*. In the coming years, information sharing in channel relationships is expected to become more sophisticated, and channel members will be going to employ their information sharing practices in a more strategic manner. Our research examines the nature of information sharing, and that will be helpful for both retailers and suppliers in the *design* of their future arrangements with each other.

By scrutinizing the antecedents of information sharing practices, we give managers insight into the circumstances in which channel members are likely to share their information. Based on these findings, managers can make a *situational analysis* and will be able to assess whether or not their channel members are going to start an information sharing arrangement with their firm. However, if this analysis tells them, that circumstances are somewhat unfavorable, our insights may help them to influence the situations in such a way that their channel members start to share information with them.

With the systematic investigation of the consequences of information sharing, we aim to provide managers with a rich insight into “what works” in the information sharing arrangements. Our studies on the consequences should help managers to prioritize the different dimensions in information sharing arrangements.

1.6 Structure of the Dissertation

With the prime purpose of answering the three main research questions, the dissertation is set up around four chapters with empirical results: Chapter 5, 6, 7 and 8 respectively. The first three empirical chapters attempt to answer the questions about the nature, antecedents and consequences using data from a large survey. Chapter 8 examines the consequences of market information sharing by means of an experiment. The remaining chapters provide the reader with conceptual, theoretical, and methodological information about the research topic. We shall briefly introduce the content of the chapters to provide an overview of the dissertation’s structure. The structure of this dissertation also graphically presented in Figure 1.3.

Chapter 2 gives an overview of different research perspectives taken by academics to investigate information-sharing in channel relationships. This systematic and extensive review includes over 120 studies and it does not only results into a list of relevant variables for studying the phenomenon, but also helps to get insight into the theories employed in explaining the intra-channel market information sharing phenomenon.

Chapter 3 lays out our research framework about the nature, the antecedents and the consequences of market information in a channel relationship. We explain the theoretical fundamentals for our hypotheses and explain how social penetration theory is applied in this channel context.

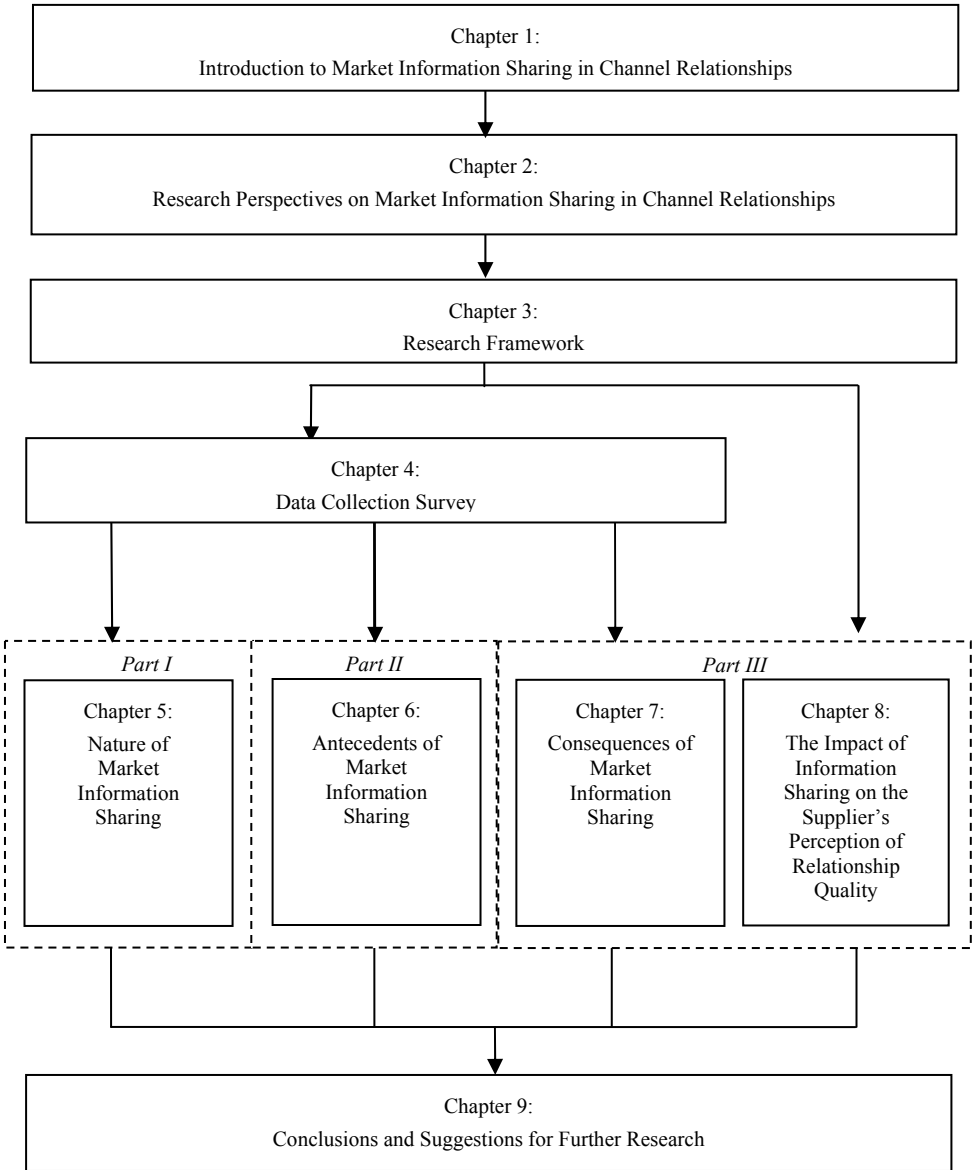
Chapter 4 describes the data collection methodology of the survey that we used for the first three empirical chapters. Specially, we discuss the sample frame, key informant selection, and questionnaire development. Remember that Chapters 5, 6, and 7 are based on data by means of the survey. Chapter 8 is based on a laboratory experiment.

Chapter 5 contains the analyses, and results of the first empirical part. Its objective is to address the first research question about the nature of market information sharing. In Chapter 6, we report the measurement validation, analyses, and results of the second empirical part and gives insights into the antecedents of market information sharing. Chapter 7 describes the analyses and results of the third empirical part that investigates the consequences of market information sharing.

In contrast to the three previous empirical chapters with a primary retailer’s perspective, Chapter 8 takes on the supplier’s perspective and reports about methodology, analysis and results of the laboratory experiment. Like Chapter 7, it deals with the consequences of market information sharing.

Based on the findings from the four empirical parts, conclusions are drawn, implications for marketing channel practices are formulated, and ideas for future academic research are presented in Chapter 9.

Figure 1.3 *Structure of the Dissertation*



CHAPTER TWO RESEARCH PERSPECTIVES ON INFORMATION SHARING IN CHANNEL RELATIONSHIPS

2.1 Introduction

In Chapter 1 we have described the phenomenon under investigation here. Not only did we lay out the management philosophy behind market information sharing with the promise for improvements in cost-saving efficiency and demand-enhancing effectiveness in channels, but also we gave real-life examples of such information sharing arrangement between retailers and suppliers. After that, we formulated our three main research questions related to the nature, antecedents and consequences of market information sharing. But before we develop our research framework to answer these questions, it is important to shed light on what academics already found out about the subjects closely related to ours here. Therefore, the purpose of this chapter is two-fold. Our first objective is to sketch the landscape of the diverse academic perspectives taken to investigate the phenomenon of intrachannel market information sharing.

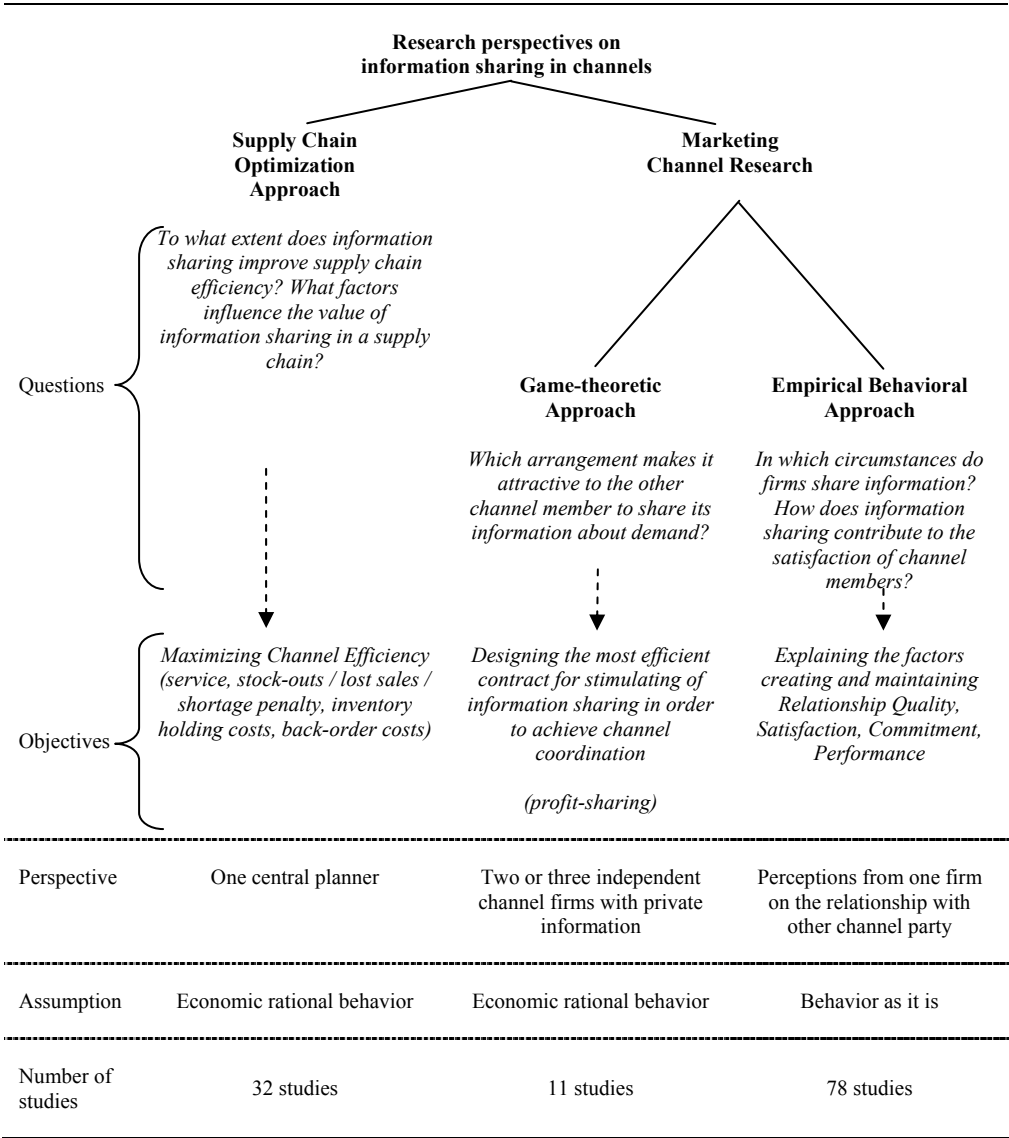
Our second and derived objective of providing a systematic literature overview is to make a list of the variables playing an important role in information sharing in channel relationships. Both objectives assist us in elaborating our contribution to the literature and providing us with the crucial building blocks for our research framework, presented in Chapter 3.

Research has been fragmented and multiple disciplines in management research have made their contributions to gain more insight into antecedents and consequences of information sharing.⁴ Figure 2.1 distinguishes three approaches to researching information sharing: supply chain optimization, game-theoretic, and empirical behavioral channel research. In the following discussion, we aim to explain for each approach how they contribute to the three issues relevant to our research questions. The first issue concerns the nature and conceptualization of information sharing; how does the research approach at

⁴ The strategic management literature also studies topics in interfirm relationships that are closely connected with information sharing. We do not include this stream of literature in the overview for the following two reasons. The first reason is that Strategic Management often investigates horizontal partnerships or international joint ventures; not necessarily vertical channel relationships. The second reason is that this literature primarily looks at *receiving knowledge*; *absorbing knowledge* (e.g. Cohen and Levinthal, 1990; Dyer and Singh, 1999) and not at the *sharing information*.

hand define information sharing and which aspects of does it capture? The second important issue relates to the antecedents in which information is shared. For each research stream, we want to detect which the conditional factors are shown to impact market information sharing. The third issue is about consequences of sharing information in channels. At the end of this Chapter, we summarize how the research streams in their typical way contribute to the three research questions we have.

Figure 2.1 Overview Research Perspectives



In the following three paragraphs we clarify the difference among research perspectives in approaching the topic. The first research perspective presumes that sharing information from all different stages (or echelons) in a chain under the direction of one well-informed central planner brings about a better overall performance and higher profits for the whole chain than the sum of profits from non-information sharing individual channel firms at each chain stage together. We found 32 supply chain optimization studies belonging to this perspective. The main objective of this approach is to assess how much information sharing helps to increase the efficiency of the (whole) supply chain.

The second research approach takes on a game-theoretic perspective. These studies view the supply chain as a composite of two or three independent firms with private market information. The eleven studies included in this overview attempt to understand which contract incentives exist to make channel firms reveal their private information and if they do, how. The main objective of this approach is to design the most attractive and efficient information sharing contract to be offered to the other channel member.

Partly complementary to the previous two approaches is the third research perspective, the empirical behavioral approach. This research perspective does not necessarily assume information sharing in channels to be an alternative conduct evaluated by entirely economically rational firms. Instead, these 78 behavioral studies look at perceptions of *actual* information sharing behaviors by channel firms. Their objective is to provide possible explanations for the hesitations of organizations to pass on their market information to their channel partners.

The remainder of this Chapter is organized as follows. Each of the three next paragraphs discusses one of the research approaches in more detail: supply chain literature (2.2), game theoretical models (2.3), and empirical behavioral research (2.4). The concluding paragraph 2.5 summarizes the similarities and differences among the research perspectives in order to list the relevant variables to be included in our research framework.

2.2 Supply Chain Optimization Approach

The first research approach, *Supply Chain Optimization*, looks at the phenomenon as a system-optimization problem in which one central channel planner with or without access to information from two or more stages (in this stream of literature, stages are often referred to as “echelons”) in the supply chain. The general point of departure is that if the central planner does not receive (all of) the *stage-level* information, then individual firms optimize their own stages and the chain may subsequently exhibit a sub-optimal system performance. Subsequently, the approach’s primary question to be addressed is to what extent information sharing leads to higher supply chain efficiency. The amount of efficiency improvement is calculated by the total reduction in the sum of the supply chain

costs, consisting of inventory holding costs, batch ordering costs, shortage penalties due to lost consumer sales opportunities or back-order costs, and, if appropriate, costs incurred by carrying obsolete or excess inventory.⁵ By having a measure for the efficiency improvement it is possible to estimate the (economic) value of information sharing in supply chains. Typical of these studies is to assess the value of information sharing as the relative cost difference between information sharing scenarios and the *base case* without any information sharing. A simple illustration of a *supply chain optimization problem* is as follows (this example is taken from Gavirneni et al., 1999).

Consider one supplier in a supply chain with one retailer dealing with consumers (supply chain structure depicted as 1M : 1R) and having an infinite number of periods to sell his products via the retailer. The retailer faces varying consumer demands and replenishes inventory by following an (s, S) policy. Meaning that at the beginning of each period, the retailer reviews his inventory level (on-hand inventory minus consumer back-orders), and if it is below s , he/she places an order with the supplier to raise the inventory level to S . The supplier satisfies this order as much as possible. In the event the supplier does not have sufficient on-hand stock to satisfy the retailer order, a partial shipment is made to the retailer, and the retailer obtains the unfilled part of the order from an external source. There is no delivery lead-time with both sources of supply. Consumer demand arises at the retailer during the period, with complete backlogging. The focus of the analysis is the supplier, who after satisfying (partially or fully) a retailer order at the beginning of each period, decides how much to produce for the period. Production takes one period and is subject a capacity constraint. The supplier incurs linear inventory holding costs and linear penalty costs for retailer orders. The objective of the supplier (as well as the central planner of the model) is to determine a production strategy to minimize the supplier's costs, under various scenarios of the supplier's information about the downstream part of the supply chain. The *base case* is the scenario presuming that the supplier has *no* information about the retailer or consumer demand expect for the order the retailer has placed in the past. By calculating the difference between the supply chain costs (in the example, only the supplier's costs), under the base case and alternative information sharing scenarios, the value of information sharing is obtained.

The illustration depicted above is considered to be a simple one, because several of its assumptions make the optimization decision of the central planner less complicated. For instance in this example, there is no lead-time in delivery, and the retailer always has an

⁵ The types of supply chain costs included in these studies vary a little. Usually, these studies include inventory holding costs, shortage penalties for lost sales and back-order costs, batch-ordering costs (e.g., Gavirneni, et al., 1999; Lee, et al., 2000). When the models are about a finite sales length context (Iyer and Bergen, 1997; Fisher and Raman, 1996) contain also costs incurred by obsolete or excess inventory. The majority of these studies assume one central planner (CP; see appendix II.1) whose aim is to optimize the total costs incurred by the each of the individual stages. Some of the studies only take the costs of one channel member into account; for instance, the supplier (Bourland et al., 1996; Gavirneni, et al., 1999)

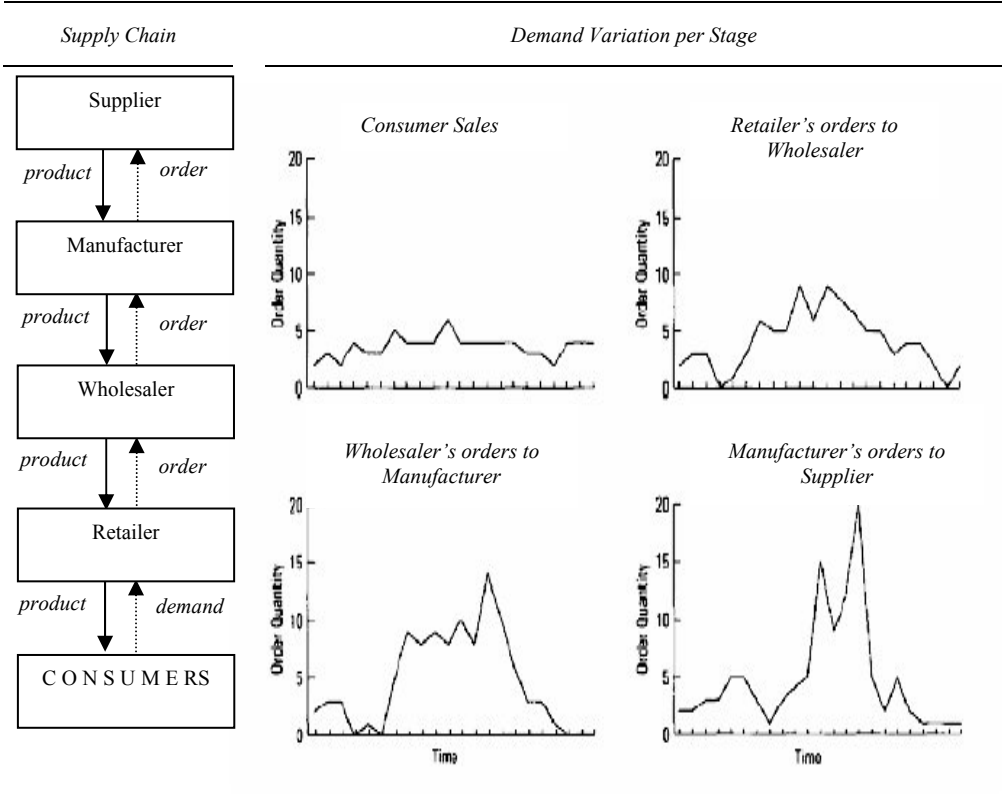
alternative source to satisfy consumer demand if the supplier deliveries fall short. In the case that the supplier has no capacity restriction, the model would even be simpler.

The focus in this approach lies thus on the *overall* supply chain performance and not just on the performance of one particular party in the whole channel (see Lee and Billington, 1992). To gain a systematic insight into the findings of the supply chain optimization approach, we collect the studies on information sharing from five high-standing journals specialized in this approach and that have been used by an earlier review by Sahin and Robinson (2002): *Management Science*, *Operations Research*, *Journal of Operations Management*, *European Journal of Operational Research*, and *Manufacturing and Service Operations Management*. We update the Sahin's and Robinson's work by adding the most recent and relevant articles published in the last two years (2003 and 2004). Appendix II.1 presents a table with a list of the 32 included studies and provides the following details for each study: its research objective, the specification of the supply chain structure for which the model is applied and the variables included in the model, and its key findings. The studies develop a mathematical multi-stage/echelon inventory control models (depending on the sales horizon, the models concern a periodic review problem or a newsboy problem). With the exception of some articles using case-studies (Lee, et al., 1997; Taylor, 1999; Fransoo and Wouters, 2000), all of the listed studies take on an OR/operations management science approach modeling logistical management decisions, and use computer simulations to test and evaluate approximations of the models.

In essence, it all begins with the periodic uncertainty and variability in consumer demand that creates the supply chain optimization problem. As made clear in Chapter 1, the marketing channels may improve their total performance to a large extent by diminishing the channel members' errors in forecasting the quantity and quality of products desired by consumers. The forecasting errors in the *quantity* of the consumer demand cause supply chain inefficiency, while forecasting errors in *quality* lead to ineffectiveness in the channel (see Chapter 1, paragraph 1.2.2). The problem of uncertainty in consumer demand quantity is modeled by periodic inventory control models and assumes an infinite number of sales periods to come. The latter problem of uncertainty in consumer demand quality is often modeled as a newsboy problem (f.i., perishable or seasonal-sensitive consumer goods like style goods, or fashion).⁶

⁶ To illustrate the classic newsboy problem of a newspaper publisher, we give the following example: a newspaper is concerned with controlling the number of papers to be distributed to newsstands. The cost of a paper varies (i.e., Sunday vs. daily), and the local consumer demand is a random variable, q , with probability function $P(q)$ = probability that demand equals q . Unsold papers are returned, with no salvage value the next day, losing millions of dollars in the production cost. It is possible, however, for a newsstand to order more papers the same day. There are holding and shortage (penalty) costs. The problem is to determine a reorder policy so as to minimize total expected cost.

Figure 2.2 Illustration of the Bullwhip Effect: Demand Variability at Different Stages of the Supply Chain



The uncertainty and variety in consumer demand do not only make it difficult for the first-hand observant, the retailer. But also further up in the supply chain, uninformed channel members are bothered by instable demand and their natural reaction is to amplify, delay, and oscillate the little information they have on demand (Forrester, 1958, 1961; the theory of industrial dynamics). In effect, even small variations in consumer demand have a tendency to grow further up in the chain. A demonstration of how this so-called *bullwhip-effect* works, is presented in Figure 2.2 showing an exemplary serial 4-stages supply chain of a retailer, a distributing warehouse, a manufacturing, and a supplier. In these indirect marketing channels, the retailer first perceives consumer sales and then makes a replenishment decision on its quantity in stock. The replenishment order includes sufficient quantity to restock the actual units sold, plus any adjustments to safety stock and pipeline inventory to compensate for a possible shift in the consumer demand pattern. These adjustments, which are passed to the distributing warehouse in the form of an overstated

order, amplify the distributor's perception of consumer demand. Replication of this process at each stage of the supply chain amplifies the information distortion, causing all channel members upstream of the retailer to lose track of actual consumer demand pattern so that system-wide inventory control suffers.

Laboratory experiments staging a supply chain environment (known as the classroom game *The Beer Distribution Game*) (Sterman, 1989) (later in the computerized version by Kaminsky and Simchi-Levi, 1998) partly explain the causes for the demand amplification by the misperceptions of time lags in the channel whereby game players do not adequately account for the delays between order placement and order delivery and therefore continued to over order or under order in the intervening periods. Furthermore, decision-makers do not have a clear idea of the optimal stock levels at each point in the chain and subsequently failed to plan for the required amount to stock in the pipeline when adjusting demand. Interestingly, these beer-game studies also reveal that decision-makers have a tendency to blame the widely fluctuating demand along the chain on external causes, for example fluctuating end-consumer demand, when in fact the end-consumer demand was held constant. So, while looking for external issues, the channel members do not search for solutions when the oscillations are actually caused by inappropriate decision-making internally within the chain. It is the local rationality whereby decision-makers try to optimize the goods flows of only their own stage in the chain.

In trying to cope with the demand variability and uncertainty, a logical reaction of (uninformed) channel members is to hold more safety stock (Graves, 1996). Hence, we can argue that, the larger the consumer demand variability, the larger the bullwhip effect, the greater the *potential* value of information sharing to smoothen supply chain operations and improve supply chain efficiency by reducing the excess of held inventory.

Whether it will ever be possible to entirely eliminate the bull-whip effect by information sharing, remains very doubtful. Chen, et al. (2000) demonstrate that even under the most ideal conditions when (1) all demand information is centralized, (2) every stage of the supply chain uses the same forecasting technique, and (3) every stage uses the same inventory policy, there will still be an increase in variability at every stage of the chain.

Furthermore, the large difference in outcomes of the different supply chain optimization studies indicates that the reduction of supply chain costs by information sharing can considerably vary. Chen (1998) finds that supply chain costs are lowered up to 9%, and on average by 1.8%. Aviv and Federgruen (1998) report benefits of 0%-5%. In contrast, Lee et al. (2000) find that information sharing can even lower supply chain costs by about 23% in their scenario with the highest consumer demand turbulence. However, Graves (1999) studies a similar model, with the exception that there is no outside inventory source, and concludes that information sharing provides no benefit to the supply chain.

Gavirneni et al. (1999) report that sharing the retailer's information on consumer demand reduced the supplier's costs by 1% - 35%. The impact on the total combined supply chain's cost would be lower because information sharing has no impact on the retailer's costs.

Actually, this enormous disparity in outcomes of these studies using different model variables suggests that many other factors may influence the value of information sharing. Based on the studies in our review we will systematically enumerate the factors shown to influence the *potential value* (i.e. aggravating the bull-whip effect in the chain), the *value* of information sharing itself, and the *relative value* of information sharing (as compared with other measures to align the channel/supply chain).

Factors influencing the potential value of information sharing. The potential value of information sharing concerns the estimation in supply chain cost reduction to be gained from sharing information in the channel. This potential is largely determined by the variability in consumer demand and the resulting bullwhip effect. Knowing that the consumer demand variability and the resulting bullwhip effect (Cachon, 1999) make channel members carry more inventory, it can be assumed that there is more potential of inventory and other supply chain costs to be reduced. Hence, it is important to first answer the question how to measure the bullwhip-effect size and second to identify the underlying causes of the bull-whip-effect. As for the quantification of the bull-whip effect, four studies concentrate on finding a good measurement method (Metters, 1997; Fransoo and Wouters, 2000; Taylor, 1999; Chen et al., 2000). Three studies address the identification of causes of the bullwhip effect (Lee, et al., 1997; Chen et al., 2000; Cachon, 1999).

The potential gravity of the bullwhip effect in the channel increases when the supply chain optimization problem gets more complex. The complexity of the supply chain optimization depends on three main structural characteristics: (1) the scope of the supply chain to be optimized, (2) the length of the sales period, and (3) the inertia embedded in the chain. The primary complicating factor is the scope of the supply chain. The scope is defined by the number of stages and the number of players per stage. Both aspects make up the total number of decision-makers involved. The larger the number of decision-makers involved, the higher the chances that the bullwhip effect worsens. Although, the vast majority of studies under scrutiny here restrict themselves to one manufacturer (1M) and one retailer (1R) (Bourland, et al., 1996; Gavirneni, et al., 1999; Lee, et al., 2000; Iyer and Bergen, 1997; Aviv, 2000) or to 1M : nR settings (Gilbert and Ballou, 1999; Fisher and Raman, 1996, Cahon and Fisher, 2000; Moinszadeh, 2002; Zhao, et al., 2002), it is found that the longer the chain (Chen, et al., 2000; Taylor, 1999; Fransoo and Wouters, 2000), and the more players (Cachon, 1999), the larger the demand variance. Understandable is that the potential value of information sharing increases when the number of stages increases (Chen, 1998).

The second complicating factor in optimizing the supply chain is the sales period length. In case of an infinite long sales period, the periodic review inventory control models are used (Chen, et al., 2000; Bourland, et al., 1996; Gilbert and Ballou, 1999; Hariharan and Zipkin, 1995; Gavirneni, et al., 1999; Cachon, 1999; Lee, et al., 2000; Zhao, et al., 2002), because a certain level of consumer demand for these goods is assumed to last. That assumption cannot be made for modeling a situation with perishable, seasonal or style goods that are only sold in a limited number of periods; like in the fashion industry (with QR-channel arrangements, see Chapter 1, paragraph 1.2.3). In a time of changing consumer preferences, the sales periods may be short (Iyer and Bergen, 1997; Fisher and Raman, 1996), and the urgency to share timely demand information becomes greater. Because excess inventory at the end of the sales season is a major cost factor for these channels, supply chain optimization studies therefore use newsboy problems to model the optimization problem of the central planner (Fisher and Raman, 1996; Iyer and Bergen, 1997; Milner and Kouvelis, 2002). The value of information shared is relatively higher when the consumer demand fluctuates even more in a short period (Milner and Kouvelis, 2002).

The third complicating factor in supply chain optimization through information sharing falls into the category of channel inertia. Limited production capacity and longer lead-times are both critical sources of inertia and make that the channel can only react to consumer demand changes with a certain delay. The more restrictions to production capacity (Metter, 1997), the more demand amplification occurs, because factory capacity limitations encourage over-ordering in times of shortages as in *ration gaming* (e.g., Metters, 1997, Lee et al., 1997). Yet, note that in over-capacitated chains, early demand information increases the value of information (to the supplier) (Gavirneni, et al, 1999). Furthermore, it is established that lead times of deliveries increase the uncertainty in the supply chain (Hariharan and Zipkin, 1995; Chen, 1998), and also enlarge the value of information because the potential to save costs goes up (Moinzadeh, 2002).

Factors influencing the value of information sharing. Not only the complicating factors surrounding information sharing, but also two characteristics of the shared information itself influence the value of information shared. Generally, three characteristics have been investigated by supply chain optimization studies: *source* of information, *extent* of information shared and the *quality* aspects, like timeliness, accuracy and predictive power. The source of information implies either it comes from upstream (supplier) or upstream (retailer). Only very limited attention is given to the sharing of information coming from the supplier, like cost or capacity information (Chen, 2003). An exception is the study by Chen and Yu (2005); their estimation of the value of supplier's lead-time information shows that as sales volume grows, this upstream information

increasingly reduces the supply chain costs. All other studies deal with downstream information from the retailer.

As for the second characteristic of information shared, the extent of the information shared may differ among the various studies. While most studies take a look at the sharing of *full* information and calculate the effect of passing on all information about consumer demand (observed at retail level) (Parlar and Whang, 1995; Anand and Mendelson, 1997; Chen, 1998; Gavirneni, et al., 1999; Chen, et al., 2000; Lee, et al., 2000; Milner and Kouvelis, 2002), the information shared is limited to the retailer's/channel member's ordering policy (Gavirneni, et al., 1999; Aviv, 2002), demand forecasts (Aviv, 2001; Aviv, 2002), advance order commitments (Gilbert and Ballou, 1999), improved forecasts (Fisher and Raman, 1996), or retail promotion plans (Iyer and Ye, 2002) with their upstream channel partners. Overall, *full* information sharing is found to be more valuable than *partial*.

Concerning the third characteristic of information shared, supply chain optimization studies look at *quality* aspects like timeliness, accuracy and predictive power. The timeliness of information shared is very valuable to the supplier for it reduces its inventory holding costs and reliability of the deliveries to retailer (Bourland, et al., 1996). Timely collaborative forecasting is also more effective. Less delay between the making of the forecast and the actual execution increase the benefits (Aviv, 2001). Both accuracy (free of errors) in information shared (Anand and Mendelson, 1997; Zhao et al., 2002) and predictive (explanatory) power (Aviv, 2002) also contribute positively to the value of information sharing.

Factors influencing the relative value of information sharing. Information sharing is not the only one available instrument to make the channel more efficient by reducing supply chain costs. For instance, Cachon (1999) study shows that besides information sharing making the supply chain more flexible in terms of shortening retailer's order intervals and lowering the minimal order batch is a viable alternative for reducing supply chain costs. It is therefore (managerially) interesting to look at the *relative* value of information sharing and to compare its value with other measures for supply chain alignment. In these comparative studies, information sharing can be regarded as complementary – the alternative measure increases the value of information shared – or as replacement – the alternative measure decreased the value of information. In a number of studies the information sharing is inextricably bound up with handing over the decision-making to the other channel member (supplier), like the VMI-effectiveness studies (Waller et al., 1999; Aviv and Federgruen, 1998; Fry, et al., 2001; Aviv, 2002); in effect, in these cases the value of information shared depends very much on the coordination measures. Also other studies find information-sharing and coordination to go hand-in-hand and consider them of complementary value (Anand and Mendelson, 1997; Parlar and Weng,

1995). For instance, Watson and Zheng (2005) emphasize the importance of an appropriate incentive scheme for the player involved, because they find that the benefits of information sharing can really be materialized when the individual channel members are made accountable for the performance of the whole channel. Additionally, Milner and Kouvelis (2002) show that in long-lead time channels the value of information sharing only can increase when the supplier is both flexible in the timing of taking the order and producing the quantity.

Substitutes for information sharing are shortening lead-times and cutting order batch sizes. The value of information sharing goes down when lead times are made shorter (Chen, 1998; Milner and Kouvelis, 2002). Smaller and smaller batch sizes decrease the value of information (Chen, 1998). Cachon and Fisher (2000) compare the value of sharing real-time demand information with two other information-technology-related sources of supply and improvement: reducing order cycle lead times through electronic transaction processing and reducing shipment batch sizes as a result of lower transaction processing costs.

To summarize the discussion on the supply chain optimization approach, we have gained the following ideas on the nature, antecedents and consequences of information sharing. First, as for the nature of information sharing, the supply chain optimization approach concentrates on the calculation of the value of information sharing. Its value mainly lies in its potential to undo the negative bullwhip costs effects in the supply chain. Intrinsically, its value is linked with the extent to which information from the marketplace is shared in the supply chain. We make difference in partial versus full sharing of information. Some studies also look at quality aspects of information, such as timeliness, accuracy and explanatory power. These quality indicators for shared information in the channel appear to increase the value of the information. However, for now, it remains unclear whether or not these characteristics are uncorrelated. Later in this dissertation (Chapter 5), we will report from our own studies that the extent of information sharing has strong associations with the (perceived) quality.

With regard to the antecedents of information sharing, this research perspective has studied the factors having an influence of the value of information sharing. Very prominent is the factor consumer demand turbulence, because variation in end-user demand is the start of the Bullwhip effect. Other circumstantial factors aggravating or dampening the bullwhip like channel inertia and the scope of the supply chain emerge as important variables to consider for explaining information sharing in channels. If a factor contributes to the value of information shared, then it can be considered to be an antecedent promoting information sharing in a channel (indicated by the “(+)”-sign). If the factor reduces the value of information shared, then the reverse is true and the factor then qualifies as a negative antecedent (indicated by the “(-)”-sign). With regard to the issue of the

consequences, it is clear that supply chain optimization studies primarily concentrate on the cost-saving efficiency improvement in the chain as a whole.

Table 2.1 *Important Variables from the Supply Chain Optimization approach*

<i>Antecedents</i>	<i>Market Information Shared</i>	<i>Consequences</i>
<i>Consumer demand turbulence (+)</i> <ul style="list-style-type: none"> • consumer demand variability (+) • length of sales period (-) <i>Channel inertia (+)</i> <ul style="list-style-type: none"> • supplier capacity (-) • channel length (+) • order/delivery lead-time (+) <i>Scope of the Supply Chain (+)</i> <ul style="list-style-type: none"> • Number of stages in the chain (+) • Number of players per stage (+) 	<i>Source</i> <ul style="list-style-type: none"> • Upstream (supply lead-times) • Downstream (consumer demand data) <i>Extent (downstream)</i> <ul style="list-style-type: none"> • Partial (inventory policy parameters, stock information, demand forecasts) • Full (consumer demand data) <i>Quality</i> <ul style="list-style-type: none"> • timeliness • errors in information • explanatory power 	<i>Supply Chain Performance (+)</i> <ul style="list-style-type: none"> • Cost-saving efficiency improvement (ordering, backorder, inventory-holding, improved demand forecast accuracy)

Note: (+) indicates that the variable increases the value of information sharing; (-) indicates that the variable decreases the value of information sharing.

2.3 *Game-theoretic Approach*

Another long-standing academic tradition in the modeling channel dynamics is game theory (Spengler, 1950; Jeuland and Shugan, 1983; Moorthy, 1987). When game theorists look at information sharing in channels, they regard it as a multi-agent decision problem, which means that there are multiple independent channel firms contending for a piece of the total channel profit (payoffs). In such a game-model, channel firms have to decide on making certain moves on which their payoff depends. For instance, they need to decide whether or not to accept or reject a contract to share their private information. Each channel member is supposed to behave rationally. Rationality in the language of game theorists implies that each channel member/player tries to maximize his/her payoff irrespective to what other players are doing. Moreover, looking solely for their own individual profits when making decisions, channel members do not care about the collective impact of the channel as a whole. Certain individual rational decisions may perhaps then result in lower total channel profits than optimal. When that happens and no optimal joint outcome is reached, the channel relationship is regarded as ill-coordinated. Game theorists aim to mend or prevent these channel coordination problems by formulating (*prescribing*) optimal arrangements for channel members. The channel coordination problem becomes bigger, when uncertainty about consumer demand grows.

For that reason, one type of such arrangements to reach channel coordination (and thus resulting in optimal total channel outcomes) in larger consumer demand uncertainty is to share market information between channel members. The prime question for game theorists is then: how should a supplier induce the retailer to reveal his true demand – what is referred to in the literature as the “demand revelation” problem (Myerson, 1979). An incentive scheme is only considered to be effective if it not only gives higher expected channel yields but also that the retailer is better off. This is called the *Pareto optimality criterion* to elicit the retailer to share his superior private information about the *state of the nature* (i.e., consumer demand) with the supplier.

So far, it has been more common for game theorists to look at *horizontal* information sharing between competitors to inform each other about the *state of nature* (e.g., Vives, 1984; Gal-Or, 1985; Shapiro, 1986; Gal-Or, 1986); here in this thesis, we look at *vertical* information sharing and to our knowledge, eleven studies have investigated this subject in a game-theoretic perspective.⁷ Appendix II.2 enumerates the studies and summarizes the different aspects: nature and number of players, sequence of the game with the specification of the strategic moves under consideration, the players’ payoff functions, the nature of information to be shared, and the key findings.

The studies in our review all present dynamic games meaning that there are different sequential steps in the games to be taken (as opposed to one-shot games where players take simultaneously one step/action). Five studies are primarily price-setting games (a *Bertrand type games*; Chu and Messinger, 1997; Roy, 2000; Niraj and Narasimhan, 2003; Kurtuluş, 2004). One of them is a quantity-setting game (a *Cournot type game*; Donohue, 2000; Li, 2002; Gu and Chen, 2004). Others concern the offering of an arrangement by the supplier (Desiraju and Moorthy, 1997; Gal-Or, 1991), or the arrangement is achieved by agreement between the two channel parties (Siedmann and Sundararajan, 1997). In order to give a clearer idea of how vertical information sharing can be modeled in a game-theoretic way, we give a simple illustration of such as game (this example is a simplification of the multi-stage game of information sharing and price-setting developed by Niraj and Narasimhan, 2002).

⁷ In the game-theoretical tradition of channels, there is another branch of studies looking at information asymmetry in manufacturer-retailer relationships. This group of studies does not particularly focus on the exchange of (demand) information itself, but on the *signaling* of a channel member to the other. A known example is from Chu (1992), where two games are presented; one is about how a manufacturer with private information can credibly signal to the retailer that consumer demand for new product will be high. We exclude these types of studies from our overview, because in these games none of the parties actually share market information; they merely send credible signals without giving insight. Other examples of demand signaling games are Desai and Srinivasan (1995), Desai (2000), and Cachon and Larivière (2001).

Consider a marketing channel consisting of one manufacturer selling to consumers through one retailer. The retailer buys the product from the manufacturer at a wholesale price w and then sets the retail price P . The function of consumer market demand (Q) is assumed to be linear function with a constant price elasticity (β) and is given by:

- $Q = \alpha_{L,H} - \beta * P$ (consumer demand function; α_L/α_H = low/high demand)
- $\Pi_r = Q * P - w * Q$ (profit function retailer)
- $\Pi_m = Q * w$ (insert profit function manufacturer here)

The consumer market demand is stochastic and the demand side uncertainty lies in the fact that the alpha can be either low (α_L) or high (α_H). In this game setup, the retailer has private information about the height of the alpha. The manufacturer has an interest in knowing more about the future consumer demand, because he wants to avoid setting a too high wholesale price in a low expected consumer market demand or setting a too low wholesale price in a high expected consumer market demand. Both situations can hurt the manufacturer's profitability.

In this game setting, manufacturer and retailer set their own wholesale price (w) and retail price (P); only after they have agreed on to share information or not. The sequence of the moves is therefore as follows: in the first stage the manufacturer decides whether to offer to form an information-sharing alliance. The next stage is the one in which the retailer decides to accept or reject the offer, if one is made. In the third stage, the manufacturer sets a wholesale price conditional on the market information available to him (either only his own predictions or the retailer's demand forecast). The fourth and final stage is the retailer setting a retail price (P) conditional on own market information and the wholesale price set by the manufacturer.

The solution of this game is found by using backward induction. A more detailed explanation on the calculation of the subgame equilibriums and the final outcomes goes beyond the scope of this thesis and we therefore refer to the publications of the game-theoretic studies in this review.

Contracts to Share Information. The manner in which information sharing is conceptualized in the game-theoretic approach is by way of the offering of a "contract" to be agreed upon by both channel members. We need to make a distinction between an explicit or an implicit information sharing contract. An explicit contract is that in one stage of a game (often in the beginning) the channel members have to make an explicit decision to share or not (as in the above-stated example; Siedmann and Sundararajan, 1997; Li, 2002; Niraj and Narasimhan, 2003; Gu and Chen, 2004; Kurtuluş, 2004). The contract to share information can also be an integral part of the contract offered. Examples of such implicit contracts regard information sharing as a built-in part of the franchise fee contract or retail price maintenance contract, (see Gal-Or, 1991), or the marketing arrangement with price and/or service requirements (Desiraju and Moorthy, 1997), or the two-period wholesale price arrangement (Donohue, 2000).

Individual and Total Channel Pay-offs. The results of the games are evaluated on both the individual profits and the total channel profit. The outcome of a game is regarded optimal when channel coordination is achieved with total channel profit being maximized under the condition that none of individual channel member's profits suffer. A second

effect and by-product of an information-sharing contract is that it may have consequences for the redistribution (share) of total of channel profits. The typical variables included in the players' pay-off function to be optimized are the wholesale price, and retail price (due to the fact it is often a price-setting game). Another variable is the quantity to be bought and sold by the retailer. Unique in this respect is the model by Siedmann and Sundararaja (1997) that contains more intangible revenues to be gained by manufacturers if they enter into a category management arrangement (strategic sales and marketing revenues, competitive revenue, extra bargaining power), at the expense of paying a certain contract fee to the retailer.

Differential impact from games settings. Except for Siedmann and Sundararajam (1997), all the games in this review deal with a market situation where some consumer demand uncertainty is assumed to exist. As stated in the above mentioned illustration of a vertical information sharing game, uncertainty about consumer demand elevates the urgency for channel members to think of sharing information as a solution to reach an optimal outcome with a better channel coordination. Similarly, Gu and Chen (2004) find in their game-setting that higher levels of consumer demand uncertainty make it strategically more beneficial for a powerful retailer to share its information. But that does not imply that all studies find that information sharing helps to reach a better channel coordination under every condition. Each of these studies identifies circumstances under which information sharing is more helpful in achieving channel coordination. Just one critical note on the necessity of information sharing is placed by Chu and Messinger (1997). They demonstrate in their 2-player channel price-setting game that the *acquisition* of market information by only one single channel member delivers the greatest profitability for the whole channel, because the informed channel member's should be able to fine-tune prices in response to demand conditions in order to maximize channel revenues. Moreover the channel as a whole can save out on the total costs of acquiring market information, because one channel members does not need to acquire any. For all the other games on information sharing, the conditions for the positive impact of information sharing on the total channel profit depend very much on the different game settings the authors investigate. We can cluster these circumstantial factors into four categories: contract characteristics, relationship characteristics, supplier competition, and retailer competition.

As for the contract characteristics, several game-models with implicit information sharing contracts demonstrate that the manufacturers offering the contract have to be very strict and complete in setting the additional requirements to the other channel member: both price and service requirements (Desiraju and Moorthy, 1997), retail price maintenance (Gal-Or, 1991), and wholesale prices for both periods (Donohue, 2000), otherwise the information sharing does not lead to better channel profits. In explicit contracts, where channel members plainly agree on sharing in passing on information, the

positive impact on the total channel profit depends on the quality of the market information being shared. When the passed-on market information is more predictive and truth-telling probability (Niraj and Narasimhan, 2003; Gu and Chen, 2004) or the demand forecasts are more accurate (Roy, 2000; Donohue, 2000), the total channel profits go up.

As for the relationship characteristics, it is important to note that different from the supply chain optimization literature, the competitive and conflicting interests between channel members play up in the game-theoretic perspective. The studies limiting the competitive arena to one manufacturer and one retailer (1 M : 1 R; a bilateral monopoly) often assume the manufacturers to be Stackelberg leaders (they make the first step in the game and determine the possible actions of the retailer) (Gal-Or, 1991; Desiraju and Moorthy, 1997; Donohue, 2000; Niraj and Narasimham, 2003). In the game setting from Gu and Chen (2004), the power between manufacturer and retailer is not taken as a given but the strength of retailer's bargaining power emanates from the model. Subsequently, they find that the retailer's bargaining power should not be too low or too high for the channel relationship to be coordinated by an information sharing arrangement.

With regard to supplier competition, in games with more than one manufacturer (Siedmann and Sundararajan, 1997; Kurtuluş, 2004), the retailer appears to profit from the advantageous position to divide-and-rule. Moreover, Siedmann and Sundararaja (1997) assign the retailer to be the Stackelberg leader, thereby strengthening the power position of the retailer. Competition between suppliers leads to asymmetric information sharing, viz. only one manufacturer receives information from the retailer (Niraj and Narasimhan, 2003). Furthermore, the game studies are not conclusive about which party turns out to be the winner of information-sharing and receives the highest share of the channel profits. The competition between suppliers appears to play a pivotal role in that respect. In 1M:1R games with the manufacturer as Stackelberg leader, the manufacturer will be the one most benefiting from information sharing. For instance, Donohue (2000) finds that the manufacturer may regain an extra share of the channel profits on the condition that he/she can arrange the retailer to give more predictive information about consumer demand.

If competition among retailers is introduced, information sharing by the retailers is not self-evident. Li (2002) emphasizes that the information leakage effect coming as a result of information sharing with manufacturers, there are retailers that shy away from any information. However, when the manufacturer offers enough compensation by a lower wholesale price, the channel becomes coordinated by information sharing.

Table 2.2 summarizes the conclusions to be drawn from the game-theoretic perspective on information sharing in channel relationships. The foremost contribution of these studies is that they emphasize the dual conflicting interests within the channel relationship. They show that the power structure plays an important role in coordinating a channel through information sharing. For instance, it is important to have channel leadership in order to

determine final outcomes of the game; it is either the manufacturers being the (Stackelberg-leader; setting wholesale prices or determining the channel arrangement) or the retailer (choosing the category advisor) that dictates the terms. Another important contribution of these studies is that they introduce competition at a very crucial element; competition at manufacturer-level or at retailer-level magnifies the conflicting interests in the channel relationship.

Table 2.2 *Important Variables from the Game-theoretic Approach*

<i>Antecedents</i>	<i>Market Information Shared</i>	<i>Consequences</i>
<i>Consumer demand turbulence (+)</i> <ul style="list-style-type: none"> • Uncertainty 	<i>Content</i> <ul style="list-style-type: none"> • Consumer demand • Competitive intelligence 	<ul style="list-style-type: none"> • total channel profits (quantity and price levels, wholesale and retail) (+) • individual channel member profit
<i>Supplier Network</i> <ul style="list-style-type: none"> • Number of suppliers (+) • Supplier Competition (+) • Retailer Competition (-) 	<i>Quality</i> <ul style="list-style-type: none"> • reliability (truth-telling) • complementarity 	
<i>Relationship Characteristics</i> <ul style="list-style-type: none"> • Governance structure (-/+) • Power structure (-/+) 		

Still, evidence from these game theoretical studies is inconclusive. The bottom line is that information sharing in channels is not always “good”. There are circumstances in which information sharing is not sensible to an individual channel member. Especially, when there are conflicting and competing interests at stake.

The two research perspectives of the supply chain optimization and the game theoretic models have in common that they both simplify the problem at hand so that the basic underlying tradeoffs in market information sharing can be understood analytically. Unfortunately, this may compromise the (external) validity of their research results when applied in a real-world channel context. For instance, broadening the scope of the problem with the inclusion of more realistic factors like multiple products, and multi-stage supply chains with multiple players at each supply chain stage, it could provide additional insights not gleamed from simple models.

2.4 *Empirical Behavioral Approach*

In contrast, the third research perspective does not simplify the problem by introducing assumptions, but it in principle tests the hypotheses on information sharing practices in real-life. That means that without the predominantly *normative* stance on information sharing taken by the two previous research perspectives, the empirical studies in the marketing channels literature do not argue whether or not firms *should* share their market

information with their channel partners and they do not demonstrate the benefits to be gained from it (less demand variance amplification, lower inventories, etc.) either; they rather explain *when and why* firms share or refrain from sharing their market information in reality. Marketing channels are not only economic systems but also social systems (Reve and Stern, 1979; Stern and Reve, 1980) and less than optimal efficiencies and effectiveness in marketing channels may be due to dysfunctional political-economic dynamics and power play struggles within the channel relationships.

Channel conflicts can be caused by many different sources (Lusch, 1976; Etgar, 1979), but one major source is ineffective communications between channel members often leading to misunderstandings, incorrect strategies, and mutual feelings of frustration. Unfamiliarity with marketing concepts and ideas, desire for secrecy, lack of motivation for information sharing, and of standardized information processing procedures have been acknowledged to contribute to ineffective channel communications for a long time (Mattson, 1969). For example, late announcements about new products or advertising campaigns, mislaid or misunderstood messages, and the inability to provide effective information are causes of great concern to dealers. Manufacturers tend to complain about late orders or cancellations, incorrect specifications, and lack of feedback about market situations (Etgar, 1979).

The objective of this paragraph is to provide a review of the extant marketing literature on the phenomenon of information sharing in marketing channels. Seventy-eight publications with studies on Information Sharing in Channels which appeared in the marketing literature were identified by means of a computer bibliographic search and issue-by-issue searches of mainly the eight major journals for marketing channels, *Marketing Science*, *Journal of Marketing*, *Journal of Marketing Research*, *Journal of the Academy of Marketing Science*, *Journal of Retailing*, *International Journal of Research in Marketing*, *Industrial Marketing Management*, and *Journal of Business Research*. The literature search covered the period of last three decades (1974 to 2005) starting with the Hunt and Nevin seminal work on the types of power uses in marketing channels. We need to be careful with confounding all of the empirical studies containing a label of information sharing, because “confusion still exists among the power, communication, and control constructs in both a conceptual and operational sense.” (Frazier, 1999; pp. 226-240). Fundamental is the notion that the perspective depends on the relationship context in which the phenomenon is approached (cf. Boyle et al., 1992). For that reason, we start with classifying the empirical studies according to the way marketing scholars have conceptualized information sharing (based on the used operationalizations). Looking at Boyle, et al. (1992), Mohr and Nevin (1990, 1996), Heide and John (1992), and Gundlach, et al. (1995) we are able to discern four different conceptualizations of information-sharing in channel relationships: information sharing as (1) exercise of information power, (2)

communicative channel behavior, (3) relational norm, and (4) demonstration of relationship bonding. Table 2.3 displays the different typical operationalizations for each of the conceptualizations.

Table 2.3 Typical Operationalizations for the Conceptualizations on Information Sharing in Channels

<i>As an Exercise of Information Power</i>	<i>As Communicative Channel Behavior</i>
<p>My primary supplier</p> <ol style="list-style-type: none"> ... focuses on general strategies (as opposed to specific tactics) as to how to make our business more profitable; ... concentrates more on strategic, long-term issues, rather than specific courses of action our business should take; ... discusses the orientation our management personnel should take with regard to long-term planning, rather than daily activities; ... attempts to change our perspective by looking at how our business decision affects the "big picture". <p>Responses are "always", "usually", "sometimes", "rarely", and "never" (5-point scale).</p> <p>(from: Boyle, et al., 1992)</p>	<ol style="list-style-type: none"> [This supplier] lets our firm know as soon as possible of any unexpected problems with things such as...* We keep this supplier well informed about what is going on in this distributorship and with customers ** This distributorship and this supplier make it a point to keep each other well informed.** We hesitate to give this supplier too much information (reversed)** This supplier seeks our advice and counsel concerning their marketing efforts.** This supplier is willing to let us see their weaknesses as well as their strengths.** We are quite involved in the marketing and planning efforts of this supplier.** <p>Responses range from "strongly disagree" to "strongly agree" (7-point scale).</p> <p>(from: *Anderson and Narus, 1990; ** Anderson and Weitz, 1992)</p>
<i>As a Relational Norm</i>	<i>As a Demonstration of Relationship Bonding</i>
<ol style="list-style-type: none"> In this relationship, it is expected that any information that might help the other party will be provided to them. Exchange of information in this relationship takes place frequently and informally, and not only according to a prespecified agreement. It is expected that the parties will provide proprietary information if it can help the other party. It is expected that we keep each other informed about events or changes that may affect the other party. <p>Responses range from "completely inaccurate description" to "completely accurate description" (7-point scale).</p> <p>(from: Heide and John, 1992)</p>	<p><i>Joint Action***</i></p> <p>The extent to which [your firm] undertakes the following activities with this supplier:</p> <ol style="list-style-type: none"> Gathering market information Customer needs analysis Performance review Setting sales target or goals Sales promotion programs <p>Responses range from "minimal" to "extensive" (7-point scale).</p> <p><i>Commitment Input****</i></p> <ol style="list-style-type: none"> Disclosed confidential information about industry/market conditions, competitors, and channel partners Provided proprietary information about firm decisions and strategies Agreed to make decisions that would benefit partners Promised resources and support (e.g., market research and help in decision making and financing) <p>Responses range from "strongly disagree" to "strongly agree" (7-point scale).</p> <p>(from: ***Kim, 1999; ****Gundlach et al., 1995)</p>

Per conceptualization we discuss the relationships found of information sharing with antecedents and consequences. Moreover we explain briefly the theoretical background used for reasoning why the exchange of market information between firms takes place and

what effects it has. Then, we compare the empirical findings from the four different conceptualizations with each other.

2.4.1 *Information Sharing as an Exercise of Information Power*

In search for explanations for inefficiencies and low effectiveness in marketing channel outcomes, marketing channel scholars have investigated a great deal on dysfunctional political-economic conflicts and power struggles within the channel relationships. Power is the channel member's ability to control or influence the decision variables of the other channel member (El-Ansary and Stern, 1972; Stern and Reve, 1980). One of the power bases is having expertise and/or information (French and Raven, 1959), and hence, we argue that the use of *expert or information power* by a channel member is one of the conceptualizations of information sharing in behavioral channel research. It is subsequently important to note that we need to make a distinction between *possession* and *use (i.e., sharing)*. The *possession* of market information is equal to having a certain power base, and that puts a channel member (source) into a position to control or influence the decision variables of the other channel member (target). Only the sharing of information can be characterized of *exercising* power; this tradition in the literature qualifies information exchange as exercising non-coercive power (Hunt and Nevin, 1974; Gaski and Nevin, 1985; Scheer and Stern, 1992; Keith et al., 1990); and considered to be an *indirect* influence strategy. While *direct* influence strategies are designed to change behaviors of the channel counter-part (target) by implying or requesting the specific action that the focal channel firm (source) wants the target to take (like requests, recommendations, promises, and appeals to legal obligations), *indirect* influence strategies are designed to change the other channel member's beliefs and attitudes about the desirability of the intended behavior; so, no specific action is requested directly by the dominant channel member in possession of market information. The indirect influence from information exchange comes from the source's discussions with the target on general business issues and operating procedures in order to alter the target's attitude about desirable behaviors (Frazier and Summers, 1984; Boyle et al., 1992).

Twenty-three empirical studies conceptualize information exchange as a non-coercive influence strategy. The commonly employed operationalization/measurement is on the perceived use of information-exchange to influence the channel counterpart's behavior (see also Table 2.3 for an overview of typical operationalizations). Although, "in general channel power research has been plagued by ambiguous and mixed findings" (Brown, et al., 1995b, p. 335), it is still possible to list the factors known to encourage the use of information sharing by a channel member. First of all, the foremost antecedent of channel members to make use of information exchange is their *possession* of the non-coercive power source (Gaski and Nevin, 1985; Rawwas et al., 1994), or the perception of power

attributed to them by the other channel member (e.g., Gaski and Nevin, 1985; Boyle and Dwyer, 1995; Brown, et al., 1995b;).

Second, whether or not channel members with market information employ information exchange as an influence strategy is largely dependent on the dependence structure in the channel relationship. When channel members deal with more dependent parties, they tend to use more non-coercive influence strategies (Kieth, et al., 1990; Tikoo, 2002). The use of non-coercive information exchange strategies are in particular used when the joint interdependence is greater and the common interests for both channel members grow (Frazier and Rodi, 1991; Gundlach and Cadotte, 1994; Kim, 2000). However, in more asymmetric interdependence structures (one channel member is more dependent on the other), the more powerful channel member prefers using a more coercive influence strategy over information exchange (Gundlach and Cadotte, 1994; Kim, 2000; Hu and Sheu; 2005).

Besides the dependence structure, the relationship climate plays an important role in the use of information power. The presence of latent conflict reflects an underlying state of incompatibility between two channel members (Brown and Day, 1981), this amount of belief and attitude dissensus may hinder the use of information exchange by either of the channel members. Yet, as soon as the conflict manifests itself the use of non-coercive power will help to relax the situation in which channel members work more actively to resolve their differences (Frazier and Rodi, 1991). This is in line with the empirical finding that sharing norms on mutuality, solidarity and flexibility in the relationship (relationalism; Macniel, 1983) further enhances the information exchange (Boyle, et al., 1992).

With regard to consequences of information sharing as an exercise of information power, the general finding is that the immediate (short-run) effectiveness of information exchange is considered to be lower than other types of power uses. It is widely assumed that the information sharing needs more time to have an effect; compared to other uses of power. It is argued that the immediate effectiveness of a base of power in altering the decisions of another is determined by its degree of selectivity and directedness. Expert-based and information power are less selective and often undirected to specific behavior (cf. Etgar, 1978), and found to have a less strong direct effect on compliance than other uses of power (such as reward and coercion, Keith, et al., 1990; threats in more dependent channels, Payan and McFarland, 2005).

The use of *soft* power like exchanging information diminishes the level of conflict in relationships (Gaski and Nevin, 1985; Brown, et al., 1995; Lee, 2001), and thereby stimulates the development of trust (Scheer and Stern, 1992) and commitment to the relationship (Scheer and Stern, 1992; Brown et al., 1995). It ultimately reinforces the perceived power position of the influencer (Hunt and Nevin, 1974); even though the power attributions are weaker compared to other power uses (e.g., Keith, et al., 1990; Scheer and

Stern, 1992; Brown, et al., 1995b), it is received by the other channel member with greater satisfaction (compared with more coercive types of influence strategies; e.g., Hunt and Nevin, 1974; Gaski and Nevin, 1985; Scheer and Stern, 1992; Brown, et al., 1995b).

The question is then whether or not the non-coercive influence attempt of information sharing by one channel member is likely to be returned by the other. When a retailer starts to share his or her information more openly, will suppliers feel invited to share more of their information? And vice versa? Reciprocal action theory (cf. Gouldner, 1960; Kelley, 1983) predicts that the actions taken by one party are in response to actions taken by the other party in an exchange relationship. There are studies in which this seems true; not only coercive influence attempts (Frazier and Summers, 1986; Frazier, et al., 1989; Kumar, et al., 1998) are returned, but also in non-coercive influence strategies (Frazier and Rodi, 1991; Kim, 2000) because the frequent use of non-coercive strategies invites the other channel member to follow a similar pattern fostered by the supportive climate created in the exchange and related to concerns for equity (Dwyer, et al., 1987).

The reciprocity of the use of influence strategies is not always likely to occur (see Kale, 1989; Frazier, et al., 1989), because it is largely subject to the dependence structure between the channel members. *Bilateral deterrence theory* (Bacharach and Lawler, 1981; Lawler et al, 1988) gives an explanation for this contingency in reciprocating coercive actions. This theory contends that, a channel member's desire to engage in conflict is a function of the party's fear of retaliation and expectation of attack. As total dependence between channel members increases (all else being equal), retaliation poses an ever-greater threat to both channel parties. Because each fears retaliation and knows that the other harbors similar fears, the expectation of attack (and use of *coercive* influence strategy) is low. Consequently, as total interdependence increases, each becomes less likely to instigate conflict. The opposite holds true for increasing interdependence asymmetry. As the channel relationship becomes more asymmetric, the relatively powerful firm has less motivation to avoid conflict (and may use more coercive influence strategies), and the relatively dependent channel partner increasingly expects to be exploited and/or attacked regardless of its own behavior, so it is more likely to engage in a preemptive strike or rebellion against the more powerful firm's domination (Lawler, et al., 1988; Kumar, et al., 1995).

Whether or not the same holds true for *reciprocating non-coercive actions*, like information sharing, may be explained by the "flipside" of bilateral deterrence theory, *bilateral convergence* (Kumar, et al., 1995): increased total dependence stimulates the reciprocating information-sharing, whereas increased dependence asymmetry does not. Kim (2000) finds confirmation that the principle of reciprocity holds for the increase in interdependence (when joint interests grow).

Interestingly, Gaski and Nevin (1985) point out that the possessor of market information (source) needs to be clear in the decision to share or not to share market information. The advantage of exercising non-coercive power is the prospect of increased satisfaction and decreased intra-channel conflict in dealing with other (target) party. However, drawback of unexercised non-coercive power will decrease satisfaction, and increase intra-channel conflict. This would imply that having a reservoir of market information obliges channel firms to share or else they would run the risk of causing unsatisfied channel partners and having a conflict with them. If the possessor of market information does not wish to share, then it would be wise not to expose their expertise and knowledge power to the other channel members.

2.4.2 Information Sharing as Communicative Channel Behavior

The power-conflict standpoint on marketing channels holds a more adversarial look at channel relationships and attempts to explain the dynamics by primarily looking at “how a channel member influences other channel members in the pursuit for its own self-interest”. Additional explanations for information sharing behavior in channel relationships can be obtained from a more cooperative view on channel dynamics; “a channel member actively work together with each other in order to reach common goals” (e.g., Dwyer, et al., 1987; Morgan and Hunt, 1994; Wilson, 1995). One particular type of such cooperative behaviors is the communicative behavior in channel relationships. The intensity with which channel members communicate with each other about plans, programs, expectations, goal-setting, and performance evaluation (cf. Anderson and Weitz, 1989) is often “defined as the formal as well as informal sharing of meaningful and timely information between firms” (cf. Anderson and Narus, 1990; Morgan and Hunt, 1994). Channel communicative behaviors illustrate therefore the second way in which information sharing has been conceptualized in empirical behavioral channel research. Communication in the channel relationship is qualified as “the glue” (Mohr and Nevin, 1990) holding channel members together.

In dissecting the components of “this glue”, 21 articles in our review reveal that approximately three ways for measuring channel communicative behavior exist. The simplest way gives a rather holistic score of communicative behavior in a channel relationship and concerns a general overall measurement looking at the “overall intensity (or openness) of communication (“the stickiness of the glue”). Anderson and Narus (1990) and Ross et al. (1997) measure the intensity of communication in the relationship; whereas Morgan and Hunt (1994) focus on reports about the other channel member’s communicative behavior.

The second measurement of channel communicative behavior is more elaborated and highlights the different aspects of it. It builds on the mechanistic perspective of communication theory (Krone, Jablin, and Putnam, 1987; Mohr and Nevin, 1990), in

which communication is viewed as a transmission process through a channel. Important facets of the communication process include the message (content), the channel (mode), feedback (bidirectional communication) and communication effects. The more complex and composed measurements are used by Gassenheimer, et al., (1996; participative communication and feedback), Schultz and Evans (2002; strategic content, informality, bi-directionality, frequency), Mohr and Spekman (1994; communication quality, information sharing, participation), Cannon and Homburg (2001; frequency, modality, amount of information sharing (by the other channel member). Also Mohr, et al (1996) emphasize the four different aspects of collaborative communication in channel relationships (frequency, bi-directionality, formality, and non-coercive content); but they combine all of the aspects into one measure of “collaborative communication”.

The third approach of measuring channel communicative behavior concentrates on one particular facet: either the frequency of discussing business issues (Kim and Frazier, 1997, the transparency in the relationship (Eggert and Helm, 2000), the outcome-based or behavior-based emphasis in the channel communication (Celly and Frazier, 1996).

From the 22 empirical studies on channel communicative behavior, eight of them investigate in which circumstances channel members exhibit more communicative behavior. They discover the following antecedents to play a role (Anderson and Narus, 1990; Anderson and Weitz, 1992; Mohr, et al., 1996; Brown, 1981; Li and Dant, 1997; Walter, et al., 2003, Reid, et al., 2002; Celly and Frazier, 1996). First, the governance structure is found to influence the intensity of communication and degree of interaction. Explicit contractual arrangements in channel relationships stimulate the amount and frequency of communication. (Brown, 1981) and stricter control and integration also go hand in hand with more collaborative channel communication (Mohr, et al., 1996). Second, if suppliers are more dependent of the downstream channel member, they are then more open in their communications (Anderson and Narus, 1990); this corresponds with the finding that higher *stakes* in the channel relationship also promotes channel communication (Anderson and Weitz, 1989). Third, the age of the relationship is found to have a (notable) *negative* relationship with the communicative behavior (Anderson and Weitz, 1989), suggesting that the parties have developed such a good understanding of each other that they can make their points more efficiently (i.e., with a lower level of communication). Fourth, trust and strong ties as major elements of relationship climate play a stimulating role in favor for channel communicative behavior (Anderson and Weitz, 1989; Li and Dant, 1997). Fifth, the perceived competence of the channel counterpart enhances the communication (Anderson and Weitz, 1989) and this finding is in line with the fact that positive outcomes given comparison level also stimulate it (Anderson and Narus, 1990). Furthermore, the complexity in the purchase process requires channel members to communicate more intensely (Reid, et al., 2002).

The majority of the empirical studies emphasize the consequences of communicative behavior in channel relationships (16 studies). The prime set of consequences is the improvement in the relationship quality. More open communications in the relationship paves the way for dealing with conflicts in a more functional way (Anderson and Narus, 1990; Morgan and Hunt, 1994), because it seems to promote conflict resolution. It can even prevent conflicts in channel relationships (Anderson and Narus, 1990; Kim and Frazier, 1997). Perhaps due to the lessened level of conflict, the increased channel communication has more opportunity to develop trust (Anderson and Weitz, 1989; Anderson and Narus, 1990; Morgan and Hunt, 1994), and gives the information-sharer to become more trustworthy in the eyes of the information-receiving channel member (Kim and Frazier, 1997; Schultz and Evans, 2002). The findings about the effects of channel communication on satisfaction are rather straightforward. All marketing channel studies on the relationship between communication and satisfaction report that communication raises the level of satisfaction with the other channel member (Anderson and Narus, 1990; Mohr, et al., 1996; Gassenheimer, et al., 1996; Schultz and Evans, 2002; Eggert and Helm, 2003). Relationships that are more informative on market developments are evaluated as of higher quality (Walter, et al., 2003).

As an important second set of consequences, intensified communication in channel relationships also changes the behavioral intentions and leads either directly or indirectly to higher levels of commitment to the relationship with the other channel member (Anderson and Weitz, 1992; Morgan and Hunt, 1994; Kim and Frazier, 1996; Cannon and Homburg, 2001; Eggert and Helm, 2003). It also levels perceptions of asymmetry in commitment (Ross et al., 1997); and moreover, channel communication supports the perceptions of commitment to the relationship from the other channel member (Anderson and Weitz, 1992); and thereby corroborating the commitments. Communicating channel members search less for alternatives (Eggert and Helm, 2003),

The third set of consequences relates to actual behavior: immediate consequence appears to be that channel members are more cooperative (Anderson and Narus, 1990; indirectly Morgan and Hunt, 1994), manage to coordinate their activities better (Mohr, et al., 1996), and spend more time dealing with each other (Anderson et al., 1987). Additionally, the increased channel communication does not only lower customer costs (Cannon and Homburg, 2001), but also may bring forth synergetic solutions (Schultz and Evans, 2002).

A helpful theory explaining why channel members start to communicate more intensely with each other is *social exchange theory* (Thibaut and Kelley, 1959). The key idea of social exchange theory is that channel members engage in and continue to the exchange with other channel member, because their benefits retrieved from the exchange are larger than the incurred costs. Channel members are satisfied with the relationship,

when the difference of benefits and costs are larger than their expectations (i.e., a certain comparison level), and they continue their relationship with the channel member if the expected pay-offs with alternative channel members are not bigger. This theory explains why trust can be considered an antecedent of more communication (exchange) with the channel member, as well as a consequence. Not trusting another channel member require costly efforts of monitoring and verifying; and when communication leads to more trust, these costs to maintain the relationship go down; subsequently reinforcing the interaction between trust and communication.

Furthermore, this theory helps us to explain the conditional impact of channel communication on satisfaction found by Mohr et al. (1996): when high integration of manufacturer control in channel relationships exists, the effect of more collaborative communication (under which non-coercive content) on outcomes is weaker; compared with low integration and control. In higher controlled relationships, the expectations level of the dominant party (franchisor, parent company) concerning channel communicative behavior is higher, and due to this raised comparison level, it will be more difficult to increase satisfaction by collaborative communication.

2.4.3 Information Sharing as Relational Norm

If a channel relationship develops over time, parties not only grow trust, and in line with this, they develop expectations towards what they find to be appropriate and inappropriate behaviors in their conduct of doing business with each other (Dwyer, et al., 1987). These relational norms are defined as expectations about behavior that are at least partially shared by a group of decision makers (Thibaut and Kelley, 1959; Dwyer and Oh, 1988; Heide and John, 1992; Jap and Ganesan, 2000) and are based on the expectation of mutuality of interest, essentially prescribing stewardship behavior, and are designed to enhance the well-being of the relationship as a whole (Dwyer, Schurr and Oh, 1987). The specific domains reflecting these norms are ‘flexibility’, ‘solidarity’ and ‘information sharing’. Six of the ten empirical studies identify information exchange as a bilateral expectation that parties will proactively provide information useful to the partner.⁸ They follow Heide and John’s operationalization. Two other studies also belong to this conceptualization. Yet, they measure the norms about information sharing differently. In their taxonomy of buyer-seller relationships, Cannon and Perreault (1999) regard open information exchange as a *relationship connector*; amongst others – operational linkages, legal bonds, cooperative norms, relationship-specific adaptations. A relationship connector is a dimension reflecting

⁸ Yilmiz et al. (2005) claim that they study relational norms; however, we need to note that their measurement of information sharing only includes statements of actual communicative behavior; none of items do explicitly refer to *expected* forms of behavior in the relationship. We therefore assign their study to the conceptualization *a demonstration of relationship bonding*.

the behavior and expectations in a particular buyer-seller relationship. Johnson and Sohi (2001) investigate the *quality of information exchanged* and whether or not it is *sufficient* in terms of accuracy, amount, usefulness, etc. Asking about sufficiency implies checking if the sharing of information lives up to some standard norm or expectation.

Only five studies have studied the antecedents of information sharing as a relational norm (cf. Jap and Ganesan, 2000). This might be the case, because the creation of relational norms requires time (socialization process to promote that both channel members internalize each other's goals) and methodologically, a longitudinal design would be needed to research it properly. Instead of measures of history (like *age*), it is found that the anticipated future is an important determinant for relational norms to be present; such as the prospect of a long-lasting business relationship (such as extendedness, Heide and Miner, 1992; long-term orientation, Lusch and Brown, 1996). Furthermore, the higher costs in develop exchange relationship in more turbulent environments (Pilling et al., 1994) (e.g., asset specificity, frequency of transactions) are to stimulate the developments of relational norms most likely in order to safeguard the relationship-specific investments made. In addition to that the characteristics of the channel members also play a role in the development of norms to share information. Both a channel member's strategic intent and its relational proclivity (Johnson and Sohi, 2001) stimulate the embeddedness of the interfirm ties (e.g., Johnson and Sohi, 2001) and consequently endorses the norms in the relationship.

As it comes to the consequences of relational norms, the studies found that the following. Relational norms help to relieve channel members' perceived loss of control over the channel relationship when they have made specific investments into that relationship (Heide and John, 1992). Furthermore, norms enhance the quality of communication between parties in terms of frequency, bi-directionality, and formality (Mohr and Sohi, 1996). The increased formality limits the opportunities for channel parties to alter or omit information; thereby norms indirectly prevent the distortion or withholding of information shared. If a channel member violates an explicit contract or implicit rule, the existence of relational norms softens the severity of contract enforcement by the dominant channel member (Antia and Frazier, 2001). Similar to Heide and John (1992), Jap and Ganesan (2000) find that relational norms strengthen the perceptions of commitment from the other channel member. Especially in the building phase, the existence of relational norms relaxes the channel member's concern of perceived asymmetrical commitment from the other party.

Clearly, the effects from information sharing as a relational norm are different from information sharing as communicative channel behavior. There is an emphasis on the prevention of disappointment and gaining for lost control over the channel relationship.

The consequences of relational norms can be explained by the *disconformation* principle (Mohr, Fisher and Nevin, 1996; Kim, 2000); This principle suggests that an experience that disconfirms an expectation leads to a significant change in response, whereas an experience that confirms the expectation brings an insignificant response change. Following Kahneman and Tversy (1979)'s discussion on decision-making under uncertainty, we note that framing can alter the reference point (viz., the baseline from potential gains and losses are assessed). If the sharing of market information is framed by one channel member as a channel partnership expectation, then actually sharing market information would in essence be complying with the norm, and the act of sharing information would only lead a relative small to no gain for the other channel member. However, if in such a frame of expectations, the channel member withholds information, it implies deviant behavior from the established norm and a relative heavy loss to the other channel member. All else being equal, more relationalism in the channel relationship is expected to result in a more information sharing between channel members, than in channel relationship without these norms. It seems that the information sharing has become a self-reinforcing circle more difficult to get out off: the cost of breaking-up the channel relationship and the reinforcing mechanisms imply growing costs for both channel members.

Much research on relational norms has been conducted as a test to see whether these social norms would help to prevent *deviant opportunistic* behavior and thus could serve as a tool to safeguard the made relationship-specific investments. Often ideas from transaction-cost economics are borrowed (Williamson, 1975, 1985; Heide and John, 1992; Jap and Ganesan, 2000; Opportunism; Wathne and Heide, 2000) and compare the safeguarding effectiveness of these relational norms (*relationalism*; Macneil, 1980) to traditional transaction cost and agency theory relationship governance mechanisms – such as promoting bilateral relationship investments, and explicit contracting (Jap and Ganesan, 2000; Brown et al., 2000).

2.4.4 *Information Sharing as Demonstration of Relationship Bonding*

The fourth way in which information sharing in channel relationships is conceptualized is that it has been regarded as a demonstration or pledge by a channel member to be willing to bond and invest in the relationship with the other party. This conceptualization may appear less homogenous of nature than the previous three, because the types of such demonstrations, promises or pledges can take many different forms and it is either measured as a commitment input (Gundlach, et al., 1995; Campbell, 1995; Achrol and Gundlach, 1999), as confidential information sharing (Doney and Cannon, 1997), as a sort of joint action (Heide and John, 1990; Kim 1999; Claro et al., 2003), as human-specific asset (Handfield and Bechteld, 2001), as relationship learning (Selnes and Sallis, 2003), as

an element of an higher-order construct of relational behavior (Lusch and Brown, 1996; Yilmiz et al., 2005), as an element of governance structure (Noordewier, et al., 1990), as coordination mechanism (Bensaou and Venkatraman, 1995), as vertical coordination (Buvik and John, 2000), or as pre-planning agreement of a category management arrangement (Gruen and Shah, 2000). Other conceptualizations of relationship bonding demonstrations are not restricted to *one* specific channel relationship, rather they conceptualize it at the firm-level as a type of channel policy program designed for every channel relationship of the firm: f.e, an automatic replenishment program for all its retailers (Myers, et al., 2000), key-account management for its customers (Homburg, et al., 2002), information-integration mechanisms for all retail customers (Kulp et al., 2004).

Twelve of the 23 empirical studies explore the antecedents of information sharing as a relationship bonding demonstration (Noordewier, et al., 1990; Heide and John, 1990; Campbell, 1995; Bensaou and Venkatraman, 1995; Lusch and Brown, 1996; Kim, 1999; Campbell, 1995; Claro, et al., 2003; Celly and Frazier, 1996; Corsten and Kumar, 2005; Joshi and Stump, 1999; Mavondo and Rodrigo, 2001; Selnes and Sallis, 2003, Subramani and Venkatraman, 2003; Yilmiz et al., 2005). First, when parties become more bilaterally dependent on each other, they engage in more relational behavior (Lusch and Brown, 1996). In particular, if the downstream channel member's cooperation is needed, the more dependent channel has the tendency to share information (Kim, 1999). Information sharing considered as a type of joint action is also enhanced when the channel member is locked-in by their relationship specific investments (Heide and John, 1990; Kim, 1999).

Relationship bonding demonstrations of information sharing are more secured when there is more clarity about future developments. Different studies show that explicit contracting are better than implicit (Lusch and Brown, 1996), longer relationship continuity expectations (Heide and John, 1990, Lusch and Brown, 1996), and signals from the other channel member about his/her commitment (Kim, 1999) are all reassurances that encourages information sharing as a demonstration for relationship bonding. Another antecedent promoting information sharing as a relational bonding demonstration is a channel member's strategy to differentiate their services from their competition. They are particularly more interested to demonstrate their bonding by sharing their market information with their (upstream) channel relationships (Kim, 1999).

As for the consequences, information sharing as a commitment input leads to a reduction in opportunistic behavior in the relationship (Gundlach, et al., 1995; Achrol and Gundlach, 1999; Gruen and Shah, 2000) and also strengthens the beliefs in long-term commitment intentions (Gundlach, et al., 1995), and commitment to implement cooperative plans by the increased trust in cooperating together (specifically for category management; Gruen and Shah, 2000).

There is evidence that these investments accelerate socialization process in the relationship by the development of relational norms (Gundlach, et al., 1995), and channel members respect each other's interests and become good at joint problem-solving (Campbell, 1995).

A general finding is that these motivational investments and joint efforts do pay off in multiple ways. In the first place, they create barriers to imitate strategy by competitors (Campbell, 1995). Second, more profits are generated by higher category performance (Gruen and Shah, 2000), a more efficient replenishment system (Myers, et al., 2000), lower stock outs at customers (Kulp et al., 2004), and better effective key account management (Workman, et al., 2003). Third, the joint motivational investments result in a better performance in more uncertain environment (percentage on time deliveries and acceptable) (Noordewier, et al., 1990). Only one study did not find a positive effect of information sharing on wholesale-distributor performance (Lusch and Brown, 1996).

The most often used theories in this conceptualization for explaining the relationships between antecedents and consequences are agency theory (e.g, Bergen et al., 1992) and transaction-cost economics. Regarding market information sharing as an agency-theoretical problem would be to find ways to minimize the likelihood of selecting the wrong channel partner to invest in (adverse selection problem) and to give the right incentives to the channel partner to make the most from the partnership (moral hazard problem).

Table 2.4 *List of Antecedents in Empirical Behavioral Approach*

<i>Antecedent</i>	<i>Information Power Exercise</i>	<i>Communicative Behavior</i>	<i>Relational norm</i>	<i>Demonstration Relationship Bonding</i>	<i>(#)</i>
<i>Market Channel Environment</i>					
Environmental uncertainty /decision-making uncertainty		CF(+)	PCJ (+),BCZ (-)	JoS(-),CHO, Ki-1(0),SeS (+)	7
Purchase complexity		RBP(∩)	BCZ (+)		2
<i>Supplier Network</i>					
Competition				Ki-1(0)	1
Outcomes given comparison		AN(+)			2
Availability of alternatives		WMHR(-)	CP(-)		2
Network intensity				CHO (+)	1
<i>Relationship Characteristics</i>					
Age of relationship		AW-1(-), MFN(+)	HM (0)	CHO, LB (0)	5
Governance/formalization/centralization	BDRS, E(+),BD(0/+)	B,MFN (+)		LB (+)	6
Connectedness/cross-functional teams			JS (+)	CK (+)	2
TSU/ stakes/asset-specificity/customization		AW-1 (+)	HM,PCJ,BCZ (+)	CK,CHO,HB, HJ-1, JoS,Ki-1, SeS,SV,YSO (+)	13
Trust/relationalism/social bonding	BDRS(+)	AW-1,LD(+)		C,CHO,MR,SeS, YSO(+)	8
Conflict/latent conflict/manifest conflict	FR (-),(+), BLM (-)				2
Continuity expectations/extendedness			HM(+)	HJ-1, LB, Ki-1, MR,SeS(+)	6
Total interdependence	FR,Ki-2,GC(+)			LB(+)	4
Dependence asymmetry	HS(+),GC(0/+),Ki-2(0)	AN (0,+)		LB(0)	5
Dependence of information-receiver	T (0),KJC,BLM (+),KH(∩)		BCZ(+)	Ki-1(+),YSO(+)	6
Dependence of information-sharer		KH (+)		YSO(0)	2
Replaceability of information-sharer		CF(+)	HM(0)		2
<i>Characteristics Information-Sharing party</i>					
Coercive power source	K,RVB (-)				2
Non-coercive power source	BLM(0),BD,GN,RVB(+)				4
Perceived competence/supplier familiarity/resource adequacy		AW-1,CF (+)	BCZ (+)		3
Strategic Intent/ fast innovation			JS (+)	C (+)	2
Relational proclivity/incentive systems			JS (+)	CK (+)	2
Cultural Similarity/Psychic distance		AW-1 (0)	BCZ (0)		2
<i>Characteristics Information-Receiving party</i>					
Experience	T (0)	CF (+)			2
Added value (service differentiation)		CF (+)		Ki-1 (+)	2
Relational restrictiveness	Br (+)				1
Morale	Br (+)				1
Compliance	Br (-)				1
Number of different studies (# / Total)	16 / 23	9 / 22	5 / 10	12 / 23	

Note: AF = Antia and Frazier (2001); AG = Achrol and Gundlach (1999); ALW = Anderson, Lodish, and Weitz (1987); AN = Anderson and Narus (1990); AW-1 = Anderson and Weitz (1989); AW-2 = Anderson and Weitz (1992); B = Brown (1981); BC = Bonner and Calantone (2005); BCZ = Bello, Chelariu and Zhang (2003); BD = Boyle and Dwyer (1995); BDRS = Boyle, Dwyer, Robicheaux, and Simpson (1990); BJ = Buvik and John (2000); BJK = Brown, Johnson, and Koenig (1995); BLM = Brown, Lusch, and Meuhling (1983); BLN = Brown, Lusch and Nicholson (1995); Br = Brill (1994); BV = Bensaou and Venkatraman (1995); C = Campbell (1995); CF = Celly and Frazier (1996); CH = Cannon and Homburg (2001); CHO = Claro, Hagelaar and Omta (2003); CK = Corsten and Kumar (2005); CP = Cannon and Perreault jr (1999); DC = Doney and Cannon (1997); E = Etgar (1978); EH = Eggert and Helm (2003); FR = Frazier and Rody (1991); GAM = Gundlach, Achrol, and Mentzer (1995); GBB = Gassenheimer, Baucus and Baucus (1996); GC = Gundlach and Cadotte (1994); GD = Goodman and Dion (2001); GN = Gaski and Nevin (1985); GS = Gruen and Shah (2000); HB = Handfield and Bechtel (2002); HJ-1 = Heide and John (1990); HJ-2 = Heide and John (1992); HM = Heide and Miner (1992); HMD = Hunt, Mentzer and Danes (1987); HN = Hunt and Nevin (1974); HS = Hu and Sheu (2005); HWJ = Homburg, Workman, and Jensen (2002); JA = Joshi and Arnold (1998); JG = Jap and Ganesan (2000); JS = Johnson and Sohi (2001); JoS = Joshi and Stump (1999); K = Kale (1986); KF = Kim and Frazier (1997); KH = Kim and Hsieh (2003); Ki-1 = Kim (1999); Ki-2 = Kim (2000); KJC = Keith, Jackson, and Crosby (1990); KLO = Kulp, Lee and Ofek (2004); L = Lee (2001); LB = Lusch and Brown (1996); LD = Li and Dant (1997); Le = Leuthesser (1997); MDA = Myers, Daugherty and Autry (2000); MFN = Mohr, Fisher and Nevin (1996); MH = Morgan and Hunt (1994); MR = Mavondo and Rodrigo (2001); MSo = Mohr and Sohi (1995); NJN = Noordewier, John and Nevin (1990); PCJ = Pilling, Crosby, and Jackson (1994); RAW = Ross, Anderson, and Weitz (1997); RBP = Reid, Bolman Pullins and Plank (2002); RVB = Rawwas, Vitell and Barnes (1997); SE = Schultz and Evans (2002); SeS = Selnes and Sallis (2003); SM = Simpson and Mayo (1997); SS = Scheer and Stern (1992); SV = Subramani and Venkatraman (2003); T = Tikoo (2002); WHJ = Workman, Homburg, and Jensen (2003); WMHR = Walter, Muller, Helfert, and Ritter (2003); YSO = Yilmiz, Sezen, and Ozdemir (2005)

2.4.5 Conclusion of the Empirical Behavioral Approach

To sum up our systematic review of the empirical behavioral studies, Tables 2.4 and 2.5 extensively list the discovered empirical relationships between the four different information sharing conceptualizations and the antecedents and consequences respectively. As for the antecedents, we regroup the identified variables into five main categories: market channel environment, supplier network, relationship characteristics, and characteristics of the information-sharing party and the information-receiving party. Given the multitude of different variables within each of these main categories, we put several closely related variables together. For example, in the category of relationship characteristics, variables concerning the governance structure are combined with aspects of formalization and centralization. The variable trust is merged together into one category with other positive relationship sentiments, like relationalism and social bonding. As it turns out, across the four conceptualizations the most frequently researched set of antecedents having an influence on information sharing is the relationship characteristics (33 different studies). Of which, the different aspects of the dependence structure in the channel relationship (15 studies) are the most often investigated antecedent. The variable relationship-specific investments (13 studies) is after that one the most frequently researched. Followers are trust (8 studies), formalization (6 studies), continuity expectations (6 studies) and relationship age (5 studies). Between conceptualizations, there is a slight difference in emphasis. The information power exercise accentuates the internal matters (relationship and information sharing party characteristics), whereas the other three conceptualizations also have an eye for other external factors like supplier network and market channel environment.

Regarding the consequences, we classify the different types of consequences according to a *chain of reactions* that information sharing in channel relationships may cause. Starting with changes in the perceptions of the information-receiving party towards the information-sharing counterpart; it has been consistently shown that it reinforces the image of information-sharing party's power base of the information sharing party (4 studies) in the eyes of the information receiving party. The corroboration of the powerful image of an information-sharing party does not necessarily go at the expense of perceived control and sense of autonomy by the influenced information-receiving party (3 studies with mixed findings). The mostly studied type of consequences is the changes in perceptions towards the relationship quality (23 studies); thanks to information sharing the channel relationship is evaluated in more positive terms: especially more trusted (8 studies) and with more satisfaction (15 studies) and with less conflict (7 studies).

Table 2.5 *List of Consequences in Empirical Behavioral Approach*

<i>Consequences</i>	<i>Information power exercise</i>	<i>Communicative behavior</i>	<i>Relational norm</i>	<i>Demonstration Relationship Bonding</i>	<i>(#)</i>
<i>Perception Changes</i>					
... toward Information-Sharing Party					
power position of influencer	HN,GN,BJK,RVB (+)				4
control by receiver/autonomy	KJC (-), SS (+)		HJ-2 (+)		3
...in Relationship Quality					
Latent conflict	FR (-/0)				1
(Manifest) conflict	FR (+) GN,BJK,L(-)	AN (0/-), KF (-)	JG (-)		7
Functionality of conflict	RVB (+)	AN (0/+), MH (+)			3
Attitude to conflict resolution	FR (+)				1
Relationship quality/harmony	HS (+)	Le, WMHR (+)			3
Trust	SS, SM (+)	AW, AN, MH, KF, SE (+)		DC (0)	8
Satisfaction	RVB(0), GN,HN,KJC, SS, BJK, SM,L(+)	AN,MFN,GBB,EH(+)	JG, MSo (+)	CHO(0)	15
<i>Behavior Changes</i>					
... in Intended Behavior					
Commitment	SS, SM (+)	GD(0), AW-2,MH,MFN,KF,CH, EH (+) AW-1 (0)		GAM,MR(+)	11
Perceived continuity of relationship					1
Instrumental commitment	BLN (+)		JG (+)		2
Normative commitment	BLN (+)				1
Propensity to leave		MH (-)			1
Search for alternatives		EH (-)			1
Perceived asymmetry of commitment		RAW (-)			1
Exclusivity/attention		LD,BC (+)			2
... in Actual Behavior					
Use of non-coercive power by receiver	K, Ki-2 (+)				2
Compliance/acquiescence	HMD, SS(+), PM,KJC(0)	MH (+)	JA (+)		6
Interfirm agreement/cooperation/ coordination/solidarity/ time spent with channel member /share of business	FS,HS (+)	AW-2,ALW, AN,MH,MFN(+)	MSo (+)		8
<i>Performance Changes</i>					
Sales/growth in sales/profitability				CHO,CK,KLO (+)	3
Synergic solutions/joint problem solving		SE (+)		C (+)	2
Customer costs/transaction costs/out-of-stock		CH (+)		KLO,MDA(-), BV (-/+)	4
Performance/receiver's role performance	BD,BLN,GN (+)	LD, SE (+)	JG, BCZ (+)	GS,HJ,MDA,NJN, KLO,SeS(+),LB (0)	14
Barriers to imitate strategy by competitors				C (+)	1
<i>Miscellaneous</i>					
Decision-making uncertainty		MH (-)			1
Severity of contract enforcement			AF (-)		1
Customer value		EH (+)			1
Relational norms				GAM (+)	1
Opportunism by other channel member /withholding information			MSo (-)	GAM,AG,GS (-)	4
Perceived equity				CK (-)	1
Capability development				CK (+)	1
Number of different studies (#)	14 / 23	15 / 22	6 / 10	15 / 23	
Note: abbreviations are explained in Table 2.4					

After the changes in perceptions, the next link in the chain concerns the changes in intended or reported behavior of the information-receiving channel member. The firm becomes more committed to the relationship, intends to stay in the relationship and gives up searching for alternatives (16 studies). With respect to actual behaviors, information sharing leads to compliance, acquiescence, agreement, cooperation and the reciprocation of non-coercive power use (13 studies). Reciprocation of information sharing practices is has been investigated by two studies.

As a final step in the chain of reactions, 21 studies research the changes in performance by information sharing. Information sharing leads to more sales, growth in sales, profitability, more efficiency, less costs, synergetic solutions, and a contribution to the other's (role) performance.

2.5 *Conclusions of Comparing the Three Research Perspectives*

The objective of this chapter was two-folded. In the first place we have explored what has already been found out about information sharing in channels by three different disciplines in management research. We have shown how each of these approaches makes their unique and specific contribution to our understanding of information sharing in channels. Whereas the supply chain optimization studies calculate the potential value in supply chain cost reduction to be gained from sharing information, and the game-theoretic models figure out under which conditions information sharing contracts can assist to maximize the total channel profits and reach channel coordination, the empirical behavioral research perspective look at the actual information sharing behavior in channels. Based on the description and systematic review of the three main research perspectives, we are now able to take the next step and make a list of all relevant variables shown to play an important role in information sharing. Table 2.6 briefly summarizes the previous discussion and in addition to showing an overlap between the three approaches, it also displays the extent to which they are complementary to each other.

First, inherently due to the way in which information sharing has been conceptualized by a research perspective, different aspects of the nature of information sharing are emphasized. Both supply chain optimization and game-theoretic modeling specifically look at the *extent* of shared information; and thereby they specifically look at the content of information which is disclosed in the channel relationship. The empirical behavioral perspective emphasizes much more the manner in which information is shared: frequency and formality.

Second, the antecedents studied by the three perspectives differ largely. All three perspectives investigate the influence of market channel environment characteristics. The only antecedent, that the three approaches have in common, is consumer demand or environmental *uncertainty* in the channel. Yet, the three approaches are not unanimous on

whether uncertainty leads to information sharing. While the supply chain optimization and game-theoretic models view information sharing (under certain circumstances) as a tool to better channel performance, the behavioral studies are divided among themselves: some show evidence for a positive association between uncertainty and information-sharing, while others demonstrate a negative one. Additionally, the supply chain optimization studies highlight the impact from the supplier network; whereas the empirical behavioral studies accentuate the relationship characteristics. The game-theoretical models are more and more including variables from both categories, supplier network and relationship characteristics. The reason why the supply chain optimization studies do not incorporate relationship characteristics is, because in principle it departs from the idea that all of the involved channel members have only one communality and that is the reduction of the negative effects of demand amplifications in the supply chain. They hardly assume that any conflicting interests exist in the channel relationship, as is assumed by the game theoretic models. The contracts are means to bridge these conflicting interests in order to achieve channel coordination.

Concerning channel member characteristics, due to their standpoint is to view all firms as identical economic rational actors, the two first approaches largely close the eyes to the influence of the channel member's characteristics.

Third, the consequences of information sharing examined in the three research perspective range from more objective performance measures to more subjective statements about perceptions, relationship quality and performance. Supply chain optimization studies and game-theoretic models look at the objective measurements as total channel profit, whereas the empirical behavioral studies investigate the impact of information sharing by means of subjective measurements. Supply chain optimization calculates the extent to which information sharing results in the adsorption of negative bullwhip effects.

Table 2.6 Key insights from the three research perspectives

	Research Perspective		
	Supply Chain Optimization	Game-theoretic	Empirical Behavioral
Objective	Maximizing channel efficiency by sharing information to optimize inventory replenishment and allocation decisions.	Designing efficient contracts for giving an incentive to share private information in order to achieve channel coordination	Explaining the factors playing a role in the creation and maintenance of relationship quality, satisfaction, commitment, and performance
Nature of Information sharing	Accent is on the downstream demand information (from retailer to supplier) and the extent to which information is shared varies: from advance demand information, retailer's inventory position, to centralized consumer demand information.	The offered contracts in the games either implicitly or explicitly agree on sharing information on consumer demand. Some contracts vary in extent and range from demand forecasts to the inclusion of competitive intelligence and cost information.	Measurements for actual information sharing behavior differ in starting point. Four broad categories of conceptualizations – information power exercise, communicative behavior, relational norm, and demonstration of relational bonding – can be distinguished.
	Mainly the content of (demand or inventory) information is the focus of research. Implicitly, these studies include the frequency (one update every replenishment period) of information sharing.	The information sharing contracts include specifications on the content of information shared. Some cases include specifications on the exclusivity of the arrangements.	Rather than on the content of information shared, the focus is on the style of information sharing in terms of frequency, formality, bi-directionality, tone-of-voice, are under investigation.
Antecedents	Conditions influencing the value of information sharing primarily lie in the domains of market channel environment and supplier network.	Conditions influencing the value of an information sharing contract for both channel members.	Factors influencing the likelihood in which channel firms use information power, engage in communicative behavior, establish relational norms, or demonstrate their willingness to bond.
	<i>Market Channel Environment</i> Consumer demand variance and channel inertia are important antecedents. The larger the consumer demand variance, the more supply chain inefficiencies to be resolved by information sharing. Inertia in the channel also increases these inefficiencies.	<i>Market Channel Environment</i> The consumer demand uncertainty gives the retailer more information about demand. An information sharing contract can eliminate this information asymmetry and coordinate the channel.	<i>Market Channel Environment</i> Uncertainty in the environment (not restrained to consumer demand) can either be a stimulus or inhibitor to share information. Also the purchase complexity is found to be another antecedent influencing information sharing behavior; the direction of the influence can however differ.

Continued

Table 2.6 Continued

Research Perspective			
	Supply Chain Optimization	Game-theoretic	Empirical Behavioral
Antecedents (continued)	<i>Supplier Network</i> The scope of the supplier network (in terms of the number of stages and the number of players per stage) increases the (total) value for the whole chain.	<i>Supplier Network</i> The number of suppliers and competition intensity among suppliers increase the likelihood for information contracts. Partly because the retailer is more in a position to benefit more from the arrangement. Retail competition negatively affects the retailer's position to extract more benefits from the contract and this will reduce the chance for such a contract.	<i>Supplier Network</i> n.a.
	<i>Relationship Characteristics</i> n.a.	<i>Relationship Characteristics</i> Not only are the mutual benefits to share information highlighted here, but also the conflicting interests in the relationship. In negotiating an information sharing contract the channel structure (Stackelberg leadership) and bargaining power appear to be important antecedents for the outcome.	<i>Relationship Characteristics</i> Relationship characteristics are the prime focus here. Factors like relationship age, trust, relationship-specific investments, contract formalization, dependence structure, appear to be important antecedents.
	<i>Channel Member Characteristics</i> All are economically rational actors. Other channel member characteristics are not taken into account.	<i>Channel Member Characteristics</i> All are economically rational actors. Other channel member characteristics are not taken into account.	<i>Channel Member Characteristics</i> Characteristics of the channel member are shown to play a role in their tendency to share information. Their power base, perceived competence, relational proclivity, service differentiation strategy.
Consequences	The principle outcome of information sharing is the equivalent of the value of information sharing. Studies calculate to what extent information sharing reduces the demand variance in the chain and ultimately how it saves costs in the total supply chain.	By definition, if an information sharing contract is signed, then the total channel profits are higher ("The channel is coordinated"). The division of the surplus may depend on bargaining power/channel structure (Stackelberg leadership).	Similar to the wide variety in conceptualizations of information sharing, the types of consequences under investigation differ a lot. The majority of the studies look at the added value of information sharing for satisfaction, relationship quality, commitment, perceptions about the channel member's performance.

CHAPTER THREE RESEARCH FRAMEWORK

3.1 Introduction

Transforming a channel relationship to be more market responsive through market information sharing is not that obvious, because the collaboration between a retailer and a manufacturer also implies dealing with conflicting interests in their relationship at the same time. These extremes of cooperation and competition really surfaced in the approaches to research information sharing in Chapter 2. On the one hand, there are the supply chain optimization studies accentuating the mutual collaboration benefits in sharing information between channel members, to dampen the costly bull-whip effect, to orchestrate inventory management decisions, and to improve supply chain efficiency. While on the other hand, the game-theoretic models also incorporate the conflicting competitive interests between channel members and presume that they do not just give up their information advantage without an adequate compensation in return. The empirical behavior perspective is not dominated by any of these two assumptions and investigates actual information sharing behaviors of firms. The purpose of this chapter is to develop the research framework that integrates the insights from all three research perspectives, which is guided by our three main research questions about the nature, antecedents, and consequences of market information in channel relationships as formulated in Chapter 1.

One of the ways we combine the insights from these research perspectives is in how we conceptualize market information sharing. As noted earlier, several empirical behavioral studies emphasize the style in which information was exchanged in channel relationships (i.e., the *sharing mode*). Seldom has the *content* of information sharing been a part of their measurements. Interestingly, the content of market information that is shared in the channel relationship is the main subject of the two other research streams. Furthermore, there are specific calls for research on the “sharing of intelligence between channel members” (Frazier, 1999). Our approach follows the empirical behavioral tradition, and attempts to answer these calls for further research by making an explicit distinction between *shared content* and *sharing mode*, and by researching what *actually* takes place in relationships; rather than asking what *could* be the potential of sharing information. However, we want to build a bridge between the three different research streams by developing a research framework that includes all key variables from these research perspectives (see Table 2.6). Figure 3.1 shows this framework constituted by three main blocks, which ordering is based on the logic of the structure–conduct–

performance approach (Bain, 1956) in which, thinking about the process of transforming the relationship into a more consumer demand-driven channel, market information sharing is viewed as the “conduct,” whereas the antecedent variables are viewed more as “structure”, finally leading to “performance”. The three Parts correspond with the main research questions posed in Chapter 1. The block in the middle is concerned with the Part I: the *nature* of the market information sharing arrangement. A conceptual discussion of the market information sharing characteristics is presented in paragraph 3.2 of this Chapter, and in Chapter 5 we will present the empirical results.

Part II of this dissertation is represented in the block on the left-hand side. It deals with the array of antecedents. In paragraph 3.3 we formulate our hypotheses on the relationships between antecedents and the characteristics of market information sharing arrangements.

Part III is reflecting in the right-hand side of the framework stating the list of consequences of market information sharing: joint market learning, channel relationship performance, and channel relationship quality respectively.

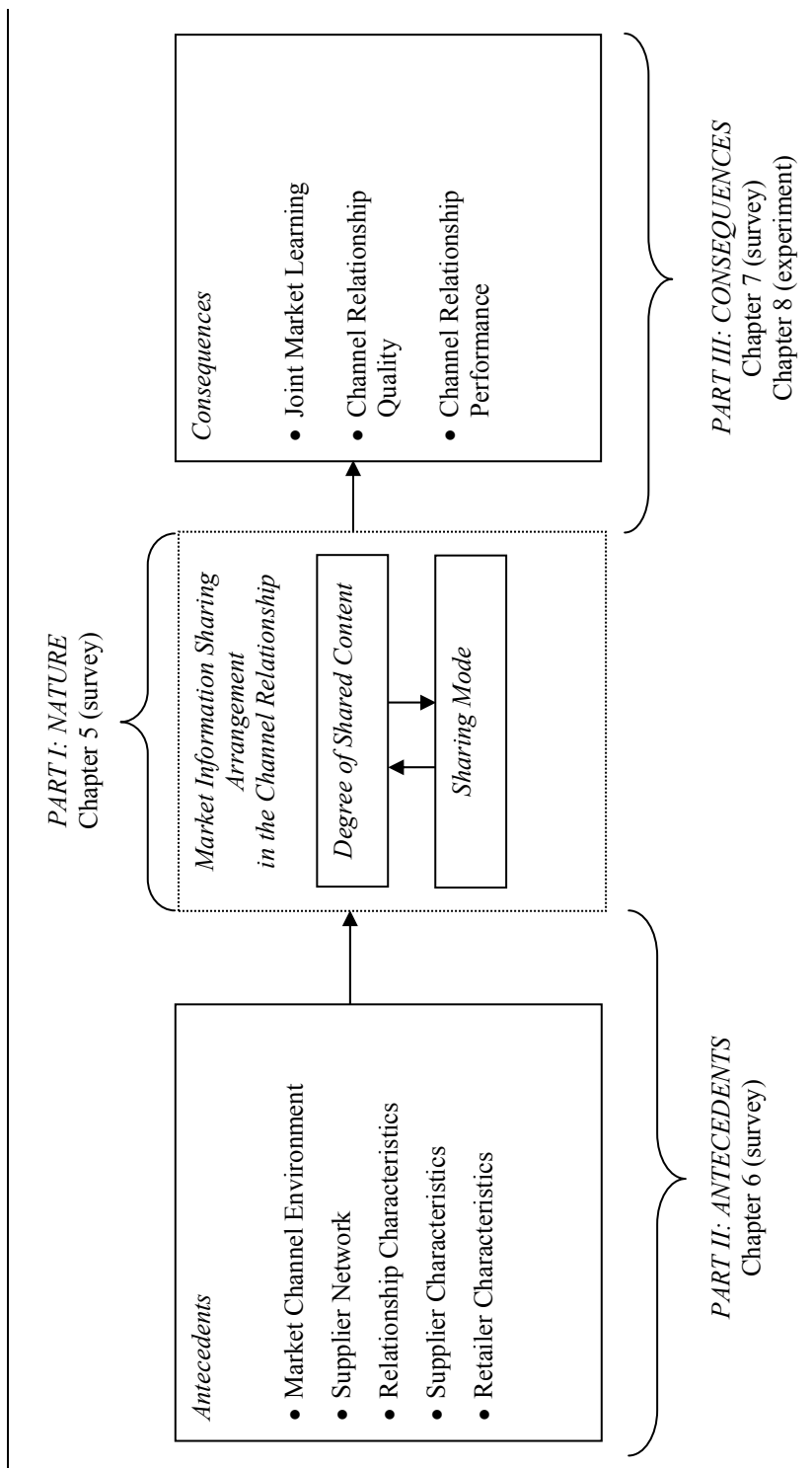
3.2 *Information-Sharing Arrangements and Key Constructs*

In Chapter 1 we have described the several types of information-sharing arrangements currently practiced by channel managers: EDI, QR, VMI, CPFR, CM. At a more abstract level, we now discuss and define the four focal constructs of information sharing arrangement in channels: (1) the shared market information content, (2) the sharing mode, and (3 and 4) the benefits and costs for channel members to share their market information with each other. In the following paragraph, we will elaborate these four constructs to develop the research framework incorporating the relationships among them and their antecedents. The antecedents will be defined as we develop the hypotheses.

3.2.1 *Market Information Sharing Arrangements*

As previously explained in Chapter 1, we define information sharing in marketing channels as “*an arrangement between two channel members to share market information with the intention to strengthen the performance of the channel for their mutual benefits*”. Such an information sharing arrangement can vary in *what* information is exchanged and *how* the information is being shared. We therefore distinguish two important dimensions of information sharing arrangements: shared content and sharing mode. Concerning the *shared content* of information, we will show in the next paragraph that it may comprise of different information categories and it can be ranked into degrees (in line with ideas from Seidmann and Sundararajan, 1997; Lee and Whang, 1998). The *sharing mode* is the second dimension of information sharing and refers to the way in which market

Figure 3.1 Research Framework



information is exchanged between channel parties. Paragraph 3.2.3 will explain the features of this dimension.

3.2.2 *Shared Content of Market Information*

Both previous chapters have demonstrated that a lot of heterogeneity in the shared information can exist in channel relationships. Especially, Chapter 1 with a brief overview of the different information sharing arrangements – Quick-Response, Continuous Replenishment Planning, Vendor Management Inventory, Collaborative Forecasting Planning and Replenishment, and Category Management – indicates that the arrangements really vary a lot in *what* information is exchanged. However, the measurement of what market information is shared does not receive much attention. As laid out in paragraph 2.4.2 of the preceding Chapter, many empirical behavioral studies on channel relationships have communication measurements that are either very complex stacking up many different aspects or are confined to a channel member's general willingness to inform the other party about "unexpected changes", "plans", "if relevant"; like intensity (Anderson and Narus, 1990; Ross et al., 1997) or transparency (Eggert and Helm, 2003). Exceptions are three examples coming close to a measurement of shared content of market information. First, Boyle et al. (1992) regard information sharing as use of non-coercive power. They define it as "[...] suppl[y] [of] information with no specific action requested or otherwise indicated" and subsequently measure it by items such as "My [...] supplier concentrates more on strategic, long-term issues, rather than specific courses of action our business should take" and makes it equal to a rather informal business talk. Their emphasis on the fact that the influence is without any obligations and contains a certain non-committal attitude makes it more a measurement of a friendly tone of voice.

The second attempt is by Mohr, et al. (1996) with their measurement of collaborative communication. Retailer-supplier communication is considered to be collaborative when it is frequent, formal, bidirectional, and non-coercive. The first two are clearly aspects of the sharing mode. The other two are more related to the content. Bidirectionality is measured as the *amount of feedback (about their product, market conditions, etc.)* the channel members give to each other. The measurement of non-coercive content is similar to that from Boyle et al. (1992) and only concerns communications without any obligations. Moreover, Mohr et al. combine all of these four items in order to arrive at one overall measure of collaborative communication compiling different aspects of an information arrangement.

Another attempt to measure shared content is by Kulp, et al. (2004) and is much more specific. They ask firms to report on their participation in information sharing initiatives like store inventory and/or POS information and VMI systems. Furthermore, their survey included an index about the sharing of information about consumers; built up from question about the sharing of consumer research (e.g., on price sensitivities, or segmentation) and

information about demand for new products and services. However, a major downside of Kulp et al.'s measurement is that respondents (CEO's from CFG manufacturing companies) were asked to report on their dealings with retail partners in general. Their unit-of-analysis is thus the "firm", and not the "channel relationship", consequently they actually ignore any variance in information sharing practices within a firm's portfolio of relationships.

If we want to develop a research framework that well integrates insights from supply optimization studies and game-theoretical modeling, than a measurement on the shared content on a relationship level is required. Measuring shared content is not an easy task to think lightly of: "[r]esearchers experience great difficulty defining and measuring communication" (Gassenheimer, et al, 1996 referring to Roberts and O'Reilly, 1974). Following the supply chain optimization studies and game-theoretic models distinguishing differences in "extent" of information sharing (from "partial" to "full"), it should be a measurement that relates to the degree in which channel members give each other insight into their possessions of confidential market information. We connect the notion of sharing confidentialities to the level of intimacy between two persons. Borrowing from social penetration theory on inter-personal relationships, a theory explaining interpersonal intimacy and overt behavior in social interaction (Altman and Taylor, 1973; Taylor and Altman, 1975; Shaw and Costanzo, 1982; Weitz and Bradford, 1999), we draw parallels between individuals and channel organizations disclosing private information to each other. In social penetration theory, the personality of an individual consists of the individual's ideas, feelings, beliefs, and emotions about self, other people, and the world. These items of personality are organized into substantive areas, such as religion, politics, and family. There are three dimensions of personality within the structure: breadth category, breadth frequency, and depth. Breadth category refers to the number of major topical areas within the personality structure. Breadth frequency refers to the amount of interaction within each area. The major topical areas of personality can be ranked along a central-peripheral or depth dimension. The personality is then often postulated as an onion-skinned body. As a relationship between two individuals develops, both individuals begin to reveal more information about more private and inner areas. This process of self-revelation can be imagined as penetrating more central, unique and vulnerable layers of the onion structure.

Importing this theoretical idea into the context at hand here, channel relationships, it is then logical to draw the parallels between an individual's personality and a channel member's market position. A channel member's market position also consists of different areas, like sales, customers, competition, margins, cost structure, profitability (see also Clark, Croson, and Schiano, 2001). These areas can be ordered according to confidentiality. The channel member's disclosure about its own position and performance in the marketplace can be represented as the "peeling-off of different onion-layers" (see Figure 3.2): in the beginning, a channel member begins with revealing less confidential and more visible

information about its position in the marketplace. Later as time passes on and the relationship grows, other content from more confidential layers are being shared with the other channel member.

Based on this theoretical idea, it is important to distinguish for each of the possible information domains to be shared between channel members, to determine to which hierarchy of layers it belongs. Later in Chapter 5 (paragraph 5.2), we will go deeper into detail on how we measure shared content

Figure 3.2 depicts a bowl with different “onion-layers” representing the information a channel member holds about its own market position. The market information that is shared corresponds with a layer and subsequently expresses the degrees of shared content in a channel relationship; ranging from low to high degrees of shared content. The lowest degree is the zero-level, at which no information is shared in channel relationships. These zero-degrees of shared content are not shown in the picture here.

The first degree of shared content in channel relationships takes shape when retailer and/or supplier share some basic almost superficial information. The retailer recounts the past sales performance of the supplier’s products and how effective its sales promotions are. The supplier only talks about promotional communication for the coming period.

One layer deeper than the superficial exchange of information is the second degree: both retailer and supplier give each other insight into logistical problems and needs. The retailer tells about his out-of-stock problems with the supplier’s products, it explains its stock policy and discloses its logistical cost targets. The supplier is then more open about the delivery schedule, the number of product available for the marketplace, and its stock policy and logistical costs targets.

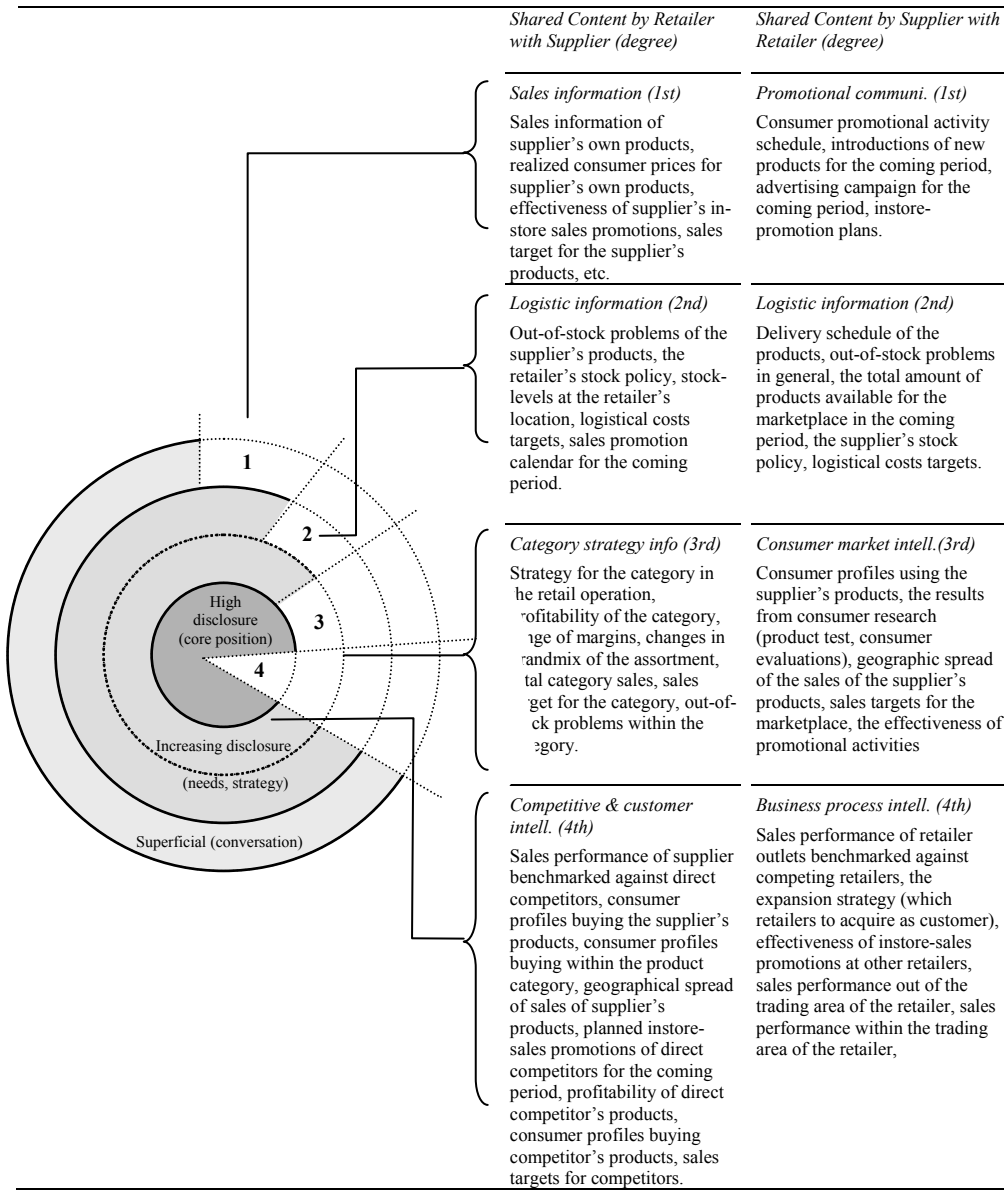
The third degree of shared content for retailers and suppliers is when they disclose information about their category information and consumer market intelligence respectively. The retailers unfold then details about the profitability of the product category as a whole, the sales and sales targets, out-of-stock problems. When suppliers share their information to the third degree, they are open about their consumer market intelligence.

The fourth degree is sharing market information from the ultimate deepest layer; in such cases, retailers make their competitive and consumer intelligence known to the suppliers. As for suppliers, they would explain to their channel partners more about their business process intelligence; sales performance at other competing stores, its effectiveness of promotional activities with other retailers. We therefore pose the following proposition:

P₁: The different categories of market information content shared between channel members constitute a hierarchy.

Figure 3.2

Categories and Degrees of Shared Market Information Content



Based on: Altman and Taylor (1973), Weitz and Bradford (1999), Seidmann and Sundararajan (1997), Lee and Whang (1998)
Note: the full details on measurement scale for Shared Market Information Content can be found in paragraph 5.2

3.2.3 *Sharing Mode*

The second dimension of an information-sharing arrangement concerns the *sharing mode* in which the market information is exchanged. Mainly the empirical behavioral approach with the conceptualization “information sharing as communicative behavior” (see paragraph 2.4.2), pays a special attention to this dimension of the information sharing arrangement. Here, we focus on a constellation of four sharing mode aspects that have been identified as collaborative (cf. Mohr and Nevin, 1990; Mohr, Fisher and Nevin, 1996): contact frequency, contact frequency with high(er) management, formality and exclusivity. *Contact frequency* has received some attention in the marketing literature (cf. Anderson and Weitz 1989) and is defined as the number of contact events between a sender (the sharing firm) and a receiver (the channel partner) during a given period of time (cf. Van de Ven and Ferry, 1980). The higher the contact frequency, the greater the collaborative nature of the sharing mode.

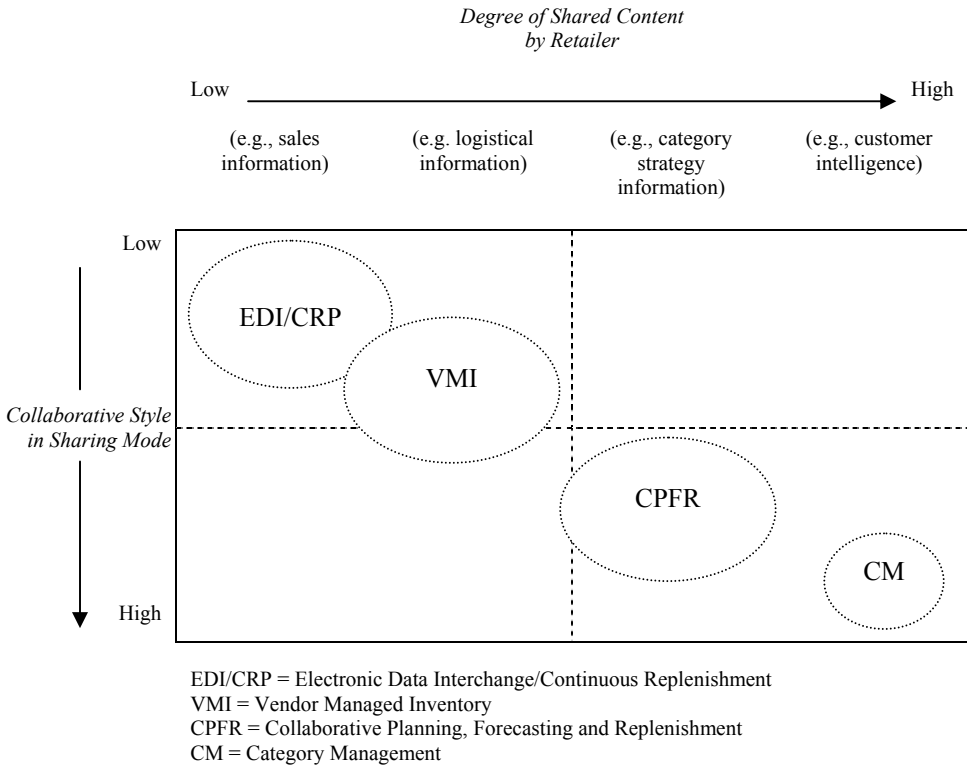
Contact Frequency Higher Management describes the contact frequency with higher management (marketing management and/or top management) of the retailer and/or the supplier. Collaborative exchanges between channel members may be featured by multi-level contacts (Day, 2000) and as such with a greater *multiplicity* of information channels within the channel relationship (Bensaou and Venkatraman, 1995). On top of the usual buying-sales contacts, the organizations have contacts at a more strategic level. The advantage of arrangements with high contact frequency from higher management is that it indicates “commitment from the top” that subsequently gives an incentive to align the interests of individual organizations (supplier and retailer) in order to make a success of the information-sharing arrangement. The higher the contact frequency of higher management, the greater the collaborative nature of the sharing mode.

Formalization (formal versus informal modality) of communication refers to the extent to which contacts between channel members are routinized, planned, or structured, as opposed to unplanned, fleeting, or ad hoc in nature (Mohr and Sohi, 1996). Maltz and Kohli (1996) refer to formality as the ratio of formal sharing events to the total number of information-sharing events during a given time period. As the information sharing is more formalized, we regard the sharing mode to be more collaborative.

Exclusivity as the fourth aspect of the information-sharing process, refers to the number of parties receiving market intelligence from the retailer. The given exclusivity of the information-sharing process by the retailer signals a strong pledge of commitment to the supplier (cf. Anderson and Weitz, 1992). Sharing information is like sharing a valuable asset; if the sharing takes place at a more exclusive basis, then we regard the sharing mode to be more collaborative (with respect to the channel partner).

We characterize the sharing mode to occur in a more collaborative fashion, the exchange of information takes place more *frequently*, *with higher management*, is *more formalized*, and on a more *exclusive* basis.

Figure 3.3 The Tentative Relationship between Degrees of Shared Content and Collaborative Style in the Sharing Mode



Although both sharing mode and sharing mode are separate dimensions of information sharing arrangements, it is likely that both are related to each other. A channel member who interacts frequently with the other party is likely to develop a deeper understanding of the latter's market information needs (cf. Fisher 1978), and subsequently it will be more likely to be able to provide the information needed by the receiver and to present the information in a manner that is readily understandable by the channel partner. Many behavioral empirical studies demonstrate that information-sharing related aspects are interrelated; for instance, key-account management practices featuring more intensive activity on information are known to be more formalized and have multiple inter-firm contacts (Homburg et al., 2002). Mohr, Fisher and Nevin (1996) find a direct relationship between the sharing of non-coercive content with contact frequency and formality; and they even go as far as to conceptually combine the different aspects of two dimensions of sharing mode and shared content by merging them into one single measurement of collaborative communication. An

observation in the field of channel collaborations is that retailers engage in EDI and VMI arrangements with many more suppliers compared to the number of suppliers included in more arrangements with higher degrees of shared content, such as CPFR and Category Management. Figure 3.3 shows the tentative relationship between the collaborative style in sharing mode and the degrees of shared content.

When a channel relationship is more and more characterized by a collaborative style of sharing information, higher degrees of content are being shared. We therefore pose the following proposition:

P₂: A collaborative style in the sharing mode is positively related to the degree of shared content, but both dimensions are distinct aspects of the information sharing arrangement.

3.2.4 *Benefits of Sharing Market Information with Channel members*

Sharing different degrees of market information with other channel members at a different frequency, with varying contact-levels of higher management, in a formalized way, and/or more exclusively is expected to bring about different types of benefits to the sharing channel member (Van Bruggen, 2001). Table 3.1 lists the different types of benefits varying from more efficiency, more effectiveness, improved working relationship, to increased influence capacity.

The first two types of benefits from sharing information are more direct of nature. When channel member share their information, the channel partners can use the information in order to increase the quality of their decisions in the channel. The decision quality is raised thanks to combining information sources from both parties, resulting not only into a richer and more complete picture of the marketplace but also in a reduction of some of the uncertainty for each of the individual decision-maker/channel member. Furthermore also it removes equivocality in the exchange of information; thereby enhancing the quality of coordinating the decision-making in the channel relationship. As a result of improved individual channel member's decision-making and the coordination thereof, the channel relationship is expected to function better in terms of both efficiency and effectiveness.

Cost-saving efficiency gain. Inefficient channel relationships suffer from costly failures in the physical supply with high transaction costs, errors in ordering, handling and delivery, an excess of pipeline inventory. Information sharing is expected to reduce supply chain costs by lowering the need for inventory (Gavirneni, et al, 1999), by diminishing shortage and back-order costs, and shortening lead times (Lee et al., 2000). Attributed to an improved inter-firm coordination and a better sales forecast (in quantity), the channel members are

able to harmonize their ordering, handling, distributing products and managing of promotional activities. In so doing, information sharing increases the efficiency in channel operations and improves the physical supply (see the Supply Chain Optimization approach; Lee, et al, 1997). The benefits of efficiency gain can be realized on a relatively short-term basis.

Table 3.1 A Channel Member's Benefits and Costs of Sharing Market Information with other Channel Party

<i>Benefits</i>	<i>Costs</i>
<ul style="list-style-type: none"> • Cost-saving efficiency gain (more efficient physical supply) <ul style="list-style-type: none"> ○ Efficient coordination between firms ○ Lower inventory holding costs ○ Lower shortage and back order costs ○ Shorter lead times • Demand-enhancing effectiveness gain (improved market mediation) <ul style="list-style-type: none"> ○ Improvement of the delivery of customer value ○ Faster response to changes in consumer demand ○ More able to "drive" consumer demand • Improvement in relationship quality • Increase in influence capability 	<ul style="list-style-type: none"> • Relationship-specific investments <ul style="list-style-type: none"> ○ More time, money and effort spent in channel member relationship ○ Becoming more dependent on the other channel member • Loss of expert power <ul style="list-style-type: none"> ○ Deterioration of negotiation position • Vulnerability to opportunistic behavior by channel member <ul style="list-style-type: none"> ○ Not using any shared market information ○ Misuse of shared market information ○ Leakage of shared market information • Deleterious network effects
Source: Van Bruggen (2001); Forrester Research, "Benefits of and Barriers to CPFR online" (2001)	

Demand-enhancing effectiveness gain. Ineffective channel relationships make mistakes in the matching supply with consumer demand. Typical symptoms of such failures to maximize consumer value are obsolete inventory, markdowns to clear inventory, low success rate of new product launches. The second benefit from information sharing is that the channel relationship becomes more capable of meeting consumer needs and adapting to changes in consumer needs more rapidly. As a firm's relationships have been recognized as an important source of competitive advantage (Dyer and Singh, 1999; Day, 2000), they can be an instrument to respond more rapidly to arising market opportunities. Information sharing enables to mobilize channel members to become more adaptive to changing consumer demand; resulting in improved market offer quality (Emshwiller, 1991), and successful new product development (Magnet, 1994). The third and fourth types of benefits from information sharing are less direct and serve to be no more than facilitation for reaching more effective and efficient channel relationships.

Improvement in relationship quality. The atmosphere of the working relationship between channel members can be thought of as hybrid culture that develops between the channel firms and reflects the elements of both firm's cultures, but is different from either firm's culture (Wilson, 1995). Perhaps, a third and more indirect benefit of sharing market information is that it stimulates the development in the channel relationship itself. Research shows that when both channel parties become more market-oriented, their relational atmosphere improves (Siguaw, et al, 1998; Baker et al., 1999). Information sharing partners are expected to become more satisfied about the performance, and about the way their dealings take place. Ultimately, each others' willingness to invest in the further development of their relationship increases.

Increase in influence capability. A firm's capability to influence is its ability and willingness to reward good behavior of the other channel member, or to inflict negative consequences on that channel member (*punitive capacity*; Kumar, et al., 1998). The possession of market information can contribute to the influence capability in two following ways. In the first place and especially in the beginning of a channel relationship, sharing market information can be perceived as a token of rewarding the other channel partner (cf. Scheer and Stern, 1992; *as a use of information power*; see paragraph 2.4.1) or as a demonstration of relationship bonding (see paragraph 2.4.4). In the second place and in particular at a later stage in the relationship, as the other channel member has grown dependent of receiving this market information and has subsequently designed its business processes accordingly, a possible withdrawal or stop of sharing information any longer may be detrimental to the receiver's performance. With this idea in mind, the fourth (indirect) benefit of market information sharing is the increase in the influence capability of the sharing company and may turn into a powerful two-edged sword in directing the channel.

3.2.5 *Costs of Information-Sharing with the Channel Members*

Despite the benefits that information sharing in channel relationships can bring, there are also costs associated with it (Van Bruggen, 2001). An information sharing channel member may run the risk of incurring four types of costs: higher relationship-specific investments, loss of expert power, increased vulnerability to opportunistic behavior, and possible deleterious channel network effects (see Table 3.1).

Relationship-specific investments and increased dependency. A more intensive information-sharing implies that the sharing firm dedicates more resources (e.g, time, money, training, information technology, specific adjustments) to the relationship with the supplier. These out-of-pocket costs are *relationship-specific investments* because these resource commitments cannot be recovered if the channel relationship terminates. As the information-sharing relationship continues, hesitancy within the sharing parties develops; meaning that the costs to switch to another channel partner rises. Information-sharing parties

become increasingly dependent on each other, and strategically less flexible to change information sharing partnership.

Loss of expert power. The second type of cost in sharing market information is the loss in expert power, because disclosing proprietary information means giving up the expert position and the opportunity to profit from a position of (market) information asymmetry, in which a channel member would negotiate for better trade deals. An inherent risk with information sharing is that, for instance, the retailer loses its look-out for negotiating a lower purchase price (Coughlan, Anderson, Stern, and El-Ansary, 2001). Channel members sharing information should also be aware of longer-term learning risks; the other channel member may be just enter into a information sharing arrangement in order to outlearn the information possessor (Mohr and Sengupta, 2002). To minimize the undesirable transfer of information, the sharing firm should be careful in its selection of *whom* to share with, and *how* to share (sharing mode).

Vulnerability to opportunistic behavior. The third type of cost is becoming more dependent of another channel member by sharing information. The increased dependence makes the sharing channel member more vulnerable to many forms of opportunism by the other (receiving) party: not only to active, but also to passive opportunism (e.g., Wathne and Heide, 2000). Active forms of opportunism would be defined in general terms as “self-interest seeking with guile” (Williamson, 1975; p. 6). In this context, guile would stand for “lying, cheating, calculated efforts to mislead, distort, obfuscate, or otherwise confuse”. Less deliberate but potentially harmful behavior by the channel partner are passive forms of opportunism, like *withholding* information, or *not using* the received information. The information sharing is then in vain, because the other party does not use the market information to improve channel relationship operations with the sharing firm. It seems like a classical principal agent theoretical problem of *adverse selection*. Yet, it remains difficult to monitor and detect the (right) use of information by the receiving party. Even supposing the sharing firm exerts itself to carefully select a channel partner, it cannot be certain whether the channel partner makes the most from the more intensive market information-sharing.

The two other forms of opportunism are active and at least equally detrimental to the sharing firm. The first is *misuse*; the shared information can be used against the sharer and misused by the other party for other purposes (Hart and Saunders, 1997). The receiving party may use the information for their own benefit rather than for improving the functioning of the channel relationship. For instance, a supplier may use the information to develop own direct channels, and a retailer to develop a private label program (activities of vertical integration). The second type of active opportunism is *leakage*. The shared information can be leaked to direct competitors of the sharing firm. For example, brand manufacturer Gillette told a large retailer the date on which it planned to begin selling its new Good-News disposable razor. The distributor promptly called competitor BIC and told it

about the impending product launch. BIC put together a crash team and was able to start selling its new razor shortly after Gillette did (Kotler, et al., 2005; p. 342).

Sharing firms may take different measures in designing a formal (legal) contract on the use of its information, herewith attempting to minimize the opportunity that channel partner misuses or leaks the (often confidential) strategic information (*moral hazard problem*; *active form of opportunism*) to competitors. However, a known example in category management partnerships literature is that the retailer is never sure that the supplier makes an *objective* category plan (Gruen and Shah, 2001). Furthermore, leakage may occur without the presence of bad intentions; although the actual transmission of information is itself confidential, direct competitors may be able to infer information from if certain actions of the sharing channel partners are observable (Li, 2002). “they are concerned that such information could end up being shared with competitors” (Hoban, 1993; quoted in: Sahin and Robinson, 2002).

Deleterious network effects. The fourth type of costs is that the sharing of information with one channel member can frustrate the relationships with a third and/or other channel members not involved in the information sharing arrangement. These *deleterious network effects* corrupt other business relationships (Ritter, 2000).

3.3 Hypotheses on the Antecedents of Information-Sharing in Channel Relationships

Referring to Figure 3.1 we focus on the left-hand part of the research model: Part II is on the antecedents of information sharing. The research perspectives in Chapter 2 engender the idea that an information sharing strategy is not appropriate for all conditions. In the systematic review of the three research approaches, we manage to earmark important and relevant antecedents that possibly influence channel members to pursue an information sharing strategy or not. These possible antecedents are grouped in five building blocks: market channel environment, supplier network, relationship, supplier, and retailer characteristics (as shown in Figure 3.1 and in Table 3.2). In understanding how much these factors stimulate or inhibit information sharing in channel relationships, it is important to realize that the sharing of higher and higher degrees of market information in channel relationships (social penetration; interorganizational penetration) does not occur in a haphazard way, but is presumed to be influenced by the nature of the benefits and costs in the channel relationship.

Sharing information in channel relationships is supported by positive reinforcements and by immediately obtained and forecasted benefits. The downside is also assumed to be true, that the sharing of market information can be stopped and reduced by negative reinforcements and by expected costs. Theories explaining these mechanisms of developing more closer channel relationships and overt channel behavior are Social Exchange theory (Thibaut and Kelley 1959; Kelley and Thibaut, 1978) and Social Penetration theory (Altman and Taylor, 1973); these theories argue that a channel member starts to share more (i.e., in

higher degrees and with a more collaborative style) information in a relationship with another channel member when the expected benefits of sharing information exceed the expected costs.

Table 3.2 Expected Relationships between Antecedents, Shared Content by Channel Members, and Collaborative Style in the Sharing Mode

Independent Variables	Hypotheses						
	Retailer's Benefits and Costs from Sharing Market Information with Supplier			Supplier's Benefits and Costs from Sharing Market Information with Retailer			Collaborative Style in Sharing Mode
	(B = Benefits; C= Costs)			(B = Benefits; C= Costs)			Hypothesis
	Hypothesis (B _r - C _r)			Hypothesis (B _s - C _s)			
	B _r	C _r		B _s	C _s		
<i>Market Channel Environment</i>							
1: Consumer Demand Turbulence	+	+	⊂	+		+	*
2: Consumer Demand Growth	+		+	+		+	+
3: Purchase Complexity	+	+	?	+	+	?	+
4: Channel Inertia	-		-	-		-	-
<i>Supplier Network</i>							
5: Network Horizon		+	-	-	+	-	-
6: Network Concentration		-	+		+	-	*
7: Supplier Competition Intensity		+	-	+		+	*
8: Retailer Competition Intensity	+		+			-	*
9: Information Sharing Norms	+	-	+	+	-	+	+
10: Negative Connectedness		+	-	+		+	*
11: Positive Connectedness		-	+	-		-	*
<i>Relationship Characteristics</i>							
12: Age of Relationship	+	-	+	+	-	+	+
13: Trust		-	+		-	+	*
14: Relationship-specific Investment		-	+	-		-	*
15: Contract Formalization		-	+		-	+	+
16: Total interdependence	+	-	+		-	+	+
17: Dependence asymmetry	-	+	-	-	+	-	-
<i>Supplier Characteristics</i>							
18a: Market Sensing Capabilities		+	-	+		+	*
18b: Market Relating Capabilities	+		+	+		+	+
19: Goal Congruency		-	+	+	-	+	+
20a: Top Management Support Supplier	+	-	+	+		+	+
20b: Incentive Structure Supplier	+	-	+	+		+	+
<i>Retailer Characteristics</i>							
21a: Market Sensing Capabilities	+		+		+	-	*
21b: Market Relating Capabilities	+		+	+		+	+
22: Predisposition to ally with suppliers	+	-	+		-	+	+
23a: Top Management Support Retailer	+		+	+	-	+	+
23b: Incentive Structure Retailer	+		+	+	-	+	+
<i>Covariates</i>							
<i>Industry</i>							
Food (Food = 1; other industries = 0)			+			+	*
<i>Supplier Type</i>							
Brand manufacturer (brand manufacturer = 1; private label = 0)			+			+	+

For example, a retailer signs a category management agreement with a certain supplier only if the expected benefits from this type information sharing arrangement with the supplier are higher than the expected costs. The expectations of the retailer are based on the accumulation of past experiences as well as on the whole set of beliefs about the future dealings and exchange of information with that supplier. It is important to note that this total of expected benefits and costs are not only being directed at the other channel member, but it also appears to be directed toward the process of information-sharing itself (e.g., Gruen and Shah; 2000) and the circumstances in which is being shared. Therefore, we hypothesize that both shared content and sharing mode are a function of the expected benefits and costs of information sharing with the other channel member (see Table 3.2), but that the extent to which these benefits and costs play a role depends on the antecedents.

Table 3.2 lists the expected direction of the effect from the antecedent on shared content. The expected direction is a result of the difference between the sum of expected benefits and the sum of expected costs. We do not develop the specific hypothesis for each sharing mode aspect, because it would hardly be feasible. For the sake of efficiency, we constructed one overall hypothesis for the collaborative nature of the sharing mode. Later in the data analysis in Chapter 6 we do take a specific look at each of the sharing mode aspects.

The degree of shared content market information and sharing mode are hypothesized to affect the channel relationship performance. The second part of the research model is on the consequences and will be dealt with in paragraph 3.5. Per domain of antecedents we will discuss the direction of the hypotheses.

3.3.1 *Market Channel Environment*

The first set of variables influencing market information sharing concerns four aspects of the market channel environment: consumer demand turbulence, consumer demand growth, product complexity and channel inertia.

Consumer Demand Turbulence is here defined as the extent to which the rate of change in the consumer demand is rapid and unpredictable (cf. Achrol and Stern, 1988). The influence of consumer demand turbulence on the benefits and costs of information sharing is rather difficult to hypothesize in a straightforward way; as it happens, the research perspectives presented in Chapter 2 show a large variety in influences of consumer demand uncertainty on information-sharing.

With regard to the expected benefits of information sharing, it is primarily the supply chain optimization approach suggesting that the following chain-of-events takes place: when the consumer demand becomes more turbulent (such as consumer demand fluctuations, many (product) innovations, high price sensitivity), the bull-whip effect augments and consequently channel parties absorb growing demand fluctuations by increasing their inventories. Higher inventory levels in the supply chain heighten the need for coordination

in the channel, and thus information-sharing would be a valuable strategy in lowering supply chain costs (Graves, 1996; Lee, et al., 1997; Cachon, 1999; Chen et al., 2000; Lee, et al., 2000). Sharing higher degrees of shared content like demand forecasts can potentially absorb demand fluctuations and subsequently reduce the supply chain costs (Aviv, 2001). Additionally in terms of effectiveness of the channel, game-theorists would predict that in situations of uncertain consumer demand, contracts to share information leads to higher channel profits (e.g., Gal-Or, 1991; Niraj and Narasimhan, 2003). Also marketing channel scholars in the empirical behavioral tradition agree that environmental uncertainty in terms of consumer diversity and dynamism impacts the decision-making uncertainty faced by the channel firms (Achrol and Stern, 1988) and causes transaction costs to rise (Pilling et al., 1994), information sharing then can help to reduce that perceived uncertainty and to better anticipate potential exchange problems. Mentzer et al. (2000) also argue that stronger channel relationships offer higher levels of interfirm coordination, greater stability and flexibility. Other empirical studies give additional evidence supporting the idea that information sharing and more coordination harnesses channel members against sudden external changes. A closer coordination in the channel relationship whereby information sharing is regarded as normal conduct mitigates perceptions of environmental uncertainty (Paswan, et al. 1998); perhaps because a more information-based coordination also more meaningful to both of them in situations with uncertain consumer demand (Celly and Frazier, 1996) and motivates channel firms to engage in relationship learning (i.e. information sharing) either to gain control over these externalities or to buffer the consequences (Selnes and Sallis, 2003).

Aside from the general agreement among research perspectives on the idea that information sharing delivers extra benefits to channel members in situations of uncertain consumer demand, there is debate on whether or not the *costs* of the information sharing in these situations are higher. The increased costs might explain us why not all firms absorb turbulence by information sharing. Studies in the behavioral empirical tradition find that it is sometimes strategically more sensible for firms to avoid stronger ties with other firms in times of environmental turbulence (Joshi and Campbell, 2003; Joshi and Stump, 1999). Consumer turbulence and uncertainty in general may give rise to opportunism, because either party can take advantage of the changing situation (Heide and John, 1990), “can yield a level of task ambiguity that greatly diminishes the willingness and ability of the parties to share information” (Bello, et al., 2003: p 6) and for that reason “parties want to remain flexible in uncertain environments” (Dwyer and Oh, 1987) and refrain from joint actions then (Joshi and Stump , 1999). For these reasons, we believe that in more turbulent consumer demand situations, the costs of information sharing in terms of becoming more dependent and the opportunistic behavior are higher.

We do think that the extra costs of information sharing are mostly borne by the retailers and not by the suppliers. In times of turbulence, suppliers seek sales guarantees and are increasingly willing to invest in their buyer relationships, while retailers try to refrain from further investments into their supplier relationships in order to maintain their independence and flexibility (Jap, 1999). As a result, we hypothesize different expected relationships between the antecedent consumer demand turbulence and the degrees of shared content by retailers (downstream) and suppliers (upstream). As for the retailers, we expect that when consumer demand turbulence keeps on increasing, the efficiency gains are gradually offset by a growing wish to stay less dependent on the supplier. In more turbulence environments, the desire to have the possibility to switch suppliers becomes bigger; it means that the perceived costs of information sharing for the retailer go up: information sharing may then imply an intertwining of its operations with one supplier leading to more difficulty to switch suppliers. When considered in tandem with the positive effects of efficiency gain, this argument suggests an inverted U-shaped relationship between consumer demand turbulence and shared content by the retailer (Hypothesis H_{1a-r}).

As for the suppliers, the efficiency gain benefits are expected to grow monotonically when consumer demand turbulence increases. Possibly, the sharing of information by the supplier in response to consumer demand turbulence may bring forth an extra improvement in relationship with its retailer. Hence, we expect consumer demand turbulence to stimulate the shared content by suppliers (Hypothesis H_{1a-s}).

Regarding the sharing mode, we expect in line with the shared content that the supplier will share its information in a more collaborative style (higher contact frequency, contact frequency of higher management, more exclusivity, and formalization); whereas the retailer is more reserved in the sharing mode style (less contact frequency, little contact with higher management, less exclusivity, and less formalization).

- H_{1a-r} : The relationship of consumer demand turbulence with retailer's degree of shared content has an inverse U-shape.
- H_{1a-s} : As consumer demand turbulence increases, suppliers share higher degrees of market information with retailers.
- H_{1a-rs} : As consumer demand turbulence increases, retailers (suppliers) share information in a less (more) collaborative style.

Consumer Demand Growth. A growing consumer demand situation makes it reasonable to believe that more new market opportunities are to be learnt from by both channel members. Main question for both retailer and supplier is "are we currently addressing all of the emerging consumer wishes?". Primary benefit from sharing information is then to seek,

monitor and maintain the effectiveness of their market channel. Since established sources of information (from syndicated suppliers) are not available in such growing market segments, both parties need to share first-hand information in their effort to monitor the growing demand. Our hypothesis is that in growing consumer demand situations, the effectiveness gain is relatively higher than in stable consumer demand (low growth). For that reason, we expect that both retailer and supplier are likely to share higher degrees of market information content (H_{1b-r} and H_{1b-s}) when the consumer demand is growing. The sharing of information serves as inputs for the learning about new market opportunities (e.g., Sinkula, Baker and Noordewier, 1997; Selnes and Sallis, 2003), and is expected to take place in more collaborative sharing modes (higher contact frequency, with higher management, more exclusively, and more formalized).

H_{1b-r} : As consumer demand growth increases, retailers share higher degrees of market information with suppliers.

H_{1b-s} : As consumer demand growth increases, suppliers share higher degrees of market information with retailers.

H_{1b-rs} : As consumer demand growth increases, channel members share their market information in a more collaborative style (higher contact frequency, contact with higher management, more exclusivity, and more formalization).

Perceived Product Complexity. When the purchase situation is more complex, the channel members experience a more technical and complicated buying/selling situation. Information sharing in high product complex buying situations may provide extra benefits as well as incur extra costs. In the first place, more product complexity means that both channel members wish to have more market information to retrieve extra securities. The need for securities springs from the higher risk of failure to meet consumer demand (in quality; effectiveness gain); channel members prefer to minimize the maximum regret of missing out on a market opportunity; and thus the benefit from information sharing is “effectiveness gain”. The suppliers will intensify communication with channel members downstream to give these guarantees (Bello, Chelariu, and Zhang, 2003). The extra costs of information sharing in more product complex buying situations is that channel members need to spend much time on elementary technical matters of the business dealing like, specifying the product and delivery conditions. As the total amount of time is limited, the relative cost of spending time and effort to exchange information about the market increases. Higher benefits as well as higher costs of information sharing in more buying situations with more complexity; that means that both effects counter each other and we therefore hypothesize a zero net effect.

Concerning the sharing mode, we hypothesize, though, that the parties seek to eliminate possible misunderstandings and have an elaborative form of sharing mode with higher contact frequency, more contact with higher management, in a more exclusive manner, and more formalized.

- H_{1c-r}: Complexity in the purchase situation does not have an influence on the degrees of shared content by retailers with suppliers.
- H_{1c-s}: Complexity in the purchase situation does not have an influence on the degrees of shared content by suppliers with retailers.
- H_{1c-rs}: As complexity in the purchase situation increases, channel members share their market information in a more collaborative style.

Channel Inertia. When it takes a long time (and a lot of effort) for a channel to react to consumer demand changes, the channel is regarded as inert. Supply Chain optimization studies demonstrate that channels with longer lead times experience greater costly bullwhip fluctuations; meaning that the potential for efficiency gain by sharing market information increases. However, this approach only advocates that information sharing *would* be an appropriate strategy to reduce these augmented demand variations and make the supply chain more efficient (Hariharan and Zipkin, 1995; Chen, 1998). However, the structural time-lag in the channel minimizes the timeliness of information so much that it loses its effectiveness in the channel. Without being effective, it is very difficult to optimize the supply chain and become more efficient. We hypothesize that notwithstanding the possible efficiency gains from sharing information in inert channels, the effect of channel inertia on lower effectiveness is greater. That is why, we think of the channel inertia as a critical structural hurdle for channel members to share, because the barriers are too large to make the sharing of information pay off in the short or medium term. We hypothesize a negative relationship between the content of market information shared and channel inertia. In accordance with the expected shared content in the relationship, we expect that the channel inertia remains a barrier to share collaboratively.

- H_{1d-r}: As channel inertia increases, retailers share lower degrees of market information with suppliers.
- H_{1d-s}: As channel inertia increases, suppliers share lower degrees of market information with retailers.
- H_{1d-rs}: As channel inertia increases, channel members share their market information in a less collaborative style.

3.3.2 *Supplier Network*

The second set of antecedents playing a role in the sharing of market information in channel relationships is the supplier network. The channel relationship cannot be seen in isolation but as being embedded in a network of other supplier relationships (cf. Ritter, et al., 2004; Achrol and Kotler, 1999). The supplier network is defined as the portfolio of supplier relationships of the retailer; it is constituted by structural dimensions, competition intensity, information sharing norms, and connectedness. The structural dimensions of the supplier network are network horizon (magnitude) and network concentration (comparable to network density).

Supplier Network Horizon. The supplier network horizon denotes primarily how extended the retailer's view of the network is (Anderson, Hakansson, and Johansson, 1994) and is here defined as the set of supplier relationships (within the product category), with which the retailer regularly deals. Sharing information in a large supplier network (with many other suppliers) is for *both* channel members less attractive than in a smaller supplier networks (with a few other suppliers), because of costs of information sharing are higher and the prospected benefits are lower. The retailers' costs to share information are relatively higher in a larger network than in a smaller network, because retailers would prefer more not to become (too) dependent from one (information sharing) supplier with so many other alternative suppliers being present.

Both the suppliers' expected costs to share information are higher and their benefits are lower in larger supplier networks. A larger supplier network spreads the retailer buyer's attention over a large group of smaller trading partners and the fragmented retailer's attention subsequently reduces the likelihood that information sharing pays off in any substantial efficiency and effectiveness gains for the supplier. Besides that, the fragmented retailer's attention increases the costs of information sharing due to the risen probability that the retailer is not going to use the received information from the supplier (a form of passive opportunism).

In large fragmented supplier network horizons, the preferred way to do business is at arm's length and information sharing is more or less discouraged. Both retailer and supplier will share information in a less collaborative style (less contact frequency, little contact frequent of higher management, less exclusively, and less formalized).

- H_{2a-r}: As the supplier network expands, retailers share lower degrees of market information with suppliers.
- H_{2a-s}: As the supplier network expands, suppliers share lower degrees of market information with retailers.
- H_{2a-rs}: As the supplier network expands, channel members share their market information in a less collaborative style.

Supplier Network Concentration. The concentration in the supplier network is the degree to which the buying budget (within a product category) is concentrated at a small number of suppliers. Assuming that the amount a retailer buys from a supplier is strongly correlated with the strength of the retailer-supplier relationship, we can draw a parallel with Burt's (1992) network density reflecting the average strength of the relationships in the network and it mainly influences the channel members' costs to share information.

The retailers' costs to share information are relatively smaller in a more concentrated supplier network. Information sharing in such circumstances would simply be relatively lower relationship-specific investments because a higher supplier concentration allows the retailer to focus its dedication to a smaller number of important suppliers.

On the other hand, the suppliers' information sharing costs are relatively higher, because a higher concentration implies for them that the retailer has strong ties with their direct competitors. In such a case, leaking confidential market information becomes much of a danger to that supplier. Perhaps the chances of leaking do not increase, but the possible detrimental effect of it does substantially.

These opposite costs effects for channel members are also expected to be reflected in the sharing mode in which market information is passed on. The retailer pursues a more collaborative style of sharing, while the supplier condenses the opportunity to share market information by sharing in a more distant way (less contact frequency, less contact with higher management, less exclusivity, and less formalized).

- H_{2b-r}: As the supplier network concentration increases, retailers share higher degrees of market information with suppliers.
- H_{2b-s}: As the supplier network concentration increases, suppliers share lower degrees of market information with retailers.
- H_{2b-rs}: As the supplier network concentration increases, retailers (suppliers) share their market information in a more (less) collaborative style.

Supplier Competition Intensity. The intensity of competition among suppliers themselves is an important characteristic for the supplier network. A number of benefits and costs of information sharing are influenced by the supplier competition intensity.

The retailers' benefits from the sharing information with a supplier that faces more intense competition are expected to be higher, because the supplier will be (extrinsically) motivated to make the most from the received retailer information. Moreover, the costs of information sharing for retailers with competing suppliers are relatively lower, due to the smaller likelihood that they misuse information (cf. Kauffman and Mohtadi, 2004). However, we expect one prime cost factor to be overriding: under conditions of high competition among suppliers, retailers can deal many competing suppliers to satisfy their

needs for market information and occupy a good negotiation position which they prefer to keep (Walter et al., 2003). Giving up this negotiation position and losing an expert power is much higher in this case, because it would be relatively better for them to play the divide-and-rule game in order to come up with the best deal when suppliers are doing their best to compete for the retailer's preference. So in such competitive circumstances, there is no immediate need for the retailer to start sharing more content. It might be that only limited degrees of retailer information sharing occurs, but revealing more about their market position to a supplier is expected to be too costly. Hypothesis H_{2c-r} therefore assumes a negative relationship.

Even though the effectiveness of some information sharing arrangements (like CRP, Myers et al., 2000) have been found to lower in more market competitive environments, we think that the suppliers expect different costs and benefits from information sharing when they are facing more supplier competition, because the need to make market information useful is greater. In competitive markets where market information is more valuable (Raju and Roy, 2000), suppliers make the sacrifice of passing on their information to retailers in order to achieve a good working relationship. Competition is thought to work as a catalyst (Mouzas and Araujo, 2000). That is why, we hypothesize, that suppliers will use market information in these situations as a competitive weapon with the objective to win the retailers' preference (Anderson and Narus, 1990); the supplier's expected benefit of an improved relationship with the retailer is greater than the cost of losing the valuable expert position. H_{2c-s} assumes a positive relationship. As a result, competition intensity among suppliers is likely to have different effects on the shared content of market information in a channel relationship. Like the supplier network concentration, competition intensity is presumed to have divergent effects on the sharing mode. The retailer prefers to lead competition among supplier do its work and prefers arm-length style sharing modes; while suppliers aim for sharing information collaboratively.

- H_{2c-r} : As competition among suppliers in the network increases, retailers share lower degrees of market information with suppliers.
- H_{2c-s} : As competition among suppliers in the network increases, suppliers share higher degrees of market information with retailers.
- H_{2c-rs} : As competition among suppliers in the network increases, retailers (suppliers) share their market information in a less (more) collaborative style.

Retailer Competition Intensity. Articles in the popular business press stress the importance for retailers to collaborate with suppliers to head their direct competitors (see also Mentzer et al., 2000; Mouzas and Araujo, 2000). Collaboration vertically with suppliers may deliver a competitive cost advantage and thus information sharing would make channel relationships

more efficient for the retailer. In this case, the supplier finds himself in a very attractive situation in which he treasures his negotiation position. The supplier is therefore expected to react differently than retailers, shop for better deals with severely competing retailer, and keep information to himself. Correspondingly, the channel members are expected to share their information in a unilateral collaborative fashion.

- H_{2d-r}: As competition among retailers intensifies, retailers share higher degrees of market information with suppliers.
- H_{2d-s}: As competition among retailers intensifies, suppliers share lower degrees of market information with retailers.
- H_{2d-rs}: As competition among retailers intensifies, retailers (suppliers) share their market information in a more (less) collaborative style (higher contact frequency, contact with higher management, formalization, exclusivity).

Information Sharing Norms in the Supplier Network. More intense business networks surrounding the focal retailer-supplier relationships increases the motivation to engage in more collaborative arrangements with each other (Claro et al., 2003). That means that in a strong network the two channel partners together with other industry actors have developed a high level of consensus and shared values. Such a generally agreed positive attitude in the network towards channel collaborations in general, and information sharing in particular, positively influences the channel member's perception ratio between benefits and costs. It puts more weight on the information sharing benefits and it downplays cost of information sharing. In effect, it raises the level of comparison for the channel relationship to maintain (cf. Anderson and Narus, 1990). For both channel members, we hypothesize that in supplier networks with highly developed information sharing norms, a firm sharing less information violates not only the expectations in one channel relationship, but it neglect of this code to share information leads to deleterious effects in the whole network. For instance, being uncooperative (i.e., sharing no information) could reduce the channel member's goodwill (Antia and Frazier, 2001). In fact, in order to avoid both decay in the relationship and deleterious network effects, retailer and supplier will share information with each other. Besides the economical motive resulting from the trade-off between benefits and costs, in a network with information sharing norms, channel members may also have legitimacy motives to share information (see Grewal, et al., 2001) and have the wish either to portray themselves as advanced or to mimic a successful benchmark firm in the network.

As for the sharing mode, networks with established norms are expected to have developed a habit to share in a more collaborative way: both channel members seek regular contact, involve higher management, engage in exclusivity contracts, and formalize their information sharing.

- H_{2e-r}: As the supplier network has stronger information sharing norms, retailers share higher degrees of market information with supplier.
- H_{2e-s}: As the supplier network has stronger information sharing norms, suppliers share higher degrees of market information with retailers.
- H_{2e-rs}: As the supplier network has stronger information sharing norms, channel members share market information in a more collaborative style.

Negative and Positive Connectedness. Whereas network characteristics like horizon, supplier and retailer competition and information-sharing norms are concerned with an overall form of interconnectedness among all channel relationships, there is also network centrality. Network centrality refers to the strength of an individual channel firm's position in the network. One measure of network centrality is the degree of connectedness (cf. Antia and Frazier, 2001). Connectedness can be defined as *the degree to which the exchange in one relationship is contingent on the other* (Cook and Emerson, 1978). We distinguish two types of connectedness: negative and positive connectedness.

As for retailer-supplier relationships in negative connected network, making such strategically important decisions to information sharing with a channel member, the firm realizes that teaming-up with one partner may deteriorate other channel relationships. The costs of information sharing in such circumstances are higher due to the increased costs of deleterious network effects. Our hypothesis (H_{2f-r}) therefore is: if the retailer-supplier relationship is negatively connected with other supplier relationships in the network, then the retailer is hampered to share information since the retailer does not want to damage the other supplier relationships. Interestingly, in such a situation, the supplier is expected to do the opposite and is more motivated to share higher degrees with the retailer, because closer ties with the retailer is going to weaken the retailer's ties with its direct competitor. Hypotheses H_{2f-s} is positive because the comparative advantage to be gained becomes bigger. The way in which information is shared is assumed to be unilaterally collaborative (for the supplier); the retailer with negatively connected supplier relationships is going to have less frequent contact, less involvement of higher management, less exclusivity, and less formalized.

- H_{2f-r}: As the retailer-supplier relationship becomes more negatively connected to other supplier relationships, retailers share lower degrees of market information with suppliers.
- H_{2f-s}: As the retailer-supplier relationship becomes more negatively connected to other supplier relationships, suppliers share higher degrees of market information with retailers.

H_{2f-rs}: As the retailer-supplier relationship becomes more negatively connected to other supplier relationships, the retailer (supplier) shares market information in a less (more) collaborative style.

In positively connected retailer-supplier relationships in the network, collaboration in one relationship leads to better performances in others. In such a case, the retailer perceives relatively lower costs in sharing with the supplier due to lower (or perhaps even negative) deleterious network costs. Collaboration with one supplier can make the retailer an interesting and knowledgeable channel partner for another supplier. The retailer is expected to share higher degrees of content with the supplier. We expect the supplier to hold back, for there is no extra competitive incentive for him to share higher degrees of content in positively connected supplier networks (H_{2f-s}). He would then indirectly sponsor his competitor. Similar to the previous hypothesis, the sharing mode is assumed to be unilaterally collaborative; the retailer share in a more collaborative fashion, while the supplier keeps away from sharing more collaboratively.

H_{2f-r}: As the retailer-supplier relationship becomes more positively connected to other supplier relationships, retailers share higher degrees of market information with suppliers.

H_{2f-s}: As the retailer-supplier relationship becomes more positively connected to other supplier relationships, suppliers share lower degrees of market information with retailers.

H_{2e-rs}: As the retailer-supplier relationship becomes more positively connected to other supplier relationships, retailers (suppliers) share market information in a more (less) collaborative style.

3.3.3 *Relationship Characteristics*

The third set of antecedents relevant to explaining when channel members overtly and collaboratively share market information with each other concerns the characteristics of the relationship. To characterize the relationship, we look at the age, the level of trust in the supplier, the relationship-specific investments made by the retailer, contract formalization, and the dependence structure.

Relationship Age. Previous behavioral empirical studies did not show an unequivocal influence of relationship age on information sharing in channel relationships; the age of the relationship may have a positive (Mohr, et al, 1996) as well as a negative effect (Anderson and Weitz, 1992) on the information sharing behavior by channel members. Two other studies do not find any effect (Heide and Miner, 1992; Lusch and Brown, 1996). We expect the age of the relationship to have effect on both the costs and the benefits of information

sharing. First, the age reduces the costs of opportunism, because older relationships have survived different and maybe difficult episodes. Second, relationship age affects the expected benefits of market information sharing. As the relationship matures, channel members are more accustomed to each other, and efficiency and effectiveness gains are easier to attain. The older the relationship, the higher degrees of market information channel members share (H_{3a-r} and H_{3a-s}). Similarly, we expect that as the relationship has come of age, the sharing takes place in a more collaborative fashion.

- H_{3a-r} : As relationship age increases, retailers share higher degrees of market information with suppliers.
- H_{3a-s} : As relationship age increases, suppliers share higher degrees of market information with retailers.
- H_{3a-rs} : As relationship age increases, channel members share market information in a more collaborative style.

Trust in Supplier. Trust in the supplier is the perceived ability and willingness of the supplier to behave in ways that consider the interests of the retailer. Trust is a vital element in a business relationship (Morgan and Hunt, 1994; Geyskens, et al., 1998) works as a facilitator of effective cooperative behavior in business relationships (e.g., Dywer, et al., 1987). Insufficient trust deters retailers from sharing critical information with their suppliers (Kinsey and Ashman, 2000). Relationships characterized by trust expose more communication (Anderson and Weitz, 1992), higher investments into the relationship (Campbell, 1995), and more relationship learning (Selnes and Sallis, 2003), encourage the transfer of proprietary information (Helper and Levine, 1992; Mohr and Sengupta, 2002). Not only the empirical evidence but also the abundance of citations in the trade press stating the critical importance of trust in ECR-projects (e.g., ECR CPFR Guide to Implementation, 2001) make use hypothesize that trust in the supplier has a positive effect on information sharing in channel relationships. For the most part, the perceived costs of information sharing are relatively lower in trusted relationships. There is a lower chance on opportunistic behavior, because trusted channel members are expected to abstain from misuse and leakage of the received market information (H_{3b-r} and H_{3b-s}). The sharing mode will also be characterized by a higher contact frequency, involvement of higher management, and exclusivity. Except for formalization, trust can serve as a safeguard against opportunistic behavior and lessens the need for formalization of the information sharing arrangement.

- H_{3b-r} : As trust in the supplier increases, retailers share higher degrees of market information with suppliers.

- H_{3b-s}: As trust in the supplier increases, the higher degrees of market information are shared by the supplier.
- H_{3b-rs}: As trust in the supplier increases, channel members share their market information in a collaborative style (with an exception for formalization).

Relationship-Specific Investments in the supplier relationship. The third relationship characteristic assuming to affect the market information sharing in channel relationships is the amount of investments made by the retailer to specifically cater the supplier relationship.

As for the retailer, the costs of information sharing are relatively after having made specific investments in the supplier relationship. The reason is that they have already become more dependent on the supplier, hence they face lesser costs of getting *locked-in*. Moreover, retailers may fear losing the specific investment into supplier relationship and by continuing the sharing of information with the supplier, losing this investment can be prevented (H_{3c-r} is positive).

As for the supplier, information sharing from their part is expected deliver relatively less when the retailer made already substantial relationship-specific investments; information sharing is less needed to gain more efficiency and effectiveness, because the retailer's investments can be considered a hostage to the supplier. Having such a hostage does not really stimulate the supplier to put extra effort in the relationship with the retailer and therefore we expect suppliers not to share more market information (H_{3c-s} is negative).

We thus theorize the relationship-specific investments in the supplier relationship having both a positive and a negative effect on the sharing of market information in the channel relationship (H_{3c-r} and H_{3c-s}), for the retailer and the supplier, respectively. The sharing mode is expected to be unilaterally collaborative; meaning that one party is sharing with a higher contact frequency, more involvement of higher management, more exclusivity, and more formalization, while the other shares information in a more distant style.

- H_{3c-r}: As the retailer's specific investment into the supplier relationship increases, retailers share higher degrees of market information with suppliers.
- H_{3c-s}: As the retailer's specific investment into the supplier relationship increases, suppliers share lower degrees of market information with retailers.
- H_{3c-rs}: As retailer's specific investment into the supplier relationship increases, retailers (suppliers) share their market information in more (less) collaborative style.

Contract Formalization. Contract formalization refers to the degree in which the channel relationship is governed by explicit contracts. There is mixed empirical evidence about the association between contract formalization and the closeness or strength of the relationship. One study claims that the effect of formalization on the closeness is negligent (Lusch and

Brown, 1996), while another study shows that information exchange is embedded in legal bonds (Cannon and Perreault jr, 1999). We think that contract formalization lower the costs of sharing information in the channel relationship. It serves as a safeguard against the costs of opportunistic behavior by either channel party and it thereby stimulates market information sharing. The hypotheses for both retailer's and supplier's shared content are that a well-formalized contract encourages channel members to share more market information (H_{3d-r} and H_{3d-s} are positive). In a similar vein, we think that contract formalization provides a layer for information sharing in a more collaborative way.

- H_{3d-r} : As contractual formalization of the relationship increases, retailers share higher degrees of market information with suppliers.
- H_{3d-s} : As contractual formalization of the relationship increases, suppliers share higher degrees of market information with retailers.
- H_{3d-rs} : As contractual formalization of the relationship increases, the channel members share their market information in a more collaborative style.

Total Interdependence. Another important relationship characteristic in channels is the degree to which the members are dependent on each other. A channel firm's dependence on the other is traditionally defined as the firm's need to maintain the relationship with the other to achieve its goals (Frazier, 1983). A good indication for the channel party's dependence on the other is whether or not the other can be easily replaced by another without harming sales and profits (cf. Heide and John, 1988; Kumar, et al., 1995). The interdependence structure of a channel relationship is made up from two dimensions: the magnitude (total) and the asymmetry in the dependencies of the two parties on each other (Gundlach and Cadotte, 1994; Kumar et al., 1995). Recent research has found that higher total interdependence between channel parties enhances the prospering of their relationship (Kumar, et 1995, Van Bruggen et al., 2005). In relationships with a greater total interdependence, parties have a larger amount of common interest to improve the functioning of the channel, and are both more motivated to prevent conflicts or other dysfunctional affairs keep them from actual performing.

As for information sharing in a higher total interdependent channel, the relative costs and benefits for both channel members are respectively lower and higher than less interdependent relationships. Costs are lower because both retailer and supplier avoid the chance of instigating a conflict with each other and will not misuse and leak the received market information. Also the fear of losing a precious negotiation position is less. Furthermore, the benefits are expected to be higher. In higher interdependent relationship, both channel members are to reap more fruits from information sharing, because due to their interdependency they are much more motivated to work for more efficiency and

effectiveness in the channel relationship. Even a soft influence strategy as information sharing is found to be more effective in relationships with higher dependency (Keith, et al. 1999).

- H_{3e-r}· As total interdependence in the relationship increases, retailers share higher degrees of market information with suppliers.
- H_{3e-s}· As total interdependence in the relationship increases, suppliers share higher degrees of market information with retailers.
- H_{3e-rs}· As total interdependence in the relationship increases, the channel members share their market information in a more collaborative style.

Dependence Asymmetry. The second dimension of the interdependence structure in the channel relationship concerns the dependence asymmetry. The difference between the channel member's dependence on its partner and the partner's dependence on the channel member is also referred to as the channel member's relative dependence (Anderson and Narus, 1990). Whereas total interdependence enhances the channel performance, the asymmetry in dependence is however suspected to create a more instable situation for its functioning. In theory, when channel relationships become more asymmetric, the relatively less dependent (more dominant) firm has increasingly less motivation to avoid conflict, because retaliation becomes less likely and less damaging. But because the relatively more dependent (dominated) firm expects to be exploited regardless of its behavior, is it more likely to engage in a "pre-emptive strike" or rebellion against the more powerful firm. With this mechanism in mind, we anticipate that in asymmetric channel relationships, both channel members would regard the relative information sharing benefits to be lower. Expectations surrounding rebellious behavior by the other channel member are likely to end up in information sharing opportunism: not working with the received information. The dominated channel firm may dedicate resources to developing other alternative channel relationships in order to lessen its relative dependence on the focal relationship. The dominating channel firm also prefers to puts its effort to (more) important channel relationships. The sharing mode in dependence asymmetric relationships will reflect these low degrees of shared content and is expected to be less collaborative than more symmetric dependent relationships.

- H_{3f(g)-r}· As the relative retailer (supplier) dependence in the channel relationship increases, retailers share lower degrees of market information with suppliers.
- H_{3f(g)-s}· As the relative retailer (supplier) dependence in the channel relationship increases, suppliers share lower degrees of market information with retailers.

H_{3f(g)-rs}: As the relative retailer (supplier) dependence in the channel relationship increases, channel members share their market information in a less collaborative style.

3.3.4 *Supplier Characteristics*

The fourth set of antecedents refers to the characteristics of the supplier. Unlike the assumption of the supply chain optimization studies and game-theoretic models presented in Chapter 2, supplier firms are not identical economic rational actors. There is a lot of heterogeneity in the characteristics of suppliers. The Resource-Based View (RBV) of the firm (Barney, 1992) posits that individual firm should strive to improve their performance through amassing and utilizing strategic assets and capabilities. Strategic resources are those that are valuable, rare, and difficult-to-imitate. An intangible asset like market information is also regarded as a source for competitive advantage and it is reasonable to expect that it affects the market information sharing process in the pursuit for more competitive, efficient and effective channel relationships (Zahay and Handfield, 2004). The qualities of a supplier affecting the expected benefits and costs from information sharing can be grouped in two classes: (1) the supplier's capabilities and (2) supplier's willingness. The two capabilities taken into account here are market-sensing and market-relating. The three willingness indicators are goal congruency, top management support, and incentive structure.

The supplier's capability in market information sharing is reflected an excellent reputation of good informational skills and expertise. Often such capable suppliers have a greater absorptive capacity (Cohen & Levinthal, 1990) and are able to "recognize the value of new, external information, assimilate it and apply it to commercial ends" (e.g., Malzer and Kohli, 1996). Knowing that absorptive capacity is its ability to understand new external knowledge, assimilate it, and apply it to commercial ends (Cohen and Levinthal, 1990: 128), we follow Day (2000,2002) and make a distinction between market sensing and market-relating capabilities.

Supplier's Market-Sensing Capabilities. Market sensing means being good at open-minded inquiry rather than looking for information to confirm pre-existing beliefs about the market. The supplier's market-sensing capabilities affect the retailer's expectation about the benefits and costs from information sharing. The retailer's costs of information sharing with the skilled market-sensing suppliers are perceived to be relatively higher. Market information from the retailer may be compared with other sources and this may hurt the retailer's negotiation position. Furthermore, the retailer's expected benefits from sharing are also be relatively low. Well market-sensing suppliers can (better) collect market information themselves; retailers are in a lesser good position to make a valuable contribution and basically listen to what these suppliers have to tell them about the market developments: lower chance of increase in influence capability. As a result of higher expected costs and lower benefits, we hypothesize that the relationship is negative.

The benefits from sharing information for market-sensing suppliers are relatively higher. Disclosing market information by them may have a substantial positive impact on the quality of the working relationship. Because the *possession* of a non-coercive power base assume some sort of responsibility for cultivating it. Not using it and withholding it may even harm the relationship with the retailer (cf. Gaski and Nevin, 1985).

Since channel members have conflicting costs and benefits from information sharing when suppliers are good at market-sensing, the sharing mode is unilaterally collaborative in style; the supplier demonstrates its good intentions to share higher degrees by having more frequent contact and with higher management involvement, more exclusivity, and more formalization. The retailer exposes a less collaborative sharing mode.

- H_{4a-r}: As the quality of the supplier's market-sensing capabilities increases, retailers share lower degrees of market information with suppliers.
- H_{4a-s}: As the quality of the supplier's market-sensing capabilities increases, suppliers share higher degrees of market information with retailers.
- H_{4a-rs}: As the quality of the supplier's market-sensing capabilities increases, the sharing mode is characterized as unilaterally more collaborative from the supplier's side (higher contact frequency, contact with higher management, formalization, exclusivity), less collaborative from the retailer-side.

Supplier's Market-Relating Capabilities. The other type of a supplier's capabilities that is important to sharing market information in channels, is knowing-how-to successfully translate the (received and collected) market information into effective marketing efforts. These market-relating capabilities surface in being skilled and knowledgeable in building loyal consumer relationships based on a good understanding of their needs.

If a supplier knows well how to apply the retailer's market information to repair the malfunctionalities in the channel relationship, the retailer is going to benefit more from information sharing with. We think that a retailer will adapt the sharing of its information to the supplier's market-relating capabilities. If a retailers shares higher and higher degrees of market information with a mediocre market-relating supplier, than beyond a certain point, we expect that an information-(sharing)-overload is reached for this supplier and the information sharing becomes counterproductive (cf. Meier 1963; O'Reilly 1978). Information overload occurs when new (market) information is transmitted to the supplier at a rate that exceeds the supplier's capacity to process it (Huber 1982; Stohl and Redding 1987). As a result, the retailer will adjust its shared information to the degree that can be processed by the supplier. The expected benefits of efficiency and effectiveness from market information sharing are greater when a supplier has better good market-relating competences, because the supplier is able to make good use of the received retailer's

information. The hypothesis could also be positive if we would frame it theoretically as an agency problem; the retailer prefers to share information with a supplier that can represent the retailer's interests at best and can make good use of its information (a minimization of the adverse-selection problem).

The supplier's expected benefits from building up a better working relationship by giving the latest market information to a retailer go up when the supplier has good market-relating capabilities. Having good market-relating capabilities coincides with the view that a good channel-bonding strategy (Day, 1994) is instrumental for the supplier's own market position; in particular due to the increased influence capacity it aims to achieve.

- H_{4b-r}: As the quality of the supplier's market-relating capabilities increases, retailers share higher degrees of market information with suppliers.
- H_{4b-s}: As the quality of the supplier's market-relating capabilities increases, suppliers share higher degrees of market information with retailers.
- H_{4b-rs}: As the quality of the supplier's market-relating capabilities increases, channel members share their market information in a more collaborative style (higher contact frequency, contact with higher management, formalization, exclusivity).

Supplier's Goal Congruency. Not only on the supplier's capabilities in sharing market information, but also the willingness to engage in an information sharing arrangement with a retailer influences the expected benefits and costs for of the channel members. One of the indicators for the supplier's willingness is its goal compatibility with the retailer. These compatibilities in terms of reputations and ambitions (goals) play an important role (Smith and Barclay, 1997).

The retailer's costs to disclose information to the supplier are relatively lower, when the supplier pursues goals that are not conflicting with the retailer's; suchlike suppliers are expected to work on behalf of the retailer and would not opportunistically misuse or leak retailer's information.

The supplier's expected benefits are relatively higher when it has high goal congruency with the retailers, because the supplier is more willing to strive for more efficiency and effectiveness in the channel relationship. The costs are also expected to be lower; the supplier does not suspect the retailer to harm the supplier's interests.

- H_{4c-r}: As supplier's goals are more congruent with the retailer, retailers share higher degrees of market information with suppliers.
- H_{4c-s}: As supplier's goals are more congruent with the retailer, suppliers share higher degrees of market information with retailers.

H_{4c-rs}: As supplier's goals are more congruent with the retailer, the channel members share their market information in a more collaborative style (higher contact frequency, contact with higher management, formalization, exclusivity).

Supplier's Top Management Support. In order to become a success, collaborations between channel firms need to be supported by top management. Managerial commitment is "a critical component" (Myer et al., 2000). The internal backup from the top or "upper organization echelons champion the initiative" (Mouzas and Araujo, 2000) and the vision from the top are important partnering antecedents (Mentzer, 1999; Day, 1995). Similar to the supplier's goal congruency, top management support signals to supplier's commitment to ally with the retailer.

The retailer's expected benefits from information sharing with a supplier having top management support is relatively higher than with a supplier without top management support. The yield in higher efficiency and effectiveness gains is much more of a strategic priority. Additionally the retailer's expected costs are lower, because the top management also serves as a guarantee against opportunistic behavior.

With the endorsement from their top management, the supplier will be surer of revealing higher degrees of market information to the retailer. The signal given by top management support also makes expected benefits from information sharing with the retailer to rise.

H_{4d-r}: As support of supplier's top management increases, retailers share higher degrees of market information with suppliers.

H_{4d-s}: As support of supplier's top management increases, suppliers share higher degrees of market information with retailers.

H_{4d-rs}: As support of supplier's top management increases, the channel members share market information in a more collaborative style (higher contact frequency, contact with higher management, formalization, exclusivity).

Supplier's Incentive Structure. In addition to top management support, the supplier organization can have an incentive structure as an instrument to stimulate information sharing (Corsten and Kumar, 2005) and to promote the working as a team in the whole channel (Watson and Zeng, 2005). The lack of such an incentive scheme may inflame the internal conflict between brand management and sales management within the supplier's organization and that does – in the end – not serve the successful implementation of information sharing programs (Gruen and Shah, 2000).

The incentive structure rewarding cooperation with the retailer is thus expected to result in higher degrees of information sharing with the retailer, because it offers a good signal for

the supplier's willingness to utilize the shared information well. We further hypothesize that the incentive structure of the supplier also promotes the sharing of information of the supplier itself, materializing the signal for cooperation.

- H_{4e-r}: As the supplier's incentive structure more and more supports collaboration with retailers, retailers share higher degrees of market information with suppliers.
- H_{4e-s}: As the supplier's incentive structure more and more supports collaboration with retailers, supplier share higher degrees of market information with retailers.
- H_{4e-rs}: As the supplier's incentive structure more and more supports collaboration with retailers, the channel members share their market information in a more collaborative style (higher contact frequency, contact with higher management, formalization, exclusivity).

3.3.5 *Retailer Characteristics*

Similar to the set of supplier characteristics, we also consider the characteristics of the counterpart to have an important influence on the information sharing practices. The qualities that retailer brings to the table of the channel relationship concern the final set of variables consisting: its market-sensing capabilities, market-relating capabilities, predisposition to ally with suppliers, top management support, and incentive structure.

Retailer's Market-Sensing Capabilities. Similar to the hypotheses about the supplier's market-sensing capabilities, we would argue that the retailer's capabilities to collect market information are expected to stimulate the sharing by retailers (H_{5a-r}), while it is to bring a halt to the sharing of suppliers (H_{5a-s}), because the supplier's information sharing benefits-costs ratios is relatively unfavorable due to higher chances for misuse and lower relative added value of shared information. Subsequently, the sharing mode is only unilaterally collaborative: the retailer shares in a collaborative fashion, while the supplier exercises restraint in the way his information is being shared.

- H_{5a-r}: As the quality of the retailer's market-sensing capabilities increases, retailers share higher degrees of market information with suppliers.
- H_{5a-s}: As the quality of the retailer's market-sensing capabilities increases, suppliers share lower degrees of market information with retailers.
- H_{5a-rs}: As the quality of the retailer's market-sensing capabilities increases, the sharing mode is characterized as unilaterally more collaborative from the retailer's side (higher contact frequency, contact with higher management, formalization, exclusivity), less collaborative from the supplier-side.

Retailer's Market-Relating Capabilities. Similar to hypotheses made about the supplier's market-relating capabilities, we expect the retailer capabilities to make good use of market information (market-relating) to affect the sharing from both sides positively (H_{5b-r} and H_{5b-s}), similar to the supplier's market-relating competences. Retailers with good market-relating capabilities is more likely to use information sharing as an instrument to build up links with channel members; the benefits from information sharing as a relationship-building tool is perceived to be greater by market-relating retailers. Suppliers are also likely to share more degrees of market information with a market-relating retailer, because it knows that the retailer is able to deal effectively with the received market information.

- H_{5b-r} : As the quality of the retailer's market-relating capabilities increases, retailers share higher degrees of market information with suppliers.
- H_{5b-s} : As the quality of the retailer's market-relating capabilities increases, suppliers share higher degrees of market information with retailers.
- H_{5b-rs} : As the quality of the retailer's market-relating capabilities increases, the channel members share their market information in a more collaborative style (higher contact frequency, contact with higher management, formalization, exclusivity).

Retailer's Disposition to Ally with Suppliers. The retailer's disposition to ally with suppliers is another and related characteristic. Earlier studies have called this retailer trait *relational proclivity* (Johnson and Sohi, 2001), partner orientation (Mentzer, et.al., 2000) or belief in manufacturer collaboration (Joshi and Campbell, 2003). This disposition relates to the strength of the general tendency held by a firm to seek out, engage in, and make close partner-style supplier collaborations as opposed to conducting interfirm buying-selling interaction at arm's length (cf. Johnson and Sohi, 2001). This retailer trait is independent of any specific supplier or any prior information specific to any potential partner (or other circumstance). A strong proclivity, for example, stems from general beliefs that information-sharing partnering will enhance outcomes, or general preferences for joint projects, and thus the expected benefits from information sharing such as effectiveness and efficiency gain will be higher. Furthermore, the expected costs of vulnerability to opportunistic behavior, loss of expert power, etc. are toned down by a retailer with such a disposition.

- H_{5c-r} : As the retailer's disposition to ally with suppliers increases, retailers share higher degrees of market information with suppliers.
- H_{5c-s} : As the retailer's disposition to ally with suppliers increases, suppliers share lower degrees of market information with retailers.

H_{5c-rs}: As the retailer's disposition to ally with suppliers increases, the channel members share their market information in a more collaborative style (higher contact frequency, contact with higher management, formalization, exclusivity).

Retailer's Top Management Support. Another indicator for the retailer's willingness to share information is also the support given by top management to collaborate with the supplier. Both channel members will share higher degrees of content, as the retailer exhibits more dedication to collaboration with the supplier, and the supplier perceives this signal of retailer commitment. These exchanges of commitment signals increase both benefits to share more information and lowers costs of opportunistic behavior.

H_{5d-r}: As support of retailer's top management increases retailers share higher degrees of market information with suppliers.

H_{5d-s}: As support of supplier's top management increases, suppliers share higher degrees of market information with retailers.

H_{5d-rs}: As support of supplier's top management increases, the channel members share their market information in a more collaborative style (higher contact frequency, contact with higher management, formalization, exclusivity).

Retailer's Incentive Structure. Retailer's incentive structure lenient to cooperate with the supplier stimulates the shared content by the retailer through the facilities given to make the channel relationship becoming to be more effective and efficient; the expected benefits are greater. The supportive incentive structure at the retailer's also signals to the supplier commitment to collaborate in the channel relationship and subsequently inviting the supplier shares higher degrees of information; due to anticipation of higher channel effectiveness and efficiency and lower expectations concerning costs of opportunism.

H_{5e-r}: As the retailer's incentive structure more and more supports collaboration with suppliers, retailers share higher degrees of market information with suppliers.

H_{5e-s}: As the retailer's incentive structure more and more supports collaboration with suppliers, suppliers share higher degrees of market information with retailers.

H_{5e-rs}: As the retailer's incentive structure more and more supports collaboration with suppliers, the channel members share their market information in a more collaborative style (higher contact frequency, contact with higher management, formalization, exclusivity).

3.4 *Hypotheses on the Consequences of Information Sharing in Channel Relationships*

The right-hand part of our research framework presented in Figure 3.1 deals with the consequences of market information sharing in channel relationships. The investigation of the impact of information sharing on the consequences is performed in two ways. By reporting survey results (in Chapter 7) we look at the effects on joint market learning, channel relationship performance and quality, from the retailer's perspective, whereas in the experiment (as reported in Chapter 8) we take a more detailed look at the effects of the retailer's market information sharing on the channel relationship quality from a supplier's stand-point. The hypotheses for the experiment will be developed in Chapter 8. Here, in the next part of this chapter we entirely concentrate on the hypotheses for the survey study.

The question how to judge the performance of a channel relationship is difficult to answer. As demonstrated in the Chapter 2, different criteria can be employed. The functioning of a marketing channel relationship can be evaluated on its efficiency and how good it is at reducing supply chain costs (supply chain optimization approach). Another performance measure more related to the effectiveness of the channel relationship is the total amount of channel profits extracted from the consumer marketplace (the game-theoretical approach). The third type of criteria concerns the relationship quality: are channel members satisfied about the way business is conducted and its results? Are they planning continue the channel relationship and committed to invest in it? (empirical behavioral approach).

Given the ultimate aim of information sharing to *transform the supply chain into a demand chain*, we want to find out whether information sharing successfully impacts this transformation. Following Mohr and Spekman (1994) and Tuten and Urban (2001), we took subjective as well as more objective indicators for the "demand chain" success. As a set of subjective measures, we look at channel relationship quality, in particular at economic and social satisfaction, and commitment. For more objective measures of success in terms of channel relationship performance we look at joint profits and strategic revenues. Critical in this transformation to a demand chain is that channel members are learning better and faster from consumer market developments. Therefore we included an important third set of consequences – joint market learning – much more measuring the process than the output.

3.4.1 *Joint Market Learning*

The sharing of market information is also expected to stimulate the market learning process within the channel relationship. The market learning process can be viewed as a cyclical one in which channel members' actions lead to channel interactions with the environment, the environment responds, and environmental responses are interpreted by the channel members who learn by updating their beliefs about cause-effect (i.e., action-response) relationships (cf. Lee, et al. 1992; Sinkula, 1994). We compare joint market learning to the process of individual organization's market learning, as described by Day (1994: p.43) and Sinkula, et

al. (1997), but we transpose the notion of learning by an organization to the notion of learning by two channel members. Similar to the learning process between departmental units within a company (purchasing unit and other units; cf. Hult and Ferrell, 1997), the joint market learning is here extended to an inter-organizational setting (Lukas et al., 1996). The idea is not completely new, but Selnes and Sallis (2003) combine information sharing and collaborative market learning into one larger construct called *relationship learning*. We think it is important to separate the “learning process” from the “individual investments” of both channel firms in the form of shared content. It goes without saying that information sharing helps both the channel members to acquire the latest market insights and comprises therefore a process by which knowledge is obtained. However, the acquisition of knowledge and information distribution are not the only sub-processes for learning. Others are information interpretation and storing the knowledge into memory (Huber, 1991); so the exchange of market information itself does not automatically mean that both channel members learn together (with the ultimate objective to improve the functioning of the channel relationship), but it is definitely a necessary condition for learning within the channel relationship (i.e., the construction of *a more complete market picture*, see Chapter 1’s jigsaw picture), for then both channel members are able confront their “theories in use” about the marketplace with each other (Lukas, Hult, and Ferrell, 1996). This confrontation of the “theories-in-use” makes it possible to detect and to find solutions for two potential forecasting errors in channel relationships (do we minimize our supply chain costs in the chain? And do we maximize our delivery of consumers’ value?).

With respect to learning, much research has been done on a firm’s absorptive capacity (Cohen and Levinthal, 1990); viz. the firm’s ability to recognize and value new knowledge, ability to assimilate new knowledge, and ability to commercialize new knowledge. Lane and Lubatkin (1998) find that all three dimensions of a firm’s absorptive capacity promote the inter-firm learning. While absorptive capacity is about a firm’s qualities in *receiving* market information, we argue that the *sharing* market information provides the opportunity to absorb and thereby enhances the joint learning about the consumer marketplace.

H_{6a}: As channel members share higher degrees of their market information with each other, they jointly learn better about their consumer marketplace.

The learning orientation within a firm largely depends on top management commitment, team orientation, and systems. Firms learn better when top management emphasizes the importance to learning, people in the organization cooperate as if they were in a team, and systems should be in place to stress the interconnectedness and mutual interdependence between the actors (Sinkula, et al., 1997; Calantone et al., 2002). Transposing these intra-organizational findings to an inter-organizational setting, it means that the way in which

information is shared is also of importance. We think of it as it could make an additional contribution to the quality of the joint learning process, because the way in which the channel parties co-research and co-discover is very dependent on the task-divisions, coordination and how they deal with each other. Parallel to key ingredients to learning within firms, the sharing mode aspects respectively resemble these three aspects: top management involvement is accentuated by the contact frequency of higher management; importance of team-work is featured by the level of contact frequencies and the degree of exclusivity; and finally, systems installation is portrayed by the degree of formalization of sharing market information. Hence, we expect that the collaborative style in the sharing mode promotes the joint market learning.

H_{6b}: As channel members share their market information in a collaborative style, they jointly learn better about their consumer marketplace.

3.4.2 *Channel Relationship Quality*

As for the second and more subjective measure of channel success, we investigate the impact of information sharing is the relationship quality. Relationship quality has been conceptualized construct consisting of different dimensions (Kumar, et al., 1995; Van Bruggen et al., 2005). Here we look at the economic and social satisfaction, and commitment as perceived by the retailer. *Economic and Social Satisfaction*. We define satisfaction as the retailer's evaluation of the characteristics of the channel relationship (Frazier 1983; Ruekert and Churchill 1984) and we make a distinction between economic and social satisfaction (Geyskens and Steenkamp, 2001). *Economic satisfaction* is defined as a channel member's evaluation of economic outcomes that flow from the relationship with its partner such as sales volume, margins, and discounts (Geyskens and Steenkamp, 2000). It has to do with the consideration of a channel member that the relationship is a success with respect to goal attainment in terms of effectiveness and efficiency. *Social satisfaction* is defined as channel member's evaluations of psychosocial aspects of the relationship, in that, interactions with the exchange are fulfilling, gratifying, and facile. It concerns the satisfaction with the social outcomes of the relationship: appreciation of the contacts with its partner, liking to work with partner, because it believes the partner is concerned and, respectful and willing to exchange ideas. (Geyskens, Steenkamp and Kumar, 1999; Geyskens and Steenkamp, 2000).

Commitment refers to the desire to maintain membership in the dyadic relationship (Morgan and Hunt 1994; Kumar, et al, 1995). In marketing channels, commitment has been encompassed by several dimensions, often incorporating effective commitment, expectation of continuity, and willingness to invest in the relationship (Anderson and Weitz, 1992; Mohr and Nevin, 1990). Affective commitment is the desire to continue the channel relationship

because of positive affect toward the partner. Expectation of continuity incorporates one of the partner's perceptions of both its own and the other channel party's intention to remain in the relationship. The willingness to invest reflects a desire to do more than just what is happening now – it is an intention to become deeply involved in the relationship through investments of capital and effort.

The impact of market information sharing on the quality of the channel relationship works via a number of mechanisms which all work in the same direction. First, information sharing can be perceived as a non-coercive use of power (Boyle et al., 1992) and in that capacity it is received with greater satisfaction (Hunt and Nevin, 1974; Gaski and Nevin, 1985; Scheer and Stern, 1992; Brown, et al., 1995). Second, higher degrees and a collaborative way of sharing information can be regarded as improved channel communication and subsequently leads to more satisfaction with the information sharer (Anderson and Narus, 1990; Walter et al., 2003) and higher commitments from both sides (e.g., Eggert and Helm, 2003). Third, information sharing can be considered an endorsement act of existing relational norms (Heide and John, 1992); withholding information can undermine long-held presumptions by the other channel member and consequently harm the relationship quality. Information sharing can at least assist in maintaining the relationship quality. Fourth, information sharing also implies an effort of investment into the relationship in order to create a stronger bonding between the channel parties. The ties between channel firms are not only strengthened thanks to the reduction in likelihood of opportunistic behavior but also due to a subsequent greater belief in long-term commitment intentions and commitment to implement cooperative plans together (Achrol and Gundlach, 1999; Gruen and Shah, 2000).

H_{7a}: As channel members share higher degrees of their market information, channel relationship quality increases.

H_{7b}: As channel members share their market information in a more collaborative style, the channel relationship quality increases.

Social satisfaction about the relationship with a channel member is especially sensitive to how business dealings take place (cf. Geyskens and Steenkamp, 2000). In particular, when the rewards are given on a contingent basis (Scheer and Stern, 1992), it may negatively affect the recipient's sense of self-determination or autonomy causing the unpleasant experience of being controlled by others (Eisenberger and Cameron, 1996; Deci, et al., 1999). In this respect, we expect the way information is given by a supplier to have influence on the retailer's social satisfaction. If information is passed on a contingency basis, then it could harm the social satisfaction. We think that affective commitment is also influenced by contingency and arbitrariness in the dealings of the other party. Sharing mode aspects reflecting a minimum of contingency and arbitrariness from the supplier are in

particular: (1) supplier's higher management contact with supplier, (2) exclusivity given by supplier, and (3) the formalization in sharing market information. These three sharing modes put emphasis on the supplier's unconditional commitment to sharing its market information with the retailer. So, when information sharing is structurally embedded in the channel relationship has a positive impact on social satisfaction of the retailer.

H_{7c}: The impacts of three sharing mode characteristics (i.e., supplier's higher management contact, exclusivity and formalization) on social satisfaction and affective commitment are greater than the impacts of sharing mode on the other relationship quality dimensions, like economic satisfaction, willingness to invest, and continuity expectations.

3.4.3 Channel Relationship Performance

The motivation for transforming the channel relationship from a supply chain into a demand chain is that both channel members can "*expand the pie*" of revenues. When the popular business press and trade journal publications report on the impact of information sharing, they often use the term *pie-expansion* to refer to the collaborative process of creating mutually beneficial strategic outcomes between channel members. Market information sharing arrangements are designed to expand the size of the joint benefits "pie" and give each channel party a share of an incrementally greater pie that could not be generated by either channel party in isolation. Two more objective success measures reflecting pie expansion are Joint Profit and Strategic Revenues. *Joint Profits* refers to the direct profits that result from the dyadic collaboration effort, as opposed to those profits earned by the efforts of one firm alone. It is not merely a summation of the two firms' individual profits but instead refers to the financial outcomes that result from the interdependence of effort and investment that reside with the dyad (Jap, 2000; Jap and Anderson, 2003).

Strategic Revenues. In addition to the short-term monetary result in terms of joint-profits, in many channel relationships another motivation to engage in market information sharing is to achieve competitive advantages (e.g., superior access to resources, a more cost-efficient supply chain, development of unique channel collaboration technologies). The gain of competitive advantages over other channel relationships is called strategic revenues. We define strategic revenues as "strategic benefits gained over competing dyads that enable the dyad to compete more effectively in the marketplace" (cf. Jap, 1999, 2000).

The effect of the degrees in shared content on the channel relationship performance can be explained by the "decision-making framework" (cf. Villas-Boas, 1994), which claims that "more information is better because actions are better adjusted to the current state of the world". When channel members disclose their market information to each other, they manage to adjust their actions to the two forecasting errors. Hence, we expect that an

increase in shared content, irrespectively by which channel party it is given, helps to lift the channel relationship performance.

- H_{8a}: As channel members share higher degrees of their market information with each other, the channel relationship performance (in terms of joint profit and strategic revenues) increases.
- H_{8b}: As channel members share their market information in a more collaborative style, the channel relationship performance (in terms of joint profit and strategic revenues) increases.

Two different separate dimensions of the information sharing arrangements – shared content and sharing mode – can have a differential impact on the performance of the channel relationship. Disclosing higher degrees of confidential information content can be viewed as making a motivational investment into the channel relationship (see Chapter 2, Corsten and Kumar, 2005; Bensaou and Venkatraman, 1995). While the shared content is much more a reflection of a relational investment made by the members, the sharing mode aspects are much more connected with the other conceptualizations of information sharing, such as the use of power and communicative behavior. As indications for the collaborative nature of the sharing mode aspect, contact frequency, contact frequency with higher management, exclusivity, and formalization, they resemble more the mechanism of open communication behavior (eg., Anderson and Narus, 1990; Mohr et al., 1996; see Table 2.5) and the use of information power (eg., Gaski and Nevin, 1985; Scheer and Stern, 1992). Consequently, we expect that shared content has a stronger impact on the hard performance measures than the sharing mode aspects: joint profits, strategic revenues, economic satisfaction and willingness to invest.

- H_{8c}: The impact of shared content on channel relationship performance (joint profits, strategic revenues) is greater than the impact of sharing mode.

3.5 Conclusions

In this Chapter we have developed a framework for our research on the nature, antecedents, and consequences of market information sharing in channel relationships. Instrumental to the framework has been the insights gained from the review of the three main research perspectives taken by Supply Chain Optimization, Game Theoretic Models, and Empirical Behavioral studies. The overall framework consists of three parts. Each of these parts has the objective to address one of the respective three research questions. The first part is dedicated to answering the question about the *nature* of market information sharing. The second part is

directed to examining the antecedents of market information sharing, while the final and third part is concerned with the consequences of market information sharing.

We have begun the construction of our research framework by distinguishing two dimensions in the market information sharing arrangement: shared content and sharing mode. As for the shared content, we have borrowed the idea from Social Penetration Theory that the disclosure of information about a channel member's (own) market position is made up from different hierarchical degrees. With regard to the sharing mode, we include seven aspects reflecting the collaborative style of how market information can be exchanged in channel relationships.

The next step we have taken in the development in the framework construction is the explanation of the benefits and costs of sharing market information sharing. In contemplating whether or not to share market information with one of its channel member, a firm anticipates gaining certain benefits from it; the benefits are the gains in demand-enhancing effectiveness, cost-saving effectiveness, relationship quality improvement, and the increase in influence capacity. On the other hand, if a firm shares information, it runs the risk of incurring certain information sharing costs: relationship specific investments and the fear to be locked-in, loss of expert power, increased vulnerability to opportunistic behavior, and deleterious network effects.

Part II of the research framework deals with the antecedents of market information sharing. In developing the hypotheses we borrowed the wide range of factors of relevant variables from the research review in Chapter 2 and included five sets of antecedents: market channel environment, supplier network, relationship characteristics, supplier characteristics, and retailer characteristics.

Finally, part III is concerned with the consequences of market information sharing. The ultimate aim to share market information is to transform the "supply chain into a demand chain". We include three main sets of consequences to indicate the success in this transformation: (1) joint market learning, (2) channel relationship quality, and (3) channel relationship performance. First, we expect that sharing of market information assists the channel members to learn better from the consumer marketplace. Second, we think that the quality of the channel relationship improves; the channel members will be more satisfied with the relationship and be more committed to it. Third, we anticipate that the channel performance improves. Information sharing channel members are going to gain more joint profits and create strategic revenues.

The next chapter is going to deal with the data collection of the survey study.

CHAPTER FOUR DATA COLLECTION: SURVEY

4.1 Introduction

Our framework for examining the nature, antecedents and consequences of market information sharing in channel relationships has been introduced in the previous chapter. The framework describes the relationships between the antecedents and consequences of market information sharing channel arrangements. In order to test the relationships in the comprehensive model of information sharing in channel relationships, we have conducted two types of data collections. One is through an experiment; and that will be explicated in Chapter 8. The other concerns a large scale mail survey among Dutch retail buyers. This chapter describes the approach we followed in conducting the survey of this dissertation. First, it reports the way our data was collected. Second, it clarifies the setup of the questionnaire.

4.2 Sampling Frame and Data Collection

Sampling Frame. The sampling frame for the study was a mailing-list of Dutch retail organizations obtained from a semi-governmental body serving the Dutch retail industry: Hoofd Bedrijfschap Detailhandel (HBD). With the assistance of the HBD, trade associations catering the specific retail industries (i.e., MITEK and UNETO-VNI) were contacted to extend and update our list of retail-organizations in order to make our mailing-list complete. We choose six retail industries that sell tangible goods to end-consumers: Consumer Electronics, Do-it-yourself (DIY), Entertainment (toys, books, pet supply, bikes, sport equipment), Fashion (apparel, footwear, jewelry), Food (supermarkets), and Personal Care (drugstores, opticians). The final list included three types of medium-sized to large retail organizations with more than four outlets: store chains, franchise organizations, and buying groups. All of these retail organizations have in common that they centralize the buying function into one decision-making unit. Since the unit-of-analysis in our study is the channel relationship (retailer-supplier), an appropriate informant to report on the sharing of market information between retail organization and supplier is the retail buyer. Note that our selection of the retail organizations population excluded small independent stores, pop-and-mom shops, and retailers selling services to consumers (e.g. barbers, temporary employment agencies, shoemakers), because they hardly have transaction or inventory information systems containing useful market information to pass on to their suppliers.

Key informant selection. Campbell's (1955) criteria of being (1) knowledgeable about the phenomenon under study and (2) able and willing to communicate with the researcher constituted our criteria for informant selection. Care was taken to ensure that the informants in our sample of buying firms were selected properly. However, because their knowledge and involvement were assessed via self-reports, additional evidence about their agreement with other sources would be desirable. For a number of reasons we have limited our data collection to one single informant per supplier relationship. To include multiple key respondents from the same organization would be less appropriate, because knowledge about the particular exchange of market information with one particular supplier is rather relationship-specific and in occasion not well spread throughout the organization. The retail buyer's job autonomy is high and his typical specialization per (group of) suppliers and product category makes it difficult to find an additional knowledgeable informant at the retailer's side of the dyad. An alternative could be to ask an informant from the supplier-side of the dyad. However, we did not do, that because of time limitations.

Table 4.1 Survey Response Rate

	Number of initial letters sent	Number of retail organizations expressing willingness to participate	%	Number of buyers agreed to participate	Number of responses actually received	Response rate of buyers %	Number of retail organizations actually participating	Response rate of organizations %
<i>Industry</i>	(1)	(2)	(2) / (1)	(3)	(4)	(4) / (3)	(5)	(5) / (1)
Consumer Electronics	61	29	47.5	41	28	68.3	17	27.9
DIY	19	12	63.2	23	20	90.0	15	78.9
Entertainment	43	25	58.1	44	30	68.2	18	41.9
Fashion	137	63	45.6	115	71	61.7	43	31.4
Food	21	12	57.1	34	17	50.0	8	38.1
Personal Care	26	13	50.0	26	12	46.2	10	38.5
Total	307	154	50.0	280	178	63.6	112 (+23*)	36.2

* responses from anonymous firms

Initially, all 307 companies of the six retail industries from the list were contacted by phone to identify the contact person in charge of buying. Following Dillman's (2000) suggestions we made pre-contacts with the potential respondents and explained them the purpose of this survey. The contact persons then received a letter with an announcement of the study. This letter further clarified the motivation and setup of the study; it also made a request for possible participation of their colleagues with a purchasing/buying responsibility. Within a week after the initial mailing, the researchers contacted them by phone and buyers from 154 organizations expressed their willingness to participate. In some organizations, more than one buyer took part in the study, but each participant

reported on a different supplier relationship. All respondents were promised a summary of the research findings, as well as a comparison of their industry with others in the sample. If they agreed to collaborate, they were sent the questionnaire. In a number of cases, the researchers needed to call them several times to remind them of the importance of the study and their promise to participate.

Finally, data for the study were obtained from 178 buyers within retail organizations in different industries in the Netherlands: consumer electronics (28), DIY (20), entertainment (30), fashion (71), food (17), and personal care (12). The 178 completed questionnaires were returned by retail buyers working in at least 112 different companies and from six retail industries (23 buyers did not reveal the name of their firm). Response rates of buyers vary from 46% to 90% per industry. The overall response of organizations is minimally 36.2%. See table 4.1 for details.

About 95% of the respondents were involved with the specific supplier relationship they had to report on (how the supplier was determined, is described in paragraph 4.3). Of the remaining 5%, almost all buyers felt confident in giving a good report on the supplier relationship. Only, three respondents reported a low level of confidence in filling out our questions and were dropped from further analysis. An additional one was discarded because of reporting on a wrong type of relationship (i.e., an advertising agency). These deletions turned our final sample size for analysis into 174.

Information about the sample is given in Table 4.2. More than 50% of the buyers work at a retail operation with more than 60 outlets and 500 employees. Buyers from three types of retail organizations were recruited to participate in our study: store chains (92); franchisors (39), and buying groups (35). All these types of buyers have in common that they are well able to inform on which and how market information is exchanged between the retail and the supplier organizations.

Although all respondents are selected on the basis of their buying responsibility, almost 20% have additional responsibilities. Six percent have a top management position; 14% have a sales and/or marketing job position in the company. On average, the respondents have more than 10 years of buying experience. Their years of experience range from less than a year to almost 39 years.

Table 4.2 Survey Sample Characteristics

	Number	%		Number	%
<i>Organizational level</i>					
Firm Size (number of stores)			Firm Size (yearly turnover) (in mln consumer sales in euro's)		
5-10	15	8.6	<5	5	2.9
11-30	34	19.5	5-10	8	4.6
31-60	28	16.1	11-30	14	8.0
61-100	16	9.2	31-60	13	7.5
101-150	24	13.8	61-100	6	3.4
150-200	17	9.8	101-150	9	5.2
201-300	13	7.5	151-200	7	4.0
301-500	10	5.7	201-300	15	8.6
501-1000	9	5.2	301-500	21	12.1
>1.000	3	1.7	501-1.000	5	2.9
	169	97.1	>1.000	7	4.0
unknown	5	2.9		110	63.2
	174	100.0	unknown	64	36.8
				174	100.0
Firm Size (number of employees)			Firm Type		
<100	24	13.8	Store chain	92	52.9
100 - 499	53	30.5	Franchise organization	39	22.4
500 - 999	27	15.5	Buying group	35	20.1
1.000 - 2.499	27	15.5		166	95.4
2.500 - 4.999	28	16.1	unknown	8	4.6
> 5.000	15	8.6		174	100.0
	174	100.0			
<i>Individual level</i>					
Job position			Year of experience in buying		
Buying position	137	78.7	until 2 years	16	9.2
Top management position	10	5.7	2 to 5 years	35	20.1
Sales / marketing position	23	13.2	5 to 10 years	41	23.6
	170	97.7	10 to 15 years	21	12.1
	4	2.3	15 to 20 years	19	10.9
	174	100.0	20 to 25 years	9	5.2
Gender			more than 25 years	13	7.5
male	128	75.7		154	88.5
female	41	24.3		20	11.5
	174	100.0		174	100.0

4.3 Structure of the Questionnaire and Selection of the channel relationship

Our questionnaire consisted of four main sections. In the first section, the instructions and guidelines were explained.

The second section contained a sort of lottery procedure helping us to make a random selection of one specific supplier relationship from the respondent's portfolio of suppliers. This procedure was as follows: the respondent was first asked to list five suppliers with whom he/she had recently been in contact. The names of the suppliers (or "anonymous"

abbreviations) were written on a list numbered from “1” to “5”. Then the respondent was asked to open an enclosed envelope containing a number (ranging from 1 to 5). This number determined the supplier that the retailer buyer had to report on. By randomizing the choice of the focal supplier relationship we aim to minimize the probability for a selection-bias (like the respondent’s tendency to choose the most salient supplier – in terms of friendship, trusted, etc.).

As a key informant for the selected focal supplier relationship, the respondent reported about his organization’s dealings with this particular supplier relationship (and how he perceived the dealings of the supplier with his organization) by answering the questions in the third section. The list of questions was divided into parts corresponding to the main building blocks of our research framework (as presented figure 3.1). The questionnaire is included in Appendix IV.1.

In the fourth and last section we checked whether the respondent felt confident in correctly filling out our survey questions by asking them: “To what extent have you felt confidence in filling out our survey questions”. As stated earlier, three respondents replied that they did not have that confidence and thus, they were deleted from further analysis.

4.4 Conclusions

In the present chapter we provided an overview of the data collection method for our mail survey. In the first paragraph, we have given a description of the sampling frame and how the key informant was selected. We have further described the individual and organizational backgrounds of our final sample of 174 retail buyers. The sample is characterized by retailer buyers with a wide variety in buying experience, and organizational backgrounds. They work at store chains, franchise organizations, and buying groups.

In the second part, we explained the structure of our questionnaire and the random selection of the supplier relationship. The selection of the supplier relationship is important, because the unit-of-analysis is the *channel relationship*. Special attention was given to randomly select a supplier relationship from the retail buyer’s supplier portfolio. Self-selection would probably lead to merely choosing trusted and more important relationships; therefore we designed a lottery to randomly choose a channel relationship. Our objective was to have variety in the kinds of supplier relationships. In the next chapters we will not only report on the research findings but also on the validation of the measures we included in the questionnaire.

PART I

THE NATURE OF MARKET INFORMATION SHARING IN CHANNEL RELATIONSHIPS

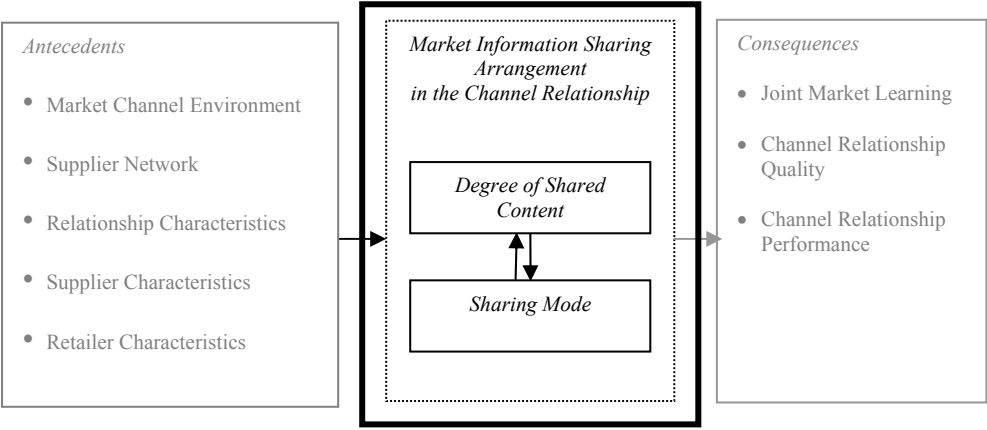
CHAPTER FIVE

THE NATURE OF
MARKET INFORMATION SHARING
IN CHANNEL RELATIONSHIPS

5.1 Introduction

The potpourri of acronyms such as ECR, CPFR, CCRM, QR, VMI, and so on, may only mystify what is really important in these market information sharing arrangements. Whatever fancy buzzword or any other voguish word is used to typify these “arrangements between two vertical channel parties to share market information with the intention to strengthen the performance of the channel for their mutual benefits”, our purpose in this chapter is to look underneath all of these labels, and we want to uncover the *nature* of market information sharing. In particular, we investigate here how organizations in a channel differ in the way they exchange this information, and which type of market information they reveal to each other. We formulate an answer to our first research question: *What is the actual nature of market information sharing between retailers and suppliers?*

Figure 5.1 Focus of This Chapter: Nature



Based on the findings from our survey among 174 retail buyers of Dutch retail organization, we will report on the nature of their market information sharing with their suppliers. But first we start by explaining the scales used. Because no established scale for

the content of information sharing exists, paragraph 5.2 lays out the development and purification procedures for the measurement for shared content. Paragraph 5.3 explains the measurements employed for sharing mode. In paragraph 5.4, based on results from the survey we illustrate what market information and how channel members share with each other. We end this Chapter with a conclusion in paragraph 5.5.

5.2 Measurements of the Shared Market Information Content

As ascertained in the previous chapters, the shared content in a channel relationship was never measured. One tradition in social-psychology dealing with assessing how much one person shares his private information with another person is called *self-disclosure studies*. Common measurements in these studies the Jourard Self-disclosure scale (Jourard, 1961; Burnard and Morrison, 1992), self-disclosure index (Miller et al., 1983), or the self-disclosure situations survey (SDSS, Harris, et al., 1999). Often these questionnaires are used in family or medical settings. Recent examples are intact families consisting of two adults and two children (Finkenauer et al., 2004), nurse-patient relationships (Ashmore and Banks, 2001), and the willingness of women with bulimic symptoms to talk about their eating habits (Evans and Wertheim, 2002).

We place such self-disclosure measurement scales into our marketing channel context in order to measure the *Shared Market Information Content*. The sharing of market information by a retailer and by a supplier respectively with their counterpart are both behavioral constructs that comprise the quantity and variety of market insights passed on by one channel member to the other. Asking retail buyers directly about their market information sharing behavior and that of their suppliers can be rather difficult, because “market information sharing” might have different connotations among the different retail buyers. Rossiter (2002) names the example of asking consumers about their liking of CARBONATED SOFT DRINKS. Consumers are rather unfamiliar with the term and are likely to use different reference frames. It is then advisable to identify the main types of carbonated soft drinks, like COLAS, NON-COLAS, and CARBONATED MINERAL WATERS. In this way, *Shared Market Information Content* is comparable to CARBONATED SOFT DRINKS, because it has all the features of an *abstract collective object* (cf. Rossiter, 2002), which is a composition of objects heterogeneous in the eyes of the raters (i.e., retail buyers), but forms a set at a higher categorical level in the eyes of the researchers. As suggested by Rossiter (2002) we followed procedures to identify main types of market information that can be shared, such as sales figures, inventory levels, strategy reports, consumer research – making a list of information to be shared as complete as possible to cover all of the “Windows of information sharing opportunities” presented in Chapter 1 (see Figure 1.2). In pre-study interviews, twenty-one buyers and retail industry experts were asked to give their definition of information-sharing and to precisely name

the market information content that a retailer (can) share/s with its suppliers, and vice versa. These interviews generate a pool of market information items to be shared. Subsequently, each of these measurement items was then pre-tested in two distinct phases: (1) face-to-face interviews with two academic experts, and (2) a pilot survey of nine possible survey participants, i.e., retail-buyers. At each stage, participants were asked to identify items that were confusing, tasks that were difficult to perform, and any other problems they encountered. Items that were identified as being problematic were revised or eliminated, and new items were developed. Finally, we came up with a list of 36 items for measuring Shared Market Information Content by the retailer with the supplier. For the Shared Market Information Content by the supplier with the retailer, a comprehensive list of 33 items was produced. For both lists of information items, the scale consisted of the degree to which this information was passed on, by means of a 7-point-scale ranging from “no insight given” (=1) to “full insight given” (=7).

After rating the extent to which these types of information are shared by retailer and supplier respectively, these ratings can be aggregated by the researcher, because they constitute the two measures of information sharing behaviors. These sets of formative indicators (see Jarvis, et al., 2003) can be computed into two index-scales (Rossiter, 2002). Thus we would like to emphasize that the indicators will not reflect but determine the degree to which a channel partner provides insight into its marketing operations and market position (a formative scale).

We could simply make an index constituted from all of the items. However, judging from the descriptive data in Table 5.1, it was clear that some market information was passed on more frequently than others. We began to make classifications of all the items into more homogeneous groups; primarily based on their information domain, and to some extent to the observed frequency. On the retailer’s side, the measurement scale of Shared Market Information Content by the retailer with the supplier was compressed into four categories: (1) sales information, (2) logistical information, (3) category strategy information, and (4) competitive and customer intelligence.

Equally on the supplier’s side, it appeared that the measurement scale of Shared Market Information Content by the supplier with the retailer could best be packed together in four categories: (1) promotional communication, (2) logistical information, (3) consumer market intelligence, and (4) business process intelligence.

Table 5.1

Frequency Statistics of Shared Information Categories by Retailer (left-hand) and by Supplier (right-hand)

Degree 1: Sales information (9 items)		Disclosure	
		Abs.	%
The overall concept of our retail stores		153	87.9
The sales figures of the supplier's own products		136	78.2
The expected market developments		156	89.7
The sales figures of the supplier's products through time		126	72.8
The realized (consumer) prices of the supplier's products		121	69.9
The effectiveness of the supplier's sales promotions in our stores.		126	73.3
The sales targets for the supplier's products		120	69.8
The realized (consumer) prices of the supplier's products through time		111	63.8
The key performance indicators for the sales of the supplier's products in our retail operation.		103	59.5
Total number of retailers sharing sales information		136	78.2
Degree 2: Logistical information (6 items)			
The out-of-stock problems of this supplier's products		126	73.7
Our stock policy		121	69.5
The stock level of this supplier's products at our operation		91	53.5
The stock level of this supplier's products at our operation through time		83	48.8
Our logistical costs targets		80	46.5
The sales promotion calendar for the coming period		117	67.6
Total number of retailers sharing logistical information		96	55.2
Degree 3: Category Strategy (8 items)			
The strategy for the whole product category in our stores.		125	71.8
The key performance indicators for the whole product category		76	44.2
The retail margins on the products belonging to product category		107	61.5
The proposed changes to the mix of brands in the assortment		103	59.2
The effectiveness of sales promotions in the product category		95	55.2
The total sales figures of the product category		87	50.0
The sales targets for the total product category		83	47.7
The out-of-stock problems for the total product category		76	44.4
Total number of retailers sharing Category Strategy information		88	50.6
Degree 4: Competitive and Customer Intelligence (13 items)			
The sales performance of the supplier benchmarked against his competitors		84	48.8
The geographic spread of the supplier's product sales per shop		69	40.1
The customers (group) buying the supplier's products		78	45.3
The customers (group) buying the products from the product category		73	42.4
The geographic spread of the sales of the product category per shop/outlet		49	28.3
The effectiveness of sales promotions from competitors		59	34.5
The planned sales promotional activities of competitors at the retailer's stores		50	29.1
The sales promotional support by competing suppliers (compensation, conditions, etc.)		56	32.7
The key performance indicators for the sales of competing products at the retailer's stores		44	25.7
The customers (group) buying the competitor's products		49	28.5
The out-of-stock problems of the supplier's competitors		40	23.4
The geographic spread of sales of competitor's products per shop/outlet		27	15.8
The sales targets of the supplier's competitors		28	16.2
Total number of retailers sharing Competitive and Customer Intelligence		42	24.1
Degree 1: Promotional communication (6 items)		Disclosure	
		Abs.	%
The introduction of new products (models) for the coming period		154	89.0
The expected market developments		135	78.0
The consumer sales promotions for the coming period		114	65.9
The advertising strategy for the coming period		109	63.0
The marketing efforts for selling within our stores		105	60.7
The overall strategy of this supplier's products		117	67.6
Total number of suppliers sharing promotional communication		114	65.9
Degree 2: Logistical information (6 items)			
The delivery times of the supplier's products		148	85.5
The (retail) outlets where he sells his products		132	75.9
The out-of-stock problems of the supplier's products in general		88	51.2
The amount of products produced for the entire market		78	44.8
The supplier's stock policy		70	40.7
The supplier's logistical costs targets		34	19.9
Total number of suppliers sharing logistical communication		72	41.4
Degree 3: Consumer market intelligence (7 items)			
The consumers (groups) using the supplier's products		106	60.9
The results from the supplier's consumer research (product tests, consumer evaluations)		93	53.8
The geographic spread of this supplier's product sales		79	45.4
The supplier's sales figures about the aggregated marketplace		94	54.0
The supplier's sales figures about the aggregated marketplace through time		93	53.4
The effectiveness of the supplier's sales promotions in general		99	56.9
The supplier's sales targets for the coming period		85	49.1
Total number of suppliers sharing consumer market intelligence		92	52.9
Degree 4: Business Process Intelligence (14 items)			
The supplier's interpretations of why other outlets/retailers perform better		92	52.9
The retailer's sales performance benchmarked against other outlets/retailers		92	52.9
The supplier's interpretation of why other outlets/retailer perform worse		84	48.6
The supplier's expansion plan (customers who he is going to approach in the coming period)		60	34.7
The key performance indicators of his products		45	26.0
The effectiveness of sales promotional activities at retailer's competitors		67	38.5
The cost structure of the supplier's products		41	23.6
The supplier's out-of-stock problems at the retailer's competitors		35	20.3
The supplier's sales performance at retail outlets outside our trading area		48	27.6
The supplier's sales performance at retail outlets within our trading area		49	28.2
The key performance indicators of the supplier's products at the retailer's competitors		25	14.5
The planned marketing efforts for the consumers sales at the retailer's competitors		45	26.0
The sales promotional support to competing retailer's (compensation, conditions, etc.)		25	14.5
The supplier's sales targets at retailer's competitors		21	12.1
Total number of suppliers sharing Business Process Intelligence		28	16.1

Table 5.2 Hierarchical Structure in Market Information Sharing

Content shared by Retailer		Degree	Content shared by Supplier	
		No Sharing (0)		
Sales information		Low (1)		Promotional communication
Sales information	Logistical information	Low/Medium (2)	Logistical information	Promotional communication
Sales information	Logistical information	Medium/High (3)	Consumer market intelligence	Promotional communication Logistical information
Sales information	Logistical information	High (4)	Business Process Intelligence	Promotional communication Logistical information Consumer market intelligence

Certain categories of information are more confidential than others. Some categories of information require more sophisticated information processing skills from the channel member than others. Regardless of the actual motive, it can well be imagined that some market information content is passed on more difficult than other categories of market insight. It would, therefore, be interesting to see whether a special hierarchy in the conduct of information sharing exists. Table 5.2 summarizes our assumed hierarchy, in which we expect that if higher-level information category is shared, then it would be very likely that

lower-level information category is shared as well. We ranked the market insight passed on by the retailer into four hierarchical levels: sales information, logistic information, category strategy information, and customer and competitive intelligence. So, the retailer begins with sharing sales information, before disclosing logistical information and category strategy information, etc. On the other side, the supplier is expected to start with promotional communication prior to giving insight into logistical, consumer market intelligence and business process intelligence. Assuming a hierarchical order in the shared content, our measurements can be thought of a sort of Guttman Scale.

In order to test the hierarchical structure in information sharing behaviors, we needed to check whether the probability of sharing a higher-level information category depends on the sharing of a lower-level information category. This can be done by checking whether the hierarchical structure in our measurements meet the requirements of scalability (Mokken's criteria tested with Loevinger's H-ratio). In order to test the assumed hierarchical structure we needed to reduce the number of responses of the original scale from 7 scale points into a dichotomy of responses: "no sharing" (=0; original scale points 1-3), and "sharing" (=1; original scale points 4-7).

For each channel member's four categories, we applied the majority rule as the criterion that should be met in order to score positively for sharing that market information category (item). For instance, sales information was considered to be shared by the retailer, when at least five out of our nine measurements. We consider logistical information to be shared, when at least 4 out of our 6 logistic information measurements are exchanged.

For the retailer, the first layer concerns sales information. Exchanging this basic type of information tells the supplier about the general retail sales performance of its own products. It discloses general market expectations, sales targets and broad strategic directions. Also it sheds light on the effectiveness of the supplier's in-store marketing efforts. At the top of Table 5.1, it shows for instance that 136 (78.2%) retailers share sales figures about the supplier's own products. Hundred and fifty-three retailers report to communicates their overall store concept/formula to the supplier (87.9%). If we apply our majority rule (i.e., 5 out of 9 information types is being shared), then we find that retailers disclose sales information in 136 (78.2%) supplier relationships in our sample (see the bottom of the table).

The second and next higher level is logistical information. This type of information gives suppliers further details about the dynamics of the product flow and thereby enhances channel transparency by detailing inventory policy, stock levels, and out-of-stock (OOS) problems. More importantly, sharing this information explains in more detail the supplier's contribution to the immediate future sales period by signaling the entire promotion calendar for the coming period. In our sample, 96 supplier relationships exchange retail logistical information, because they share at least 4 out of our 6 logistical information types.

The third level, category strategy, implies signaling even more classified market information to the supplier. This set of information is about the strategy for the product group, sales targets, the assortment composition, sales promotion effectiveness and out-of-stock-problems for the whole product category. Passing on this information occurs when the retailer involves the supplier in Category Management practices. Practitioners in the food industry speak, in such a case, of giving "customer insight" to suppliers (AC Nielsen, 2002). Giving out these details is not without risk; buyers attach value to keeping this information confidential, because exposing it may weaken their bargaining position. Information exchange occurs in 88 channel relationships in our sample (50.6%), because 5 out of our 8 category strategy measurements are shared.

When a retailers also discloses competitive and customer intelligence, this can be seen as the absolute stage of openly sharing market information with supplier. Think of explaining the customer profiles visiting and buying at the retailer's stores, geographic distribution of product sales. It also implies giving competitive benchmarks of performance by telling the performance of competing products in the retailer's assortment. In 24.1 percent of channel relationships in our sample, suppliers receive details about their competition and retailer's customers. At least 7 out of our 13 measurements needed to be affirmed in order to score positively on this type of information.

In order to test the scalability of our hierarchical scale we calculated the Loevinger-H-values (cf. Mokken, 1971) from the Mokken's scalability tests. Table 5.3 shows the cross-tables of pairs of items. The first box confronts the two observations of sharing sales information (level 1) with sharing logistical information (level 2). The item assumed to be higher in the hierarchy (i.e., information less easily shared) is stated in the columns (i.e., logistical information). The lower one, sales information, is in the rows. If an hierarchy between these pairs of market information categories would exist then it would be unlikely that a retailer shares logistical information, but does not share sales information: the upper-right cell of the first cross-tab. In our sample, there are 4 observations in which that is the case; so-called Guttman errors. On the other hand, there are 44 cases when sales information is shared, but logistic information is not shared. This shows that sharing logistic information is the "more difficult" item here.

When comparing this score to the probability of having no hierarchical order between the pair of items, four is significantly low. The appropriate test-variable is the Loevinger H per pair of items. All Hi-values are above the critical value of .30. The scale coefficient H amounts to .64 and $\Delta^* = 15.59$ (delta-star is drawn from a normal distribution and with H-value would be true, than delta-star is zero; here delta-star is significantly larger than zero). Together, these findings provide evidence that the hierarchical scale can be qualified as "strong" (cf. Mokken, 1971).

The hierarchical levels in the shared market information content by retailer (n=141) and the number of information items shared are correlated at 0.93 (p<0.01).

Table 5.3 Scalability of Shared Information by Retailer with Supplier (response patterns)

		Logistical information (level 2)			Guttman errors	H _r -score
		no	yes			
Sales information (level 1)	no	34	4	38	4	0.81
	yes	44	92	136		
		78	96	174		
		Category Strategy (level 3)				
		No	Yes			
Sales information (level 1)	No	37	1	38	1	0.95
	yes	49	87	136		
		86	88	174		
		Customer and Competitive intelligence (level 4)				
		No	yes			
Sales information (level 1)	no	35	3	38	3	0.67
	yes	97	39	136		
		132	42	174		
		Category Strategy (level 3)				
		no	yes			
Logistical information (level 2)	no	53	25	78	25	0.37
	yes	33	63	96		
		86	88	174		
		Customer and Competitive intelligence (level 4)				
		No	yes			
Logistical information (level 2)	no	67	11	78	11	0.42
	yes	65	31	96		
		132	42	174		
		Customer and Competitive intelligence (level 4)				
		No	yes			
Category Strategy (level 3)	no	82	4	86	4	0.81
	yes	50	38	88		
		132	42	174		
		1: Sales	2: Logistical	3: Category Strategy	4: Intelligence	
1: Sales		-				
2: Logistical		0.81	-			
3: Category Strategy		0.95	0.37	-		
4: Intelligence		0.67	0.42	0.81	-	
H _{retailer → supplier} = 0.63						

We deal with an observation error (a Guttman error) in the cases that cannot be classified according to the hierarchical structure of Shared Content in the following way: re-classifying them would be difficult because we do not know with certainty at which level the observation error occurs: at the maximum level, at the one-but-last level, or any other level. We choose to perform the data analyses with only the cases in which the Shared Content can be classified. For the Retailer's Shared Content, all of our later analyses will therefore include the classifiable 141 cases.

In a similar vein, we ranked the content of shared market information by the supplier with the retailer, from low to high: promotional communication, logistical information, consumer market intelligence, and business process intelligence. The first and elementary level is the promotional communication. The supplier announces to the retailer how its products will be promoted in the intermediate future. This principal trade marketing information discloses plans for advertising, instore-promotions, and consumer sales promotions; it also includes announcing new products, and general information about the strategies and market developments. At least 4 out of our 6 measurements needed to be affirmed in order to score positively on this type of information; a majority of the suppliers (114; 65%) in our sample give promotional information to the retailer (see the right half of Table 5.1 for the detailed list of items).

The second level is the logistical information given to the retailer concerning supply lead times, inventory policy, distribution structure and out-of-stock situation for the supplier products. More than 3 out of our 6 measurements needed to be affirmed in order to score positively on this type of information: less than half of the suppliers is open about the logistical status of their products. Only 4 out of 10 suppliers in our sample give out this information.

The subsequent higher levels of Shared Market Information Content are Consumer Market Intelligence and Business Process Intelligence. Consumer market intelligence clarifies the market situation to the retail buyer. At least 4 out of our 7 measurements for consumer market intelligence are needed to be affirmed in order to score positively on this type of information. Giving insight into the business processes of the supplier may inform retailers about development and/or improvement in its private label program in this product category. With respect to business process intelligence, 8 items (out of 14) needed to be affirmed.

We also tested the hierarchical properties of this scale. The right half of Table 5.1 shows the descriptive statistics of this hierarchy and Table 5.4 depicts the Loevinger- H_i values for the scale, ranging from .30 to .93. The total H is .54 and the delta-star value is 10.63 can be qualified as a "strong" scale (cf. Mokken, 1971). The hierarchical levels in the shared market information content by supplier (only levels 0 until 4; $n=121$) and the number of information items shared are positively correlated at $r = .95$ ($p < .01$).

Similar to the previous scale for Retailer’s Shared Content, the cases that cannot be classified according to the hierarchical structure will be excluded from our further data analysis. Concerning the Supplier’s Shared Content, we thereby perform our analysis on the set of 121 cases.

Table 5.4 Scalability of Shared Information by Supplier with Retailer (response patterns)

		Logistical information (level 2)		Guttman errors	H _r -score
		no	yes		
Promotional comm. (level 1)	no	46	13	59	14
	yes	55	59	114	
		101	72	173	
		Consumer Market information (level 3)		Guttman errors	H _r -score
		No	Yes		
Promotional comm. (level 1)	No	50	9	59	9
	yes	31	83	114	
		81	92	173	
		Business Process intelligence (level 4)		Guttman errors	H _r -score
		No	yes		
Promotional comm. (level 1)	no	56	3	59	3
	yes	89	25	114	
		145	28	173	
		Consumer Market information (level 3)		Guttman errors	H _r -score
		no	yes		
Logistical information (level 2)	no	64	38	102	38
	yes	18	54	72	
		82	92	174	
		Customer and Competitive intelligence (level 4)		Guttman errors	H _r -score
		No	Yes		
Logistical information (level 2)	no	97	5	102	5
	yes	49	23	72	
		146	28	174	
		Customer and Competitive intelligence (level 4)		Guttman errors	H _r -score
		No	yes		
Consumer market information (level 3)	no	81	1	82	1
	yes	65	27	92	
		146	28	174	
		1: Promotional	2: Logistical	3: Consumer Market	4: Business Process
1: Promotional		-			
2: Logistical		.47	-		
3: Consumer Market		.71	.30	-	
4: Business Process		.69	.70	.92	-
H _{supplier → retailer} = .54					

5.3 Measurements of the Sharing Mode

As mentioned in Chapter 3, a certain collaborative style in channel communications between two firms is characterized by a certain degree of formalization, exclusivity, frequent contact between organizations, and by involvement from people with positions at different management layers. Because empirical studies thus far have primarily captured the mode whereby market information is shared, we use established scales for each of these different aspects. Tables 5.5 and 5.6 list the measurement items used. The first mode-characteristic of market information sharing we investigate, is *formalization of information sharing* in the relationship. In contrast to previously mentioned contract formalization, this type of formalization relates specifically to the way the market information sharing is formalized in detailed arrangements, in routines and clear division of tasks. We adapt three items from Dahlstrom and Nygaard (1999) to measure this level of formalization ($\alpha = 0.85$).

Table 5.5 *Measurements Multi-item Scale Sharing Mode Constructs*

<i>Construct</i>	<i>mean</i>	<i>s.d</i>	<i>min</i>	<i>max</i>	<i>α</i>	<i>n</i>
Information Sharing Formalization	2.42	1.46	1.00	7.00	0.85	174
Exclusivity Shared Market Information						
Given by Retailer	2.36	1.40	1.00	7.00	0.68	173
Given by Supplier	1.88	1.21	1.00	6.50	0.74	173
<i>Formalization of Market Information Sharing</i> (3 items, $\alpha = 0.85$; Dahlstrom and Nygaard, 1999)		<i>Exclusivity Shared Market Information from Retailer</i> (2 items, $\alpha = 0.68$; borrowed from Anderson and Weitz, 1992)				
Our firm and this supplier...		Our firm...				
1. ... have detailed agreements with each other about which market information we share.		1. ... only gives market information to this supplier.				
2. ... have a clear division of tasks with regard to using the shared market information.		2. ... refrains from giving other suppliers of this product category the same amount of market information.				
3. ... have clear arrangements about the information routines (standards, formats, etc.) for each of the involved parties.		3. ... seldom gives the same amount of market information to only one supplier. (R)*				
		4. ... deals with many suppliers in this product category; we do not give the same market information to this supplier on an exclusive basis. (R)*				
		<i>Exclusivity Shared Market Information from Supplier</i> (2 items, $\alpha = 0.74$; borrowed from Anderson and Weitz, 1992)				
		This supplier ...				
		1. ... exclusively gives us this market information.				
		2. ... refrains from giving the same amount of market information to our competitors (other retailers).				
		3. ... seldom gives one retailer the same amount of market information on an exclusive basis. (R)*				
		4. ... deals with many retailers; all do not exclusively receive the same amount of market information. (R)*				
* item deleted from scale						

Exclusivity is second sharing mode variable, and refers the extent to which a channel member shares the shared content on an exclusive basis. We borrow measures from Anderson and Weitz (1992) for both retailer and supplier exclusivity. For each, retailer and supplier, we measure the exclusivity of content shared with channel member by 4 items. In the scale purification, two items were deleted from analyses due to low loadings. The remaining two items obtain an alpha's of 0.68 and 0.74 respectively. Some indication for the validity of these measurements is provided by our check question about the number of channel parties receiving at least an equal amount of market information. We found a significant negative correlation between the exclusivity measures and the number of parties, $r = -0.25$ ($p < 0.01$) and $r = -0.27$ ($p < 0.01$) for retailer exclusivity and supplier exclusivity respectively. This gives us support for the validity of our measurements.

Table 5.6 Contact Frequency and Level of Retailer-Supplier interaction

	Contact Frequency *							
	Absolute frequency numbers and percentages are between brackets.							
	* 1 = never takes place; 2 = less than a year; 3 = once or twice a year; 4 = once or twice every quarter; 5 = once or twice a month; 6 = once or twice a week; 7 = daily or more often.							
Contact Level	1	2	3	4	5	6	7	Mean (s.d)
Retail company's contact frequency with:								
Sales personnel of the supplier (1)	7 (4.0)	2 (1.1)	7 (4.0)	38 (21.8)	49 (28.2)	53 (30.5)	18 (10.3)	5.02 (1.34)
Higher management of the supplier (with Marketing Strategy responsibility) (2)	7 (4.0)	11 (6.3)	53 (30.5)	43 (24.7)	36 (20.7)	20 (11.5)	4 (2.3)	3.95 (1.34)
Sales personnel or higher –level management of the supplier (maximum of (1) and (2))	0 (0.0)	1 (0.6)	5 (2.8)	38 (21.8)	52 (29.9)	57 (32.8)	21 (12.1)	5.28 (1.06)
Supplier company's contact frequency with:								
Buying staff of the retailer (3)	3 (1.7)	2 (1.1)	3 (1.7)	26 (14.9)	57 (32.8)	63 (36.2)	20 (11.5)	5.30 (1.16)
Higher management of the retailer (with Marketing Strategy responsibility) (4)	13 (7.5)	28 (16.1)	51 (29.3)	44 (25.3)	25 (14.4)	10 (5.7)	3 (1.7)	3.47 (1.37)
buying personnel or higher-level management of the retailer (maximum of (3) and (4))	2 (1.1)	1 (0.6)	4 (2.3)	25 (14.4)	58 (33.3)	64 (36.8)	20 (11.5)	5.34 (1.09)

Frequency (or quantity) of contacts between buyer and seller is measured by how often channel members have contact (cf. Mohr, et al., 1996). We make a distinction in the various contact frequencies of retailer and supplier with the different organizational levels of their channel partner. Table 5.6 shows, for example, that 53 retail organizations (30.5%) have once or twice a week contact with the supplier's sales personnel. In 20 cases (11.5%), the retailer has once or twice a week contact with the supplier's higher-level management with marketing strategy responsibility. Looking at the other side of the channel's dyad, 63 supplier organizations talk to the retailer buyers at a weekly basis; while only 10 suppliers speak to higher-level retail managers with marketing in the same frequency. In assessing an overall score for the contact frequency of the retailer with the supplier we take the maximum score of either the contact frequency with sales personnel or the contact frequency with higher management. Suppose, if the frequency of the retail company with sales personnel from the supplier is once a month (score = 5), and the retailer has contact with the marketing manager every week (score = 6), then the contact frequency of the retail organization with the supplier as a whole is assessed as "every week", score 6. In the same way, we compute the (overall) contact frequency of the supplier with the retailer.

Contact Frequency with Higher-level Management is the sharing mode variable indicating the involvement of higher-management in the sharing of market information. We measure this involvement by one item: the contact frequency of higher-level management with marketing responsibility. If a comparison is made for the involvement of higher-level management for both retailer and supplier, then we do not observe a large difference: most of the time the contact is once or twice a year.

Table 5.7 exhibits the correlations among the sharing mode variables. The off-diagonal correlation score have a wide range from .08 to .84. The degree of information sharing formalization is positively associated with the exclusivity given by both channel members. Higher degrees of formalization also coincides with a higher contact frequency by both parties; but especially induced by involvement of higher-level management from the retailer ($r = .25$; $p < .01$). Yet, exclusivity of shared information content from the retailer is strongly connected with the more frequent involvement of supplier's higher-level management ($r = .26$; $p < .01$).

Table 5.7

Correlation Matrix: Sharing Mode Constructs

	Correlation Matrix						
	1	2	3	4	5	6	7
<i>Information Sharing Mode</i>							
<i>Formalization</i>							
1: Formalization Information Sharing	1.00						
<i>Exclusivity of Shared Content</i>							
2: Given by Retailer	.16*	1.00					
3: Given by Supplier	.29**	.46**	1.00				
<i>Contact Frequency</i>							
4: by retailer	.18*	.11	.15*	1.00			
5: by supplier	.18*	.08	.08	.84**	1.00		
<i>Contact Frequency with higher-level management</i>							
6: from retailer	.25**	.15	.22**	.50**	.43**	1.00	
7: from supplier	.12	.26**	.24	.35**	.40**	.39**	1.00

Note: * $|r| \geq .15$ are significant at $p < .05$ for $n=172$; ** $|r| \geq .21$ are significant at $p < .01$ for $n=172$

Because it is not possible to perform a confirmatory factor analysis to validate the two formative shared content measures (see Jarvis, et al., 2003), we would like to see whether, these new measures of the degrees in shared content positively correspond with the collaborative style in the sharing mode and the perceptions of quality. In Table 5.8, we relate both dimensions of market information sharing practices (by the supplier) to the retailer's quality perceptions. We based our measurement of the retailer's quality perceptions of the market information on the dimensions posited by Menon and Varadarajan (1992). Retailers were asked to rate the quality of market information received from suppliers by 14 quality indicators. Results in Table 5.8 show that above all the degree of shared content by the supplier is strongly correlated with almost every quality aspect (minimum $r = .36$). The sharing mode aspects however are not as good indications for quality as Shared Content is. The sharing mode aspect having the strongest positive relationship with quality perceptions is the formalization of market information sharing (correlations with 11 of the 14 quality indicators). To a lesser extent, the exclusivity given by suppliers has significant associations with the retailer's perception of quality. Contact frequency and contact frequency with higher management come out as almost unrelated to the retailer's quality perceptions. Interestingly, contact frequency is the single sharing mode aspect that is associated with the perceptions of better accuracy. Perhaps, higher contact frequency does not only make the given information more verifiable but also puts pressure on the supplier to give the correct market information.

Table 5.8 Summary Statistics Retailer's Perceptions of Quality of Market Information and Correlations with Supplier's Information Sharing

<i>Retailer's Perceived Quality of Supplier's Market Information</i>			<i>Supplier's sharing mode</i>			
	<i>mean (s.d.)</i>	<i>Supplier's degree of shared content</i>	<i>Formalization (agreed with supplier)</i>	<i>Exclusivity given by supplier</i>	<i>Contact Frequency</i>	<i>Contact Frequency with Higher Management</i>
Sufficient(ly)...						
Important	3.49 (1.76)	.49**	.19*	.14	.18	-.01
Timely	2.67 (1.77)	.36**	.27**	.18	.07	.09
Accurate	4.41 (1.63)	.41**	.02	.01	.21*	-.05
Amount	4.67 (1.65)	.47**	.21*	.12	-.02	-.06
Reliable	4.67 (1.54)	.46**	.25**	.12	.10	-.12
Useful	3.83 (1.88)	.46**	.40**	.28**	.06	-.00
Relevant	2.93 (1.73)	.44**	.17	.32**	.14	.04
Valuable	2.86 (1.83)	.51**	.30**	.29**	.01	.02
Consistent	2.91 (1.81)	.50**	.21*	.26**	.02	-.00
Objective	2.60 (1.67)	.40**	.30**	.41**	.04	-.01
Verifiable	2.62 (1.75)	.36**	.32**	.29**	-.03	-.05
Unique	2.91 (1.94)	.44**	.31**	.43**	-.00	.04
Practical	3.62 (1.87)	.44**	.07	.19*	.10	.09

* p< .05; ** p< .01; n= 117 (listwise)

Our conclusion is that the strong positive relationship between the supplier's degree of shared content and quality perceptions gives us a certain assurance of the measurements (nomological) validity. Another important conclusion that we wish to draw, is the following. In Chapter 2, some studies in the supply chain optimization and game theoretical tradition have researched the shared content and its quality as two separate dimensions. In our empirical data however these two aspects are very strongly related.

5.4 Degrees of Shared Content and Sharing Mode: Descriptive Analyses

To answer the first research question of what channel firms actually share, we will present the following descriptive analyses in the subsequent three paragraphs: the degree of shared content (5.4.1), the sharing mode (5.4.2) and the relationship between the degrees of shared content and the sharing mode (5.4.3). The fourth paragraph (5.4.4) reports an initial inspection of the differences in market information sharing practices among various channel contexts, and it serves as a stepping stone to testing our hypotheses on the antecedents of market information sharing in the Chapter hereafter.

Table 5.9 *The Degrees in Shared Content by Retailers and Suppliers*

Degree	Content shared by Retailer	Frequency (%)	Content shared by Supplier	Frequency (%)
No Sharing (0)		31 (22.0)		44 (36.1)
Low (1)	Sales information	20 (14.2)	Promotional Communication	20 (16.4)
Low/Medium (2)	Sales information Logistical information	27 (19.1)	Promotional Communication Logistical information	10 (8.2)
Medium/High (3)	Sales information Logistical information Category Strategy info	29 (20.6)	Promotional Communication Logistical information Consumer Market info.	29 (23.8)
High (4)	Sales information Logistical information Category Strategy info. Customer & Competitive Intelligence	34 (24.1)	Promotional Communication Logistical information Consumer Market info. Business Process intelligence	19 (15.6)
Total		141 (100)		122 (100)

5.4.1 Degrees of Shared Market Information Content

Table 5.9 shows to what degree retailers and suppliers in our sample share market information. As can be concluded from the Table, the 22.0% of the retailers and 36.1% of suppliers do not share any market information with their respective upstream or downstream channel partner. Consequently, a considerable number of retailers (78%) and supplier (64%) *do* pass on market information to their channel partners, albeit in varying degrees.

As for retailers, 14.2% of the 141 retailers only share basic sales information with their suppliers. Information about logistical matters is added by 19.1% of the retailers in communication with their suppliers. 20.6% of the retailers do not only share their sales and logistical information, but also shares details of the category strategy they follow. 24.1% of the retailers complete the market information sharing with suppliers with competitive and customer intelligence.

Regarding the suppliers, 16.4% of them restrict the exchange to promotional communication. Another 8.2 percent add supplementary logistical information. 23.8% of the suppliers also elaborate on their consumer market intelligence; and one group of 15.6% provides their retailer with even more insight: they pass on intelligence about their own business processes as well.

At this first glance, it seems that retailers share more content than suppliers do. However, when we compare the degree of shared content of both retailer and supplier with each other, then we notice that retailers increasingly share higher degrees of their market information content with their counterpart; the smallest group of them (14.1%) remains at the lowest level, while the largest group (24.1%) shares their market information at the highest possible level. Instead, suppliers have a tendency to restrict their shared content to the one but highest level (23.6%). The group of suppliers sharing the highest possible level of content is smaller (15.6%).

When we confront the individual sharing behaviors of both retailer and supplier with each other in Table 5.10 we get an even better idea of the extent to which the market information sharing takes place in a symmetrical way. Retailer-supplier relationships are the unit-of-analysis in this Table. The table shows the degree of shared content in the 99 channel relationships (in which both shared contents from retailer as well as from supplier are corresponding with the tested hierarchical rankings), and that, for instance, sharing of market information does not take place on either side in 17 out of 99 of the retailer-supplier relationships. In 11 channel relationships, however, the degrees in market information sharing are the highest as well from the supplier's side as from the retailer's. In three channel relationships (encircled in the below stated table), suppliers only share promotional communication with their retailers, while retailers do not share any market information.

Table 5.10 *The Association between the Degrees of Shared Content of the Channel Members*

		Supplier's Degree in Shared Content *									
		0	1	2	3	4					
No Sharing						BPI					
					CMI	CMI					
			L	L	L	L					
		PC	PC	PC	PC	PC					
	Total										
		17	3	2	2	1	25				
		4	3	2	2	1	12	No sharing			0
		4	6		4	1	15	S	L		1
		7	5	1	7	3	23	S	L	CS	2
		2	1	3	7	11	24	S	L	CS	3
		34	18	8	22	17	99	S	L	CS	4
							Total				

* Supplier's Shared Content Levels:
PC = Promotional communication; L = Logistical information; CMI = Consumer Market Intelligence; BPI = Business process intelligence

** Retailer's Shared Content Levels:
S = Sales information; L = Logistical information; CS = Category Strategy Information; C&CI = Customer & Competitive Intelligence

The correlation between the Retailer's degree of Shared Content and the Supplier's degree is $r=.55$ ($n=99$; $p<.01$). So, although the two degrees of shared content are associated, the correlation is not perfect; that means that there are relationships in which retailer and supplier share different degrees of content. The 38 (17+3+7+11) cases positioned at the diagonal of the matrix can be considered to be examples of retailer-supplier relationships in which the exchange of market information occurs at a same degree in both directions. In the

off-diagonal cases, the sharing of market information is not mutually high to the same degree. In these other 61 cases, sharing market information is regarded as being asymmetrical. As for the 40 channel relationships below the diagonal, the retailer discloses relatively more of its market position than its counterpart does. Above the diagonal, there are 21 channel relationships in which the supplier shares more information content than the retailer does.

5.4.2 *Sharing Mode*

The sharing of market information may take place in different styles; therefore we also study the *Sharing Mode*. The aspects of sharing mode considered here are: overall contact frequency, contact frequency of higher management (with marketing responsibility), exclusivity, and formalization.

Table 5.11 *Summary Statistics of Sharing Mode and Correlations with Degrees of Shared Content*

Sharing Mode	mean (s.d.)	Shared Content	
		Retailer's degree of Shared Content (n = 141) Corr.	Supplier's degree of Shared Content (n = 122) Corr.
<i>Contact Frequency (overall)¹</i>			
1: by retailer	5.28 (1.06)	.12	.06
2: by supplier	5.34 (1.09)	.19*	.13
<i>Contact Frequency of Higher-Level Management¹</i>			
3: from retailer	3.97 (1.31)	.23**	.18*
4: from supplier	3.44 (1.39)	.19*	.13
<i>Exclusivity of Shared Content²</i>			
5: Given by Retailer	1.88 (1.21)	.10	.18*
6: Given by Supplier	2.36 (1.40)	.27**	.39**
<i>Formalization²</i>			
7: Information Sharing	2.42 (1.46)	.28**	.40**

¹ the frequency scales range from 1 to 7. 1 = never takes place; 2 = less than a year; 3 = once or twice a year; 4 = once or twice every quarter; 5 = once or twice a month; 6 = once or twice a week; 7 = daily or more often.

² a 7-point scale from 1 = strongly disagree to 7 = strongly agree.

Note: * |r| ≥ 0.18 are significant at $p < .05$ for $n=122$; ** |r| ≥ 0.23 are significant at $p < .01$ for $n=122$

The middle part of Table 5.11 depicts how market information sharing between retailer and supplier takes place in our sample. The first aspect of the sharing mode is the contact frequency. The retailers have a contact frequency rate with the supplier's organization

(overall) of 5.28 on average. This mean score is closer to “once or twice a month” (a score of 5) than to “once or twice a week” (a score of 6; see Table 5.6). Logically, suppliers have similar overall frequency contact rate with the retailer organization (either with the buying staff or higher management levels): the mean score is 5.34; implying that the contact of the supplier with the retailer organization is a bit more frequent than on a “once or twice a month” basis (a score of 5).

The second aspect of sharing mode is the contact frequency with higher management from the retailer or the supplier with the other channel member’s organization. As for both retailers and suppliers, the contact of their higher management with the channel partner is less frequent than the overall contact frequency rate, which is logical, because the contact frequency with higher management is a subset from the overall contact frequency. The mean score for the contact frequency of higher management from the retailer with the supplier organization is 2.97; which indicates a contact frequency close to “once or twice every quarter” (nearly 3). As for the counterpart, the contact frequency of higher management from the supplier is slightly lower. The mean score is 2.44; indicating an average contact rate between “once or twice a year” (a score of 2) and “once or twice a quarter” (a score of 3). The slight difference is not significant ($t = -1.51$; $p = .13$).

The third aspect of sharing mode is the degree in which the shared market information content is kept exclusive. In our sample, the overall degree of exclusivity is low (ranging from 1.88 for the retailer to 2.36 for the supplier on a 7-points scale); this implies that parties tend to share the same degree of market information content with multiple other channel members. Retailers give less exclusivity (1.88) than suppliers do (2.36). This difference is significant ($t = 4.52$; $p < .01$). The lower exclusivity given by retailers demonstrates their hesitation to link up their business with one specific supplier. Retailers, in general, prefer to remain independent of any supplier and would like to preserve the liberty of switching supplying sources.

The fourth and final aspect of sharing mode is the extent of formalization of the sharing of market information. Formalization of the market information process measures the degree in which the channel parties have made detailed and explicit agreements about the exchange (i.e. about which market information to share, about a clear division of tasks of using the exchanged market information and about routines to manage the information). We find that channel partners hardly specify any of such arrangements (mean score is 2.42 on a 7-points scale). We find formalization of information-sharing low, not only because of its absolute low mean score of 2.42 on a 7-points scale, but also compared to the (more general) level of *contract formalization* which we also measured (as an antecedent). In Chapter 6 we will report that the contract formalization (see Table 6.3) – the degree in which the relationship is detailed and specified and whether the contract is specifically written and formal – has an average of 3.23. When we perform a paired t-test on both formalization measures, then it

shows that contract formalization is significantly higher than formalization of information-sharing ($t = 7.48$; $p < .01$). Also previous marketing channel studies show a much higher level of contract formalization (Mohr and Sohi, 1994; Mohr et al., 1996). It is surprising to us that only very few channel members explicitly formalize which market information they exchange and about the subsequent management of that information.

So, summarizing the way in which market information is exchanged, we draw the following conclusions: sharing takes place at relatively high contact frequency between retailer and supplier, with occasional contact at higher management levels, with little exclusivity from either side, and with a rather low level of formalization.

5.4.3 *Degrees of Shared Content in relation with Sharing Mode*

One of our propositions (P_2 in Chapter 3) is that higher degrees of shared content are embedded in channel communications which are more collaborative. It would be interesting to see whether the *Degrees of Shared Content* are related to the *Sharing Modes*. We expect that higher degrees of shared market information content go hand-in-hand with more frequent contact between channel parties, and in a more exclusive arrangement. If parties would share higher degrees of market information content, would they rather engage in stricter agreements and formalize their sharing of market information?

The right-hand part of Table 5.11 reveals that the correlations between the degrees of shared content and aspects of the sharing mode are all positive. A number of them are significant. The retailer's degree of shared content is higher when the supplier has more contacts with the retailer. ($r = .19$; $p = .05$). Higher degrees of market information are shared by the retailer, when higher management has more frequent contact: from level supplier management ($r = .19$; $p = .05$), and from higher retail managers themselves ($r = .23$; $p < .05$). Exclusivity of shared supplier's market information goes together with higher degrees of shared content ($r = .27$; $p < .01$). The strongest correlation is retailer's shared content with the degree of formalization. Higher degrees of formalization are associated with higher levels of shared content by the retailer ($r = .28$; $p < .01$). Interestingly, no significant correlation is found between retailer's shared content with the overall contact frequency of the retailer ($r = .12$) and the exclusivity given by the retailer ($r = .10$).

The correlation between supplier's degree of shared content and sharing mode show a similar pattern. All correlation values are positive and four of them are significant. The contact frequency of higher management from the retail-side seems to strongly endorse the sharing of more content by suppliers ($r = .18$; $p < .05$). Furthermore, giving exclusivity in a mutual way, as well by the retailer ($r = .18$; $p < .05$) as by the supplier ($r = .39$; $p < .05$) goes hand-in-hand with higher degrees of shared content by the supplier. Especially, the degree of formalization of information sharing is connected with more supplier's shared content ($r = .40$; $p < .01$).

We have noted above that exclusivity and formalization are fairly low. However, we now see that a clear association between these sharing mode aspects and the degrees of shared content is present. As information sharing progresses to higher degrees, then more exclusivity and formalization also exists. So, if retailers and suppliers share more content to a higher degree, agreements about information-sharing between channel members are more formalized, more exclusive, and higher-management from the retailer company is more engaged in the market information sharing process.

5.4.4 *Differences in Shared Content among Channel Contexts*

It is often stated that the level of channel collaboration and the degree of shared content varies among the different channel contexts, as characterized by industry, retail firm type, retail firm size, and supplier type (Coughlan, et al., 2001). Table 5.12 reports the variety in market information sharing broken down according to these context variables.

Although the samples per industry are small, our observations tend to confirm the commonly held observation that retailer-supplier relationships in the food industry are relatively more progressive concerning the sharing of market information: 42% of the retailers (the mean score of the degree of shared content is 2.75) and 44% of the suppliers (the mean score of the degree of shared content is 3.11) are sharing to the fourth and maximum degree of shared content. These percentages are higher than the ones in the other five industries. Considering the significance of the differences, suppliers in the food industry are significantly more open to their retailers than their colleagues in other industries ($F(5,116) = 2.54$; $p = 0.03$; post-hoc analysis show that t-values of paired comparisons are only significant for the food industry compared with each of the other industries). The food industry is often named as the front-runner in exploring new ways to collaborate in channels and to apply advanced information technology facilitating the sharing of market information between retailer and supplier (evidence for being a front-runner is the participation of merely food companies in the ECR industry platforms). After the food industry, it seems that the DIY industry is most active in sharing market information (mean scores are 2.38 and 2.00 respectively). This observation is in line with the presence of this industry in ECR activities. Besides the food industry, DIY is one of the few retail industries being active in (national and continental) ECR platforms.

Examining the differences in sharing behaviors among the different *retail firm types* reveals no significant differences (for retailer's shared content: $F(2,133) = 1.88$; $p = 0.16$; for supplier's shared content: $F(2,113) = 1.52$; $p = 0.22$). Yet, we discover a number of interesting tendencies; for instance, the store chains are the retail type with tighter organizational structures and more control over their market information management, they are not relatively more open in their information sharing practices (mean score is 2.06 on a

scale from 0 to 4) than the other retail types. A gripping observation is to find that despite store chain's better access to timely market information from their outlets than any other more loosely-organized retail organization type, store chain buyers are less open in sharing information. Perhaps, store chains behave in a more autonomic and haughtier manner in dealing with their suppliers.

Table 5.12 Frequency Statistics of Shared Content broken down by Industry, Firm Type, Firm Size

<i>Industry</i>	Retailer's Degree of Shared Content *					Mean (S.D.)
	0	1	2	3	4	
Consumer Electronics	6 (26)	2 (9)	8 (35)	5 (22)	2 (9)	1.78 (1.31)
Entertainment	1 (6)	2 (12.5)	4 (25)	8 (50)	1 (6)	2.38 (1.02)
Fashion	18 (28)	10 (15)	9 (14)	13 (20)	15 (23)	1.95 (1.56)
Food	1 (8)	2 (17)	1 (8)	3 (25)	5 (42)	2.75 (1.42)
DIY	2 (12.5)	2 (13)	4 (25)	4 (25)	4 (25)	2.38 (1.36)
Personal Care	3 (33)	2 (22)	1 (11)	1 (11)	1 (11)	1.67 (1.66)
<i>F(5,135) = 1.12; p = 0.30</i>						
<i>Retail Firm Type</i>						
Store Chain	14 (18)	13 (16)	20 (25)	20 (25)	13 (16)	2.06 (1.33)
Franchise Organization	4 (14)	3 (11)	4 (14)	8 (29)	9 (32)	2.54 (1.43)
Buying Group	10 (36)	3 (11)	3 (11)	6 (21)	6 (21)	1.82 (1.63)
<i>F(2,133) = 1.88; p = 0.16</i>						
<i>Retail Firm Size</i>						
5 – 30 outlets	11 (28)	5 (13)	6 (15)	7 (18)	11 (28)	2.05 (1.60)
31 – 100 outlets	7 (20)	6 (17)	8 (23)	9 (26)	5 (14)	1.97 (1.36)
>100 outlets	12 (13)	8 (13)	11 (18)	18 (30)	12 (20)	2.16 (1.42)
<i>F(2,133) = 0.21; p = 0.81</i>						
<i>Supplier Type</i>						
Brand manufacturer	17 (19)	11 (12)	18 (20)	24 (20)	19 (21)	2.19 (1.41)
Private Label manufacturer	14 (28)	9 (18)	9 (18)	10 (20)	9 (18)	1.82 (1.48)
<i>t = 1.46; p = 0.15</i>						
<i>Total</i>	<i>31 (22)</i>	<i>20 (14)</i>	<i>27 (19)</i>	<i>34 (24)</i>	<i>29 (20.6)</i>	<i>2.07 (1.45)</i>

Continued

Table 5.12 Continued (Supplier's Degree of Shared Content)

Industry	Supplier's Degree of Shared Content*					Mean (S.D)
	0	1	2	3	4	
Consumer Electronics	9 (38)	4 (17)	1 (4)	6 (25)	4 (17)	1.67 (1.61)
Entertainment	8 (57)	2 (14)	-	3 (21)	1 (7)	1.07 (1.49)
Fashion	21 (38)	11 (20)	6 (11)	8 (15)	9 (16)	1.51 (1.53)
Food	-	1 (11)	1 (11)	3 (33)	4 (44)	3.11 (1.05)
DIY	4 (24)	2 (112)	2 (12)	8 (47)	1 (6)	2.00 (1.37)
Personal Care	2 (67)	-	-	1 (33)	-	1.00 (1.73)
$F(5,116) = 2.54; p = .03$						
<i>Retail Firm Type</i>						
Store Chain	24 (36)	15 (9)	6 (9)	14 (21)	7 (11)	1.47 (1.44)
Franchise Organization	7 (33)	-	3 (14)	7 (33)	4 (19)	2.04 (1.60)
Buying Group	10 (35)	4 (14)	1 (3)	7 (24)	7 (24)	1.90 (1.68)
$F(2,113) = 1.52; p = .22$						
<i>Retail Firm Size</i>						
5 – 30 outlets	14 (35)	6 (15)	3(8)	13 (33)	4 (10)	1.68 (1.49)
31 – 100 outlets	12 (40)	5 (17)	5 (17)	3 (10)	5 (17)	1.47 (1.53)
>100 outlets	17 (36)	9 (19)	2 (4)	13 (38)	6 (13)	1.71 (1.56)
$F(2,116) = 0.26; p = .77$						
<i>Supplier Type</i>						
Brand manufacturer	24 (30)	14 (17)	3 (4)	26 (32)	14 (17)	1.90 (1.55)
Private Label manufacturer	20 (50)	6 (15)	7 (18)	3 (8)	4 (10)	1.13 (1.38)
$t = 2.69; p < 0.01$						
Total	44 (36)	20 (16)	10 (8)	29 (24)	19 (16)	1.66 (1.54)

*Note: Tables states frequencies and percentages. Percentages are stated between the parentheses.

The retail type with generally more loosely controlled inflow of market information, the franchise organizations, seem more entrepreneurial in their sharing practices. On average, they tend to share more market information (mean score is 2.54). A possible explanation might be found in their organizational structure that is aimed to cater to their member-franchisees. That supporting structure accustoms them to share power and responsibilities and engage in collaborative practices with suppliers more easily. As a response to their open sharing, the suppliers of franchisers share more openly with them.

The buying groups have a propensity to be more conservative in their sharing (mean score is 1.82). One may doubt whether the collaborative act of sharing market information can be harmonized with their initial reason to exist: bundling bargaining power to fight for better buying conditions in negotiations with suppliers. Retail buyers being brought up in the

adversary model of dealing with suppliers really need to make a “mind switch” to start sharing their market information with their suppliers.

Concerning the *retail firm size*, neither the shared content of suppliers ($F(2,116)=0.26$, $p=.77$) nor the shared content of retailers ($F(2,133)=0.21$; $p=.81$) differs significantly between small (until 30 outlets), medium (31 to 100 outlets) and large (more than 100 outlets) retail operations.

As for the supplier type, retailers do not share significantly higher degrees of market information content with brand manufacturers than with their private label producers ($t=1.46$; $p=.15$). On the other hand, brand manufacturers share much more content than their private label competitors ($t=2.69$; $p<.01$). Owing to their status as brand owners they might have conducted more consumer market research and thus must have an interesting story to tell to their retailers.

To sum up, these rough first analyses find some variations in the degrees of shared content that can be related to two channel context variables. The first context variable is the industry type: suppliers in the food industry significantly share higher degrees of content. The second context variable is whether the retailer is dealing with a brand manufacturer or a private label manufacturer. Brand manufacturers share more content than private label producers. In order to understand what is really driving the degree in the retailer's and supplier's shared content, and sharing mode aspects, we will test our hypotheses with multivariate analysis techniques in the next chapter.

5.5 Conclusions

This chapter has provided details on the nature of market information sharing in channel relationships. We have looked beyond the numerous superficial acronyms that some information sharing arrangements may carry by measuring what actually is shared in a channel relationship, and how the sharing of information takes place. Three major findings have been reported. The first major finding stems from our new measure for the shared content. We have discovered and empirically assessed that a hierarchical structure in the shared content can be found. This hierarchy suggests that the sharing of market information manifests itself in different degrees and means that a channel member starts with sharing the most basic and least confidential market information before giving any disclosure about higher degrees of more confidential market information. Each channel member can disclose its market position to the other channel member in five different degrees. The lowest degree is sharing “zero” degrees of content; this implies that the channel members reveal nothing about its market position to the other one. The highest degree of shared content is “four”, in which the channel member shares the most confidential market information with its partner in the channel (i.e., competitive intelligence).

The second major finding in this chapter concerns the descriptive statistics on market information sharing in channel relationships. In our sample, the practices are quite diverse but sharing is fairly popular. Nearly 80% of the retailers share some market information with suppliers. Sixty four percent of the suppliers share some of their market information. When it comes down to sharing the highest degree of information, 24% of the retailers have almost no secrets to their channel members, while 16% of the suppliers reveal nearly everything to (at least one of) their retailers. On average, there is a slight asymmetry in shared content in our sample: retailers share slightly higher degrees in sharing with their channel partners than suppliers do. The sharing mode of market information is normally very frequent, is seldom exclusive but rarely formalized. Higher management from either side of the channel dyad is sporadically involved in the process of market information sharing.

The third major finding is about the associations between Shared Content and Sharing Mode. In market information sharing practices between channel members, the shared content coincides with aspects of the sharing mode. When higher degrees of content are shared between channel partners, the sharing mode is more formalized, becomes more exclusive and involves higher-level managers from the retailer. The shared content is unrelated with the frequency rate at which channel members have contact with each other.

We have begun exploring some of differences in information sharing practices in the differing channel contexts. In the next chapter, we are going to look more systematically for the antecedents in which channel members share lower or higher degrees of content, or share their information in a less or more collaborative style.

PART II

THE ANTECEDENTS OF MARKET INFORMATION SHARING IN CHANNEL RELATIONSHIPS

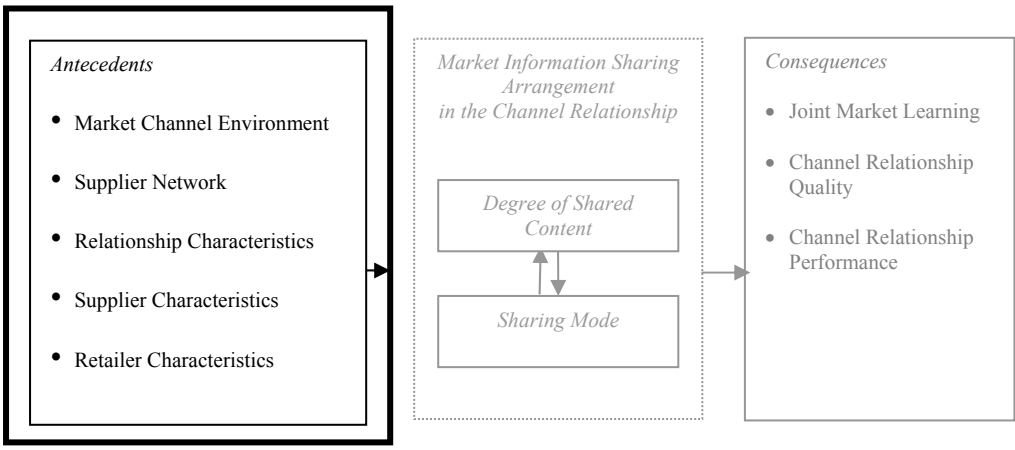
CHAPTER SIX

THE ANTECEDENTS OF
MARKET INFORMATION SHARING
IN CHANNEL RELATIONSHIPS

6.1 Introduction

The previous chapter inspected the actual nature of market information sharing in channel relationships. In analyzing the shared content and sharing mode, it became clear that in channel relationships, the information sharing arrangements can be quite different from each other; meaning that there is a lot of variance in the information sharing arrangements to be explained. Thus, as a logically next question after finding out *what* and *how* channel members share their market information, this chapter’s purpose is to seek explanations for why firms are so different in the sharing of degrees in content and/or in their sharing mode. Here we aim to answer our second research question: *what are the antecedents of market information sharing in channel relationships?* We will go into discovering the factors that promotes retailers and suppliers to share higher degrees market information content, and on the factors determining in which mode market information sharing takes place in a channel relationship. As figure 6.1 portrays, this Chapter focuses on the left-hand side of our research framework.

Figure 6.1 Focus of This Chapter: Antecedents



Following Anderson and Gerbing's (1988) two step approach, we first assess the validation of our construct measurements by developing separate measurement models (paragraph 6.2), before we conduct the tests of our hypothesized relationships between the constructs (paragraph 6.3).

6.2 *Operationalization and Measurement Validation of the Antecedents*

All constructs for antecedents are grouped together in five domains: (1) market channel environment, (2) supplier network, (3) relationship characteristics, (4) supplier characteristics, and (5) retailer characteristics (see Figure 6.1). As explained in Chapter 4, data was collected about an existing retailer's relationship with one (randomly selected) supplier. While the retailer, supplier and relationship characteristic are measured at the level of the dyad, both the market channel environment and supplier network variables were measured at the product category level (which included the competing suppliers with the *focal* supplier). Per domain of antecedents we will discuss how we operationalize the constructs and we subsequently assess the quality of our measurements. Whenever possible, measurement scales from previous research were used and when necessary these were modified to the setting of market information sharing in channel relationships. For each multi-item scale, the response categories were anchored by 1 (strongly disagree) and 7 (strongly agree). The following procedural steps in the scale purification were taken. We started with examining the intercorrelations among the items designed for each scale, removing the items that exhibited low correlations. We then conducted a principal component analysis to determine the scales' unidimensionality and discriminant validity and further refined the scales when necessary. Finally we conducted confirmatory factor analysis (CFA) on the scale items. Because of the large number of constructs relative to our sample size, it was not possible to conduct CFA at once, we therefore conducted confirmatory factor analyses on the groups of maximally similar constructs (here the five "domains") (see also Moorman and Miner, 1997; Antia and Frazier, 2001).

Market Channel Environment. In order to characterize the retail buyer's market environment, we included four market channel environment factors which make it necessary to respond to consumer needs changes: consumer demand turbulence, consumer demand growth, purchase complexity and channel inertia. Table 6.1 presents the details of exact measurement operationalization, descriptive statistics, and confirmatory factor analyses. First, *consumer demand turbulence* is the extent to which the rate of change in the consumer demand is rapid and unpredictable. The measure of consumer demand turbulence was adapted from Jaworski and Kohli (1993)'s market turbulence. One item was deleted due to low inter-item correlation; the final three-item scale has an alpha of 0.87.

Table 6.1 Construct Measures of Market Channel Environment

Operationalization	
<i>Consumer Demand Turbulence</i> (3 items, $\alpha = 0.87$) (adapted from: Jaworski and Kohli, 1993)	<i>Purchase Complexity</i> (3 items, $\alpha = 0.81$) (adapted from: Cannon and Homburg, 2001)
1. In this product category, consumer demand keeps on changing over time.	1. The buying process in this product category is relatively complex
2. Every time consumers react differently to marketing efforts within this product category.	2. The buying process in this product category is relatively complicated
3. In this product category consumer preferences change in a rapid pace.	3. The buying process in this product category is relatively technical
4. Very unexpectedly, different consumers buy products from this product category.*	
<i>Consumer Demand Growth</i> (2 items, $\alpha = 0.89$)	<i>Channel Inertia</i> (2 items, $\alpha = 0.84$)
1. During the past three years, growth in the consumer demand has been considerable.	1. The buying process in this product category features a relatively long time-lag between ordering and delivery to our firm.
2. This product category can be called a "growth-market".	2. The buying process in this product category is slow in its ability to react to consumer demand changes due to the length of the channel.
	3. The buying process in this product category is featured by a production capacity available in this channel and adjusts to consumer demand sluggishly.*

Descriptive Statistics					
Construct	mean	s.d	min	max	n
Consumer Demand Turbulence	4.54	1.50	1.00	7.00	173
Consumer Demand Growth	4.26	1.60	1.00	7.00	172
Purchase Complexity	3.57	1.38	1.00	7.00	173
Channel Inertia	3.41	1.82	1.00	7.00	173
Continued					

Confirmatory Factor Analysis									
<i>Constructs</i>	χ^2	<i>df</i>	χ^2/df	<i>TLI</i>	<i>CFI</i>	<i>RMSEA</i>	α	<i>t-value</i> <i>(min)</i>	<i>t-value</i> <i>(max)</i>
	39.26	30	1.31	.98	.98	.043			
Consumer demand turbulence							.87	10.86	14.24
Consumer demand growth							.89	10.23	12.24
Purchase complexity							.81	8.06	18.08
Channel inertia							.84	10.95	11.28

* item was deleted from scale

Second, we measured *consumer demand growth* in order to make a distinction between emerging and mature markets. Relatively new consumer markets are generally unpredictable and rapid response to changes may be required. Consumer demand growth was measured by two items and had an alpha of 0.89.

The *purchase complexity* is the third characteristic of the market channel environment. A more complex buying situation makes it more difficult for a retailer to evaluate purchase choices a priori or even be certain about a supplier's performance ex post. The three-items

measure for purchase complexity was borrowed from Cannon and Homburg (2001), and cover complexity, complicity and technical nature. The scale has an alpha of 0.81.

The fourth market channel characteristic, *channel inertia*, complicates the possibility of a rapid response to market changes. Channel inertia is measured by the length of the time lag between retailer's ordering at the supplier's and selling to end-consumers. A long time lag may slowdown the adjustments of the channel to sudden changes in consumer needs. This channel inertia is measured by three items. After scale purification one item was deleted, resulting in an alpha of 0.84.

We also conducted confirmatory factor analysis on the scale items of this set of market channel variables; and we found that all of the goodness-of-fit statistics indicate an adequate fit with the data with the four factors (consumer demand turbulence, consumer demand growth, purchase complexity, channel inertia): $\chi^2 = 39.26$, $df = 30$, $p = .09$; $TLI = .98$; $CFI = .99$; $RMSEA = .043$). In addition with the marginally significant χ^2 test, our conclusion is confirm with the goodness-of-fit exceeding the .90 standard. The RMSEA is also far below the .10 maximum. All of the measured market channel characteristics constructs show convergent validity because all item loadings are significant; t-values range from 8.06 to 18.08 and are well above the critical value for the .01 significance level (critical value = 2.58). Cross loadings are insignificantly low. Reliability for each construct was calculated in order to assess whether the specified indicators (items) are sufficient in their representation of their constructs. All cronbach alphas exceed the recommended level of .70.

In order to investigate the discriminant validity of the constructs, we performed a series of chi-square difference tests by comparing constrained models to the original model in which we allow each construct to be distinct. In the constrained models, we forced pairs of constructs having a perfect correlation ($r=1.0$) (see Bagozzi and Yi, 1988; Steenkamp and Van Trijp, 1991). Evidence for discriminant validity was found, because the chi-squares of all the constrained models significantly exceed that of the original unconstrained model. The smallest difference was 69.04; significantly larger than the critical value of 3.84 (1 df). For details about the χ^2 -difference tests between the assumed original unconstrained model and constrained models, we refer to Appendices VI.1.

Supplier Network. In the sourcing of trading goods, the retailer is often dealing with a network of competing suppliers. Our model incorporates seven variables characterizing the supplier network: (1) the network horizon, (2) concentration level, (3) competition intensity among suppliers, (4) competition intensity among retailers, (5) information sharing norms among suppliers, and (6) negative and (7) positive connectedness. First, the *supplier network horizon* denotes primarily how extended the retailer's view of the network is (Anderson, et al., 1994; Holmen and Pedersen, 2003). The number of supplier

relationships in the focal product category defines the magnitude of the supplier network horizon. In our sample, the retailer does business with on average 15 suppliers for each product category.

Second, the *supplier network concentration* measures the degree of concentration in the network by the percentage of buying budget in the product category spent at the four largest supplier. (0 = less than 10%; 1 = 11 – 30% ; 2 = 31 – 60; 3 = more than 60%). The mean score (2.32) of network concentration variable indicates that in most cases, buying takes place in a rather concentrated supplier network (i.e., >60% of buying budget is spent at the four largest suppliers).

Third, the *competition intensity among suppliers* is important characteristic for the supplier network. Under conditions of high competition among suppliers, retailers have many alternative options to satisfy their needs for market information. As a result, competition intensity among suppliers is likely to stimulate suppliers to share information. The measurement of competition intensity was adopted from Jaworski and Kohli (1993) alpha is 0.82 (with final four items).

Fourth, the *competition intensity among retailers* also affects the dynamics in the supplier network. Similar to the competition measure from supplier competition, we took the measurement of competition intensity from Jaworski and Kohli (1993) alpha is 0.79 (with final four items).

Fifth, the *shared norms of information sharing* in the supplier network make up another factor affecting the vertical cooperation with retailers. The commonly held norms in the supplier network concerning the sharing of proprietary market information is measured by an adapted scale from Heide and John (1992) and two items remained after scale purification (alpha = 0.67).

Sixth and seventh, *negative and positive connectedness*, the relationships within supplier network do not act in isolation but are connected to different degrees. Certain dealings in a relationship in the supplier network can influence other relationships. The degree in which cooperative efforts with the focal supplier *deteriorates* the dealings in any other supplier relationship in the network is referred to as the *negative connectedness* of the focal supplier relationship (Cook and Emerson, 1978) (3 items; alpha = 0.87). However, the opposite effect might also be plausible: any cooperative effort of the retailer with the focal supplier might *elicit* other cooperative actions from other suppliers in competition for the preference of that retailer. This likelihood on *positive connectedness* is measured by 3 items; alpha is 0.89.

The CFA on the scale items of this set of supplier network variables showed that all of the test statistics ($\chi^2 = 98.28$; $p = .21$; TLI = .99; CFI = .99; RMSEA = .014) give evidence for a good fit with the data. Convergent validity appears to be in order due to significantly high t-values (minimum t-value is 5.64) and low cross-loadings. The minimum difference

of 178.61 for one degree of freedom as a result from a series of χ^2 -difference tests confirm the discriminant validity of the constructs (see Appendix VI.2 for details).

Table 6.2 Construct Measures of Supplier Network

Operationalization	
<i>Supplier Network Horizon</i> (1 item)	<i>Supplier Network Concentration</i> (1 item)
How many suppliers deliver goods to you in this product category?	What is the percentage in your buying budget for this product category spent at the four largest suppliers? (0 = less than 10%; 1 = 11 – 30% ; 2 = 31 – 60; 3 = more than 60%).
<i>Competition Intensity among Suppliers</i> (4 items, $\alpha = 0.82$) (cf. Jaworski and Kohli, 1993)	<i>Competition among Retailers</i> (4 items, $\alpha = 0.79$) (cf. Jaworski and Kohli, 1993)
<ol style="list-style-type: none"> 1. There are many competitors of this supplier in this purchase market.* 2. Temporary trade promotions (like discounts) are often used in this purchase market.* 3. In this purchase market, they mostly compete on price. 4. Within this product category, anything that one competitor can offer, others can match readily. 5. Competition between suppliers within this product category is cut throat. 6. In this purchase market, one hears of a new competitive move almost every day. 	<ol style="list-style-type: none"> 1. Competition in our marketplace is cutthroat. 2. One hears of a new competitive move almost every day. 3. The activities in our marketplace are particularly hostile. 4. In our market there are many promotion-campaigns.* 5. In our market, anything that one retailer offers, others can match readily.* 6. Our competitors are relatively strong. 7. In our marketplace there is a lot of price competition.*
<i>Information-Sharing Norms among Suppliers</i> (2 items, $\alpha = 0.67$) (adapted from Heide and John, 1992)	<i>Positive Connectedness</i> (3 items, $\alpha = 0.89$)
<ol style="list-style-type: none"> 1. In general suppliers of products in this product category expect that every market information that might help retailers, is passed on.* 2. In this purchasing market it is common that retail companies and suppliers exchange their own confidential market information. 3. In this purchasing market, suppliers and retailers are expected to keep each other posted on matters that are important to them. 4. Suppliers and retailers inform each other about changes in advance.* 	<ol style="list-style-type: none"> 1. If our firm is going to collaborate (more) with this supplier, than it will be easier for us to collaborate with competitors of this supplier. 2. A closer cooperation between our firm and this supplier will facilitate the relationship between our company and one of this supplier's competitors. 3. Working together to this supplier can be beneficial to the performances in the relationship with other competing companies.
	<i>Negative Connectedness</i> (3 items, $\alpha = 0.87$)
	<ol style="list-style-type: none"> 1. If our firm is going to collaborate (more) with this supplier, than it will be more difficult for us to collaborate with competitors of this supplier. 2. A closer cooperation between our firm and this supplier will disturb the relationship between our company and one of this supplier's competitors. 3. Working together to this supplier can be detrimental to the performances in the relationship with other competing companies.

Table 6.2 Continued

Descriptive Statistics						
<i>Construct</i>	<i>mean</i>	<i>s.d</i>	<i>min</i>	<i>max</i>	<i>α</i>	<i>n</i>
Supplier Network Horizon	15.09	17.78	1	120	n.a.	174
Supplier Network Concentration	2.32	0.85	0	3	n.a.	174
Information Sharing Norms among Suppliers	3.85	1.35	1.00	7.00	0.67	172
Competition Intensity among Suppliers	4.09	1.36	1.00	7.00	0.82	171
Competition Intensity among Retailers	4.94	1.03	3.00	7.00	0.79	173
Negative Connectedness	2.83	1.37	1.00	6.67	0.87	172
Positive Connectedness	2.96	1.30	1.00	6.33	0.89	169

Confirmatory Factor Analysis									
<i>Constructs</i>	χ^2	<i>df</i>	χ^2/df	<i>TLI</i>	<i>CFI</i>	<i>RMSEA</i>	<i>α</i>	<i>t-value (min)</i>	<i>t-value (max)</i>
	98.28	95	1.03	.99	.99	.014			
Competition Intensity among Suppliers							.82	8.71	13.53
Competition Intensity among Retailers							.79	5.61	12.32
Information Sharing Norms							.67	7.30	18.13
Negative Connectedness							.87	10.11	15.62
Positive Connectedness							.89	10.45	15.08
* Item deleted from scale									

Relationship Characteristics. Whereas market channel and supplier network environment were measured at product category level (which included the competing suppliers and the focal supplier), the constructs regarding the characteristics about the retailer-supplier relationship were measured at the relationship-level with the focal supplier only. Table 6.3 shows that we measured six aspects: the age of the relationship, the amount of trust in the supplier, the transaction-specific investments made in the relationship, contact formalization, the supplier's dependency on the retailer and the retailer's dependency on the supplier.

Age of the relationship was measured by a single item that assessed how long the retailer had done business with the supplier. In our sample, the age of the retailer-supplier relationship varies from four months to 40 years. On average, retailers have been trading with the supplier relationship nine and a half years.

Trust. The second relationship characteristic included in the study is the amount of trust in the supplier. Trust is often defined as "the extent to which a firm believes that its exchange partner is honest and/or benevolent". Trust in the supplier is, on the one hand, the retailer's belief that the supplier is reliable, stands by its word, fulfils promised role obligations, and is sincere (cf. Anderson and Narus, 1990; Dwyer and Oh, 1987; Schurr and Ozanne, 1985), and on the other hand, the belief that the supplier is genuinely interested in its interests or welfare and is motivated to seek joint gains (see Geyskens, et al., 1998). We used a five-item scale for trust in the supplier which incorporated was the

major facets of trust – reliability, integrity, and confidence (based on Morgan and Hunt, 1994; Jap, 1999); four items were used in the analysis and had an alpha of .85.

Relationship-specific investments. The third feature of the relationship between retailer and supplier is the extent to which both channel members have jointly made investments specifically catered to their channel relationship. We relied on items of Anderson and Weitz (1992) and Jap (1999) to measure the scale for (dyadic) relationship-specific investments. The final two-item scale has an alpha of .67; due to low inter-item correlations we had to delete the third item. When one of the channel members terminates their relationship, these investments can be lost.

Contract Formalization. The fourth characteristic of the relationship is the contract formalization. Contract formalization refers to the degree in which the relationship is detailed and specified; whether the contract between the retailer and the supplier is specifically written and formal (cf. Anderson, et al., 1987; Mohr et al., 1996; Lusch and Brown, 1996; Jap and Ganesan, 2000). It was measured by 5 items and has an alpha of .84.

Table 6.3 *Construct Measures of Relationship Characteristics*

Operationalization	
<i>Relationship Age</i> (1 item)	<i>Trust in Supplier</i> (4 items, $\alpha = 0.85$) (cf. Morgan and Hunt, 1994; Jap, 1999)
About how long has your firm been doing business with this supplier? ... years ... months	<ol style="list-style-type: none"> 1. The promises of this supplier are reliable. 2. This supplier is very honest in dealing with our company. 3. Our firm trusts this supplier. 4. When problems arise, this supplier would go of its way to help our firm.* 5. This supplier takes our firm's interests into account, when something goes wrong.
<i>Relationship-specific Investment</i> (2 items, $\alpha = 0.67$) (cf. Anderson and Weitz, 1992; Jap, 1999)	<i>Contract Formalization</i> (5 items, $\alpha = 0.84$; adapted from Jap and Ganesan, 2000)
<ol style="list-style-type: none"> 1. If this relationship were to end, we would be wasting a lot of knowledge that's tailored to their relationship. 2. If either company were to switch to a competitive retailer or supplier, we would lose a lot of the investments made in the present relationship. 3. We have invested a great deal in building up our joint business.* 	Our firm and this supplier ... <ol style="list-style-type: none"> 1. ... have a specified and detailed agreement with each other. 2. ... have a formal written agreement stating each others obligations in detail. 3. ... have a contract that also includes specific penalties for any default. 4. ... govern our relationship with written contracts. 5. ... often refer to contracts in order to make a decision about differences of opinion.

Continued

Table 6.3 Continued

<i>Supplier Dependence on Retailer</i> (3 items, $\alpha = 0.82$) (cf. Kumar, Scheer and Steenkamp,1995)	<i>Retailer Dependence on Supplier</i> (3 items, $\alpha = 0.84$) (cf. Kumar, Scheer and Steenkamp,1995)
To which extent is the supplier dependent on your firm?	To which extent is our firm dependent on this supplier?
1. If our firm ceases to do business with this supplier, then this supplier will have a problem in replacing compensation for the loss in sales from our trade area.*	1. If this supplier ceases to do business with our firm, we will have a problem in replacing the loss in sales in this product category.
2. This supplier is through and through dependent on our firm.	2. It would be difficult for our firm to replace this supplier.
3. It would be difficult for this supplier to replace our firm.	3. Concerning this product category, our firm is through and through dependent on this supplier.*
4. This supplier does not have a good alternative in our trade area.	4. In this product category, our firm does not have a good alternative for this supplier.

<i>Construct</i>	Descriptive Statistics					
	<i>mean</i>	<i>s.d</i>	<i>min</i>	<i>max</i>	<i>α</i>	<i>n</i>
Relationship Age	9.52	8.77	0.33	40.00	n.a.	111
Trust in Supplier	5.23	0.98	1.00	7.00	0.85	174
Relationship-specific Investment	3.68	1.40	1.00	7.00	0.67	171
Contract Formalization	3.23	1.61	1.00	7.00	0.84	174
Supplier Dependence on Retailer (a)	4.03	1.59	1.00	7.00	0.82	173
Retailer Dependence on Supplier (b)	3.43	1.53	1.00	7.00	0.84	173
Total Interdependence (a) + (b)	7.44	2.41	2.00	12.67	n.a.	173
Relative Retailer Dependence (b) – (a)	1.62	1.18				
Relative Supplier Dependence (a) – (b)	1.83	1.30				

Confirmatory Factor Analysis									
<i>Constructs</i>	χ^2	<i>df</i>	χ^2/df	<i>TLI</i>	<i>CFI</i>	<i>RMSEA</i>	<i>α</i>	<i>t-value (min)</i>	<i>t-value (max)</i>
Trust	198.98	109	1.83	0.91	0.93	.070			
Relationship-specific investments							.85	8.93	14.03
Contract Formalization							.67	7.21	8.37
Supplier dependence							.79	6.16	16.31
Retailer dependence							.82	9.13	12.20
							.84	8.99	13.67

* Item deleted from scale

Dependency structure. The fifth relationship characteristic is the dependency structure between channel parties. A firm’s dependency on another firm traditionally has been defined in channels as the firm’s need to maintain a relationship with the other firm to achieve its goals (Frazier, 1983). The firm’s inability to replace the other firm has often been considered an indication of the firm’s dependency (Kumar, et al., 1995). We used prior measures developed by Kumar, Scheer, and Steenkamp (1995) to measure the dependence structure between retailer and supplier. The two four-items measurement focus on each firm’s replaceability. Both reliability of the measures of supplier’s dependence and retailer’s dependence are well above 0.80.

We performed CFA to check the convergent and discriminant validity of the relationship constructs. The χ^2 -test statistic indicated a significant difference between the data and the model ($\chi^2 = 198.98$; $p < .01$), yet all of the other goodness-of-fit test statistics (TLI = .91; CFA = .93; RMSEA = .007) showed a good fit with the data. Also we found evidence for convergent validity due to the fairly high t-values (minimal t-value is 6.16; more than 50% of the t-values is higher than 10) and low cross-loadings. With the χ^2 -difference tests we tested the discriminant validity (see Appendix VI.3 for details).

Calculation of interdependency and dependence asymmetry. To assess the total interdependence in the channel relationship, we follow the additive method (Kim and Hsieh, 2003) and compute total interdependence as the sum of both dependencies on each other. The average total interdependence score is 7.44 (2.41) on a scale from 2 to 14. The interdependence asymmetry refers to the difference between each channel member's dependence on the other. In line with Kumar et al. (1995, 1998)'s approach, we calculate the relative retailer dependence and the supplier's relative dependence by using a spline regression (Marsh and Cormier, 2001). After calculating the absolute asymmetry of dependence as the absolute difference between retailer and supplier, we create two dummy variables: Dummy 1 = 1 if retailer's dependence is greater than supplier's dependence and 0 if else. Dummy 2 = 1 if supplier's dependence is greater than retailer's dependence and 0 if else. Next step is to develop the two new variables -- relative retailer dependence as the product of Dummy 1 and the absolute interdependence asymmetry and relative supplier dependence as the product of Dummy 2 and the absolute interdependence asymmetry. With these two variables, we can check whether the effects of supplier relative dependence is different from the retailer relative dependence. The average dependence asymmetry score, when the retailer was relatively more dependent (Dummy 1 = 1 – 31.1% of the relationships) is 1.62 (1.18). When the supplier is relatively more dependent (Dummy 2 = 1 – 59.9%), the average dependence asymmetry score is 1.83 (1.30). In nine percent of our sample, the relationships were rated as perfectly symmetrical. Comparing these statistics of interdependence structures with previous studies (cf. Van Bruggen, et al., 2005; Kumar, et al., 1995; Jap and Ganesan, 2000; Li and Dant, 2001; Kim and Hsieh, 2003), the channel relationships in our sample are featured moderate total interdependence, and relatively moderate asymmetry.

Supplier Characteristics. Our research model incorporates four main supplier characteristics related to its capabilities and willingness to share market information. First, the supplier's *market information processing capabilities* approximates its competency to share (useful) market information. These capabilities are measured by 7 items of market orientation (adapted from Jaworski and Kohli, 1993); making a distinction between three

sorts of skills: market-sensing, market-information dissemination, and market-relating capabilities (cf. Day, 1999). Market-sensing capabilities are about the supplier's skills in collecting market information and is being measured by two items ($\alpha = .71$). The measures on the skills to disseminate market information within the organization were deleted in the scale purification process, due to insignificant item loadings. This might well be due to the difficulty for the retailer buyer to make judgments about internal procedures at the supplier. Being good at translating market information into successful marketing propositions refers to the supplier's market-relating capabilities and is measured by two items ($\alpha = .85$), after deleting one item with a low correlation.

Second, *goal congruency* approximates the supplier's inclination to share market information with the retailer, because it expresses the degree in which both supplier's and retailer's objectives are compatible. Goal congruency (cf. Anderson and Weitz, 1989; Jap, 1999, Smith and Barclay, 1997) measured by 4 items (of which 1 was deleted from further analysis) has an 0.82 alpha-score.

Third, the *top management support of the supplier* is an expression of the supplier's willingness to share market information with the channel member. The amount of top management support is displayed by the different resources made available to develop cooperative efforts with the channel member. We borrowed a three items measurement from Gruen and Shah (2000) to assess the degree of perceived management support. We asked the respondent to rate the support his contact person at the supplier firm receives from his top management. The three items have an alpha of 0.84.

Fourth, an *incentive structure* lenient to cooperation with the supplier is an additional expression of willingness to develop cooperative efforts with the channel member. We employed a 3-item measurement. One (reversed) item was deleted after scale purification, due to low inter-item correlations. Alpha for the 2-items scale is 0.62.

We also performed CFA for this set of supplier characteristics variables and found an adequate fit between the data and the model (TLI=.93; CFI = .95; RMSEA=.072), despite the significant high χ^2 of 79.68 (df=44; $p<.01$). Convergent validity was confirmed by the significantly high t-values (minimum t-value = 5.62). Discriminant validity was tested by usual χ^2 -difference tests; all of the constructs were proven to be significantly different from each other; although the supplier's market sensing and market relating capabilities were very similar yet significantly different (χ^2 difference = 4.50; higher than the critical value of 3.84). See Appendix VI.4 for further details.

Table 6.4 Construct Measures of Supplier Characteristics

Operationalization						
<i>Market Information Processing Capabilities Supplier</i> (4 items)	<i>Goal Congruency</i> (3 items, $\alpha = 0.82$) (adapted from Anderson and Weitz, 1989)					
<i>Market Sensing Capabilities</i> ($\alpha = 0.71$)	1. Our firm and this supplier pursue compatible goals.					
1. This supplier performs a lot of market research on its own	2. Both companies have the same objectives in this relationship in common.					
2. This supplier is fast in tracing changes in consumer preferences	3. This supplier and our firm support each others' sales and profit targets.					
<i>Market Information Dissemination Capabilities*</i>	4. Our objectives differ significantly from those of this supplier (R)*					
3. At this supplier, all management levels are regularly updated about market developments.*						
4. Market information is professionally disseminated by this supplier throughout its organization.*						
<i>Market Relating Capabilities</i> ($\alpha = 0.85$)						
5. This supplier knows well how to interpret market developments.*						
6. This supplier is well capable of translating new market insights into marketing efforts.						
7. This supplier is very good at commercializing market information.						
<i>Top Management Support Supplier</i> (3 items, $\alpha = 0.84$) (adapted from Gruen and Shah, 2000)	<i>Incentive Structure Supplier</i> (2 items, $\alpha = 0.62$)					
The top management of this supplier ...	Our main contact person at this supplier ...					
1. ... provides our contact persons with the necessary financial resources to give shape to the collaboration with our firm.	1. ... receives appreciation from his/her own organization for the way in which he/she cooperates with our firm as a team.					
2. ... gives our contact person sufficient time to give shape to the collaboration with our firm.	2. ... is being evaluated by his/her own organization for the way he manages the relationship with our firm.					
3. ... makes an adequate amount of personnel available to our contact person for the collaboration with our firm.	3. ... is mainly accountable for his/her own individual sales. (R)*					
Descriptive Statistics						
<i>Construct</i>	<i>mean</i>	<i>s.d</i>	<i>min</i>	<i>max</i>	α	<i>n</i>
Market Information Processing Capabilities						
Market Sensing Capabilities	4.38	1.52	1.00	7.00	0.71	174
Market Relating Capabilities	4.47	1.36	1.00	7.00	0.85	173
Goal Congruency	4.97	1.19	1.00	7.00	0.82	174
Top Management Support Supplier	4.66	1.41	1.00	7.00	0.84	171
Incentive Structure Supplier	4.68	1.19	1.00	7.00	0.62	168

Continued

Table 6.4 Continued

Constructs	Confirmatory Factor Analysis								
	χ^2	df	χ^2/df	TLI	CFI	RMSEA			
							α	t-value (min)	t-value (max)
Market information processing skills	79.68	44	1.81	.93	.95	.072			
Market Sensing Capabilities							.71	8.72	9.91
Market Relating Capabilities							.85	11.22	13.25
Goal congruence							.82	8.63	12.14
Top Management Support Supplier							.84	10.50	11.97
Incentive Support Supplier							.62	5.62	7.03
* Item deleted from scale									

Retailer Characteristics. As we did with the set of supplier characteristics, we have also measured the retailer’s characteristics associated with its competency and willingness to share its market information. First, we measured the retailer’s market information processing capabilities: market sensing ($\alpha = 0.64$) and market relating capabilities ($\alpha = 0.92$).

Second, we asked questions about the retail firm’s predisposition to ally with suppliers (cf. relational proclivity, Johnson and Sohi (2001)); 4 items; alpha = 0.76) as one indicator for the retailer’s overall willingness to share market information with suppliers.

Table 6.5 Construct Measures of Retailer Characteristics

Operationalization	
<i>Market Information Processing Capabilities Retailer</i> <i>(4 items) (adapted from Jaworski and Kohli, 1993)</i>	<i>Firm’s predisposition to ally with Suppliers</i> <i>(Relational Proclivity) (cf. Johnson and Sohi,</i> <i>2001)(3 items, $\alpha = 0.76$)</i>
<i>Market Sensing Capabilities ($\alpha = 0.64$)</i>	In general, in my firm the view is that...
1. Our firm performs a lot of market research on its own	1. ... closer partner-type relationship with suppliers offer major advantages in doing business
2. Our firm is fast in tracing changes in consumer preferences	2. ... teaming up and working closely with suppliers allows us to be more effective.
<i>Market Information Dissemination Capabilities</i>	3. ... it is appropriate to share proprietary information with our suppliers if it is useful to do so.
3. At our firm, all management levels are regularly updated about market developments. *	4. ... most often, suppliers can be trusted to meet their obligations.*
4. Market information is professionally disseminated by our firm throughout our organization.*	5. ... most of the time, suppliers will not take advantage of us.*
<i>Market Relating Capabilities ($\alpha = 0.92$)</i>	6. ... the less any supplier knows about how we do things, the better off we are . (R)*
5. Our firm knows well how to interpret market developments.*	
6. Our firm is well capable of translating new market insights into marketing efforts.	
7. Our firm is very good at commercializing market information.	

Continued

Table 6.5 Continued

Top Management Support Retailer (own firm) (3 items, $\alpha = 0.78$)			Incentive Structure Retailer (own firm) (2 items, $\alpha = 0.73$) (borrowed from Gruen and Shah, 2000)						
Our top management ...			Our firm ...						
1.	... provides us with the necessary financial resources to give shape to the collaboration with this supplier.		1.	... gives appreciation for the way in which we cooperate as a team with this supplier.					
2.	... gives us sufficient time to give shape to the collaboration with this supplier.		2.	... evaluates us for the way we manage the relationship with our firm.					
3.	... makes an adequate amount of personnel available to us for the collaboration with this supplier.		3.	... holds us mainly accountable for our own individual sales. (R)*					
Descriptive Statistics									
Construct	mean	s.d	min	max	α	n			
Market Information Processing Capabilities									
Market Sensing Capabilities	4.42	1.25	1.00	7.00	0.64	173			
Market Information Dissemination Capabilities *									
Market Relating Capabilities	5.13	1.10	1.00	7.00	0.92	173			
Top Management Support Retailer	4.70	1.50	1.00	7.00	0.84	172			
Incentive Structure Retailer	4.50	1.23	1.00	7.00	0.62	165			
Firm's predisposition to ally with Suppliers	5.55	0.84	1.75	7.00	0.76	172			
Confirmatory Factor Analysis									
Constructs	χ^2	df	χ^2/df	TLI	CFI	RMSEA	α	t-value (min)	t-value (max)
information processing capabilities	52.82	44	1.20	.98	.99	.032			
Market Sensing Capabilities							.64	5.94	9.23
Market Relating Capabilities							.92	13.44	15.18
Predisposition to ally with suppliers							.76	8.28	11.07
Top Management Support Retailer							.78	8.13	13.26
Incentive Support Retailer							.73	8.22	9.91
* item deleted from scale									

Third, *retailer's top management support* is another indicator for willingness to share with the supplier. The amount of top management support given was measured by three items; borrowed from Gruen and Shah (2000). We asked the respondent to rate the support received from his own top management. The three items have an alpha of 0.78.

Fourth, the *incentive structure* lenient to cooperation with the supplier is an additional indication for the willingness to share information with the supplier. Comparable to the supplier's scale for this construct we employed three items from Gruen and Shah (2000). One (reserved) item was deleted after scale purification. Alpha for the 2-items scale is 0.73.

We also conducted confirmatory factor analysis on the scale items of this set of variables; and we found that the measurement model adequately fits the data, because all the test statistics are better than the threshold values as mentioned in the literature (Hair et al., 1998) (including the χ^2 of 51.45; df=44; p= 0.17). RMSEA is .032 which falls well below the threshold value of .10. TLI and CFI measures are both satisfactory above the recommended level of .90.

All of the measured retailer characteristics constructs show convergent validity because all item loadings are significant; t-values range from 5.92 to 15.18 and are well above the critical value for the .01 significance level (critical value = 2.58). Cross loadings are insignificantly low. Reliability for each construct was calculated in order to assess whether the specified indicators (items) are sufficient in their representation of their constructs. Most Cronbach alphas exceed the recommended level of .70.

We performed a series of chi-square difference tests in order to investigate the discriminant validity of the constructs. Evidence for this was found, because the chi-squares of all the constrained models significantly exceed that of the original unconstrained model. For details about the χ^2 -difference tests between the assumed original unconstrained model and constrained models, we refer to Appendices VI.5.

The correlations among the finalized measures of the antecedents are presented in Appendix VI.6. The overview of the antecedents' bi-variate correlations with the dependent variables (shared content and sharing mode) and the antecedents is given in Appendix VI.7. In order to prelude the use of all independent variables, we inspect this correlation matrix in combination with the correlations among the antecedents (in Appendix VI.6). The highest correlation score between blocks of antecedents is .47 (between retailer's relationship-specific investments and the supplier's goal congruency). Within the blocks of antecedents, we find higher correlations; in particular for the measures of the supplier's (.91) and retailer's capabilities (.52). The high individual correlations between the antecedents warn us to be wary of possible problems of multicollinearity (Hair, et al., 1998).

According to Anderson and Gerbing (1988)'s approach, we now test our hypotheses, and start with investigating the antecedents of Shared Content (6.3). In the subsequent paragraph we are going to take a closer look at the antecedents of the Sharing Mode of information-sharing arrangements (6.4). Since the hypotheses are directional, all statistical tests will be one-tailed (cf. Antia and Frazier, 2001; Frazier and Lasser, 1996).

6.3 Hypothesis Testing: Antecedents of Shared Market Information Content

Our hypotheses about the five groups of antecedents of Shared Content in channel relationships are tested using regression analysis. The data analysis is carried out in SPSS and focuses on Pearson correlation coefficients and ordinary least squares (OLS)

regression models. In the estimation procedure, we entered all the variables in a single step – through the “enter” entry mode.

Based on findings from the previous section, we also include the two channel context variables that were found to be related to the degrees of shared content. Hence, both industry (food versus others) and supplier type (brand manufacturer versus private label manufacturer) were added as covariates in our estimated models.

Table 6.6 shows the results from two OLS-regressions for our focal dependent variables. The first model tests the influences of antecedents on retailer’s shared content (paragraph 5.4.4). The second model concerns the supplier’s shared content with the hypothesized antecedents. Retailer’s degree of shared content (adjusted R-square = .27) and supplier’s degree of shared content (adjusted R-square = .34) both achieved good levels of predictive accuracy. Furthermore, the two equations were statistically significant below .01 level. The tolerance values for all variables measuring the fraction of the total variance in the independent variable not predicted by the other independent variables is high (Hair, et al., 1999). The lowest tolerance value found is .29 (much higher than the critical minimum value of .10; Hair et al., 1999) and this indicates that multicollinearity should not be a problem.

We will now discuss the tests of the hypotheses for the different antecedents of Shared Content per block/domain in our research model, primarily based on the outcomes of the multivariate analyses and if valuable, we complement the discussion with a reference to the bivariate correlations matrices in Appendices VI.6 and VI.7.

Table 6.6 Antecedents of the Degree of Shared Market Information Content

Independent Variables	Dependent Variables			
	Retailer's degree of Shared Content		Supplier's degree of Shared Content	
	H	beta scores (sign.)*	H	beta scores (sign.)*
<i>Market Channel Environment</i>				
1a: Consumer Demand Turbulence		-.21(.02)	H _{1a-s} : +	-.12(.84)
1b: Consumer Demand Turbulence SQ	H _{1a-r} : ∩	-.16(.04)		-.04(.27)
2: Consumer Demand Growth	H _{1b-r} : +	-.03(.63)	H _{1b-s} : +	.12(.11)
3: Purchase Complexity	H _{1c-r} : ?	.13(.16)**	H _{1c-s} : ?	.03(.78)**
4: Channel Inertia	H _{1d-r} : -	-.15(.08)	H _{1d-s} : -	-.04(.35)
<i>Supplier Network</i>				
5: Network Horizon	H _{2a-r} : -	.06(.75)	H _{2a-s} : -	.00(.61)
6: Network Concentration	H _{2b-r} : +	.21(.01)	H _{2b-s} : -	-.23(.08)
7: Competition Intensity among Suppliers	H _{2c-r} : -	.04(.66)	H _{2c-s} : +	-.03(.60)
8: Competition Intensity among Retailers	H _{2d-r} : +	.02(.43)	H _{5fs} : -	.13(.83)
9: Information Sharing Norms	H _{2e-r} : +	.32(<.01)	H _{2d-s} : +	.12(.12)
10: Negative Connectedness	H _{2f-r} : -	-.06(.25)	H _{2e-s} : +	.04(.34)
11: Positive Connectedness	H _{2g-r} : +	.04(.34)	H _{2f-s} : -	-.09(.18)
<i>Relationship Characteristics</i>				
12: Age of Relationship	H _{3a-r} : +	***	H _{3b-l} : +	***
13: Trust in the Supplier	H _{3b-r} : +	.03(.38)	H _{3b-s} : +	.00(.49)
14: Relationship-specific Investment	H _{3c-r} : +	.16(.06)	H _{3c-s} : -	-.15(.10)
15: Contract Formalization	H _{3d-r} : +	-.00(.50)	H _{3d-s} : +	.07(.19)
16: Total Interdependence	H _{3e-r} : +	.22(.01)	H _{3e-s} : +	.12(.02)
17a: Relative Retailer Dependence	H _{3f-r} : -	-.05(.31)	H _{3f-s} : -	-.17(.16)
17b: Relative Supplier Dependence	H _{3f-r} : -	.04(.65)	H _{3f-s} : -	-.11(.16)
<i>Supplier Characteristics</i>				
18a: Market Sensing Capabilities	H _{4a-r} : -	-.22(.03)	H _{4a-s} : +	.30(.01)
18b: Market Relating Capabilities	H _{4b-r} : +	.20(.06)	H _{4b-s} : +	.22(.08)
19: Goal Congruency	H _{4c-r} : +	.09(.19)	H _{4c-s} : +	.13(.18)
20a: Top Management Support Supplier	H _{4d-r} : +	-.15(.92)	H _{4d-s} : +	.18(.08)
20b: Incentive Structure Supplier	H _{4e-r} : +	.03(.37)	H _{4e-s} : +	.06(.36)
<i>Retailer Characteristics</i>				
21a: Market Sensing Capabilities	H _{5a-r} : +	.02(.43)	H _{5a-s} : -	.05(.67)
21b: Market Relating Capabilities	H _{5b-r} : +	.25(.01)	H _{5b-s} : +	.13(.17)
22: Predisposition to ally with suppliers	H _{5c-r} : +	.15(.06)	H _{5c-s} : +	.07(.34)
23a: Top Management Support Retailer	H _{5d-r} : +	.01(.48)	H _{5d-s} : +	-.19(.97)
23b: Incentive Structure Retailer	H _{5e-r} : +	-.05(.66)	H _{5e-s} : +	.01(.47)
<i>Covariates</i>				
Industry (Food = 1; other industries = 0)	+	.08(.17)	+	.39(.25)
Supplier Type (brand manufacturer = 1; private label = 0)	+	-.01(.52)	+	.11(.36)
R-square		.43		.52
Adj. R-square		.27		.34
F (sign.)		2.56 (<.01)		2.95 (<.01)
N		131		111

Notes: missing values listwise deleted; * p-value is one-tail probability; bold beta-values and p-values indicate acceptance of the hypothesis; ** p-value is two-tail probability due to the nature of this hypothesis. *** Note: we have tested the models with inclusion of the variable "relationship age" and found no significant effect. Due to the large number of missing values in this variable, we decided to take out this variable. Doing so did not have any effect on the structure of the results shown here.

Market Channel Environment. Consumer demand turbulence, consumer demand growth, purchase complexity, and channel inertia are factors of the market channel environment expected to have an influence on retailer's and supplier's shared content.

In our research model as introduced in Chapter 3, we mentioned the contradictory predictions from two research perspectives concerning the effect of consumer demand turbulence on retailer's shared market information content. The supply chain optimization approach expects a positive relationship between the level of consumer turbulence and shared content of the retailer, while empirical behavioral marketing channel literature would expect a negative relationship. Our research model combines the two types of predictions and H_{1a-r} hypothesizes therefore an inverted u-shape, because in the case of low turbulence (stable demand), the benefits of improved inter-firm coordination outweigh the costs for the retailer of more dependency. However, as consumer demand becomes more turbulent, the predictive value of the retailer's shared information decreases and does not compensate the increasing costs of becoming more dependent of the supplier.⁹ Our results do not support this hypothesis, but it discovers another nature of the non-linear relationship. The quadratic term is significant ($b = -.16$; $p = .04$), yet the linear term is negative and significant. This indicates that the shape of the curve is not an inverted-U, but it is concave. This form implies that the effect of consumer demand turbulence on retailer's shared content is negative and becomes even more negative when turbulence increases ($b = -.21$; $p = .02$). So, as consumer demand becomes more turbulent, the retailer shies away from sharing in an accelerated way.

We further check for the supplier's shared content as a reaction to consumer demand turbulence. In Chapter 3 we posed that both research perspectives, supply chain optimization and empirical behavioral, would have a prediction in the same positive direction. The supply chain optimization perspective states that through sharing their market information, suppliers have a better opportunity to explain more about consumer demand when the environment is more turbulent. The empirical behavioral market channel literature would expect that suppliers faced with turbulent consumer demand rather tighten their buyer relationships to reduce another source of turbulence (H_{1a-s}). Our findings show that this is not the case; the beta-values for both terms are not significantly positive ($b = .12$; $p = .84$; $b = -.04$; $p = .27$). This implies that the supplier's degree of shared content does not increase in more turbulent consumer demand situations.

Our findings support the predictions of the empirical behavioral perspective, rather than the one of the supply chain optimization perspective. In particular for retailers, sharing of their market information is diminished in an accelerated way when consumer

⁹ Note: consumer demand turbulence as a predictor variable is mean-centered (before forming the quadratic term) to reduce multicollinearity (Jaccard, Turrisi, and Wan, 1990)

demand becomes more turbulent. In a turbulent environment, retailers prefer to keep their market information to themselves and not to engage in any close sharing arrangements with suppliers. They like to keep their bets open and remain flexible in switching from one trading partner to the other.

Our hypothesis about the effect of consumer demand growth on sharing market information content (H_{1b-r} and H_{1b-s}) is that both retailers and suppliers share more content with each other in situations of a growing consumer demand. Our findings do not support these hypotheses, either for the retailer ($b = -.03$; $p=.63$) or for the supplier's degrees of content ($b=+.12$; $p=.11$). Possibly, the effect of consumer demand growth on the supplier's degrees of shared content is taken away by correlations with other explanatory variables (see Appendix VI.6). We find, for instance, a relatively high correlation between consumer demand growth and consumer demand turbulence ($r=.36$; $p<.01$). Another explanation for not finding a significant positive relationship between the consumer demand growth and shared content is that in growing markets channel parties do not need the help of each other so much. Or perhaps, in slowly growing saturated markets, retailers and suppliers do seek each others' assistance and want each other's market information to increase the profitability by improving the channel relationship's efficiency.

The impact of purchase complexity on degree of shared content is hypothesized in H_{1c-r} and H_{1c-s} as being undirected, because there are more benefits as well as costs associated with information in such more technical and complicated buying situations. Our results do not give some evidence for any direction. There may be a tendency that product complexity enhances the shared content by the retailer ($b = +.13$; $p=.16$; two-tailed probability), but this is almost certainly not the case for the shared content by the supplier ($b=+.03$; $p=.78$; two-tailed probability).

Hypotheses H_{1d-r} and H_{1d-s} assume that the amount of channel inertia – the length of the structural time lag in reacting to changes in consumer demand – inhibits the sharing of market information content by the channel members. We find a marginal support for one of the two hypotheses; i.e., for the retailer's degrees of shared content ($b = -.15$; $p=.08$); no support is found for the suppliers ($b= -.04$; $p=.35$). This suggests that retailers share relatively less market information in channels of high inertia and that the supplier's degree remains unaffected by the level of channel inertia.

Overall, we find that the retailer's shared content is more influenced by market channel environment variables; than the supplier's shared content. The market channel environment's predominant impact stems from the level of consumer demand turbulence. The more consumer demand turbulence, the lower degrees retailers share with their suppliers. We find additional influences from consumer demand growth, product complexity, and channel inertia. The more complex the product is, the more the retailer

shares; and the more inert the channel is, the less market information content is being exchanged by both channel parties.

<i>Market Channel Environment</i>	<i>Retailer's degree of Shared Content</i>	<i>Supplier's degree of Shared Content</i>
1a: Consumer Demand Turbulence	--	n.s.
1b: Consumer Demand Turbulence SQ	--	
2: Consumer Demand Growth	n.s.	n.s.
3: Purchase Complexity	n.s.	n.s.
4: Channel Inertia	-	n.s.

-- = negative relationship with $p<.01$; - = negative relationship with $p<.05$;
++ = positive relationship with $p<.05$; + = positive relationship with $p<.05$;

Supplier Network. We expect that the nature of the supplier network has an effect on the shared content in channel relationships. The supplier network is constituted by structural dimensions, competition intensity, information sharing norms, and connectedness. The structural dimensions of the supplier network are here defined by the network horizon (magnitude) and network concentration (H_{2a-r} to H_{2b-s}). In hypothesis H_{2a-r} we theorize that a larger number of suppliers (supplier network horizon) would lower the degree of shared content, because of the following reasons. Retailers generally prefer to source from many different suppliers, because they want to prevent themselves from becoming (too) dependent from one supplier. This buying strategy scatters the retailer buyer’s attention over a widespread group of smaller trading partners, and subsequently it reduces the opportunity to engage in more collaborative open sharing arrangements. A reduced opportunity to have the retailer’s attention also minimizes the possibility for the supplier to share higher degrees of content (H_{2a-s}). Our study shows that the number of the suppliers supplying products in the product category (network horizon) does not have an effect on the shared content in channel relationships (for retailers: $b = +.06$; $p=.75$; for suppliers: $b = +.00$; $p=.61$), and hence we reject H_{2a-r} and H_{2a-s} .

Likewise, hypothesis H_{2b-r} advances a positive relationship between network concentration and sharing by the retailer. A more concentrated supplier network allows the retailer to focus its dedication to a smaller number of important suppliers. Hypothesis H_{2b-s} however posits a negative relationship between network concentration and the supplier’s shared content, because a higher concentration implies for them that the retailer has strong ties with their direct competitors. Our study confirms the hypotheses that a higher degree of network concentration stimulates retailers to share more content with suppliers ($b = +.21$; $p=.01$) and, although marginally significant, a concentrated network impacts the supplier’s shared content negatively ($b = -.23$; $p=.08$). In fact, it is not so much the number

of suppliers, but the concentration in the supplier network having an un-balancing effect in market information sharing: in more concentrated supplier networks, retailers share higher degrees information, while suppliers tend to restrict their degrees in shared content. Later we will go into depth in discussing this two-edged effect of network concentration.

In addition to structural dimensions of the supplier network, also competition intensity and cultural dimensions (information sharing norms) in the supplier network are incorporated in the study (H_{2c-r} to H_{2e-s}). Retailers are less tempted to share with their upstream trading partners if their suppliers are engaged in intense competitive wars. It is better for the retailer to play the *divide-and-rule* game in order to come up with the best deal when suppliers are doing their best to compete for the retailer's preference. So in such competitive circumstances, there is no immediate need for the retailer to start sharing more content. Hypothesis H_{2c-r} therefore assumes a negative relationship. Whereas suppliers in a severe competitive situation are expected to use their market information sharing as a competitive weapon in order to win the retailers' preference (as an extra service to them). H_{2c-s} assumes a positive relationship. The regression analyses show that there is no effect from competition intensity on the shared content from neither retailer nor supplier (for retailer: $b = .04$; $p = .66$; for supplier: $b = -.03$; $p = .60$). Competition intensity among retailers does not have any impact on the shared content from any channel member either ($b = .02$; $p = .43$ for retailer's shared content; $b = +.13$; $p = .83$ for supplier's shared content)

Shared norms in the supplier network concerning information sharing with retailers were hypothesized to have positive effects on the shared content by both channel members (Hypotheses H_{2e-r} and H_{2e-s}). In supplier networks with favorable information-sharing norms, the retailers share more information ($b = +.32$; $p < .01$), whereas the effect of these norms on the suppliers' shared content is not significant ($b = +.12$; $p = .12$). The relationship between supplier's shared content and information-sharing norms is significant in the bivariate correlation matrix ($r = +.23$; $p = .03$). Probably, the relationship in the multivariate analysis dissolves, because some of the effect is taken away by other explanatory variables. A good suspect is the variable supplier's market relating capabilities ($r = .17$, $p < .05$); implying that the more a supplier has developed his market relating capabilities, the more the retailer tends to think that the supplier operates in a network with already established information sharing norms.

The amount of market information sharing may not be only dependent on characteristics of the supplier network as a whole, but also on possible connections among the different supplier relationships in the network. For that reason we included the degree of negative and positive connectedness of the focal retailer-supplier relationship with other supplier relationships. If the retailer-supplier relationship is negatively connected with other supplier relationships in the network, then the retailer is hampered to share information openly since the retailer does not want to harm the other supplier relationships

(Hypotheses H_{2f-r}). Yet in such a situation, the supplier is more motivated to compete with its direct competitor and share more openly with the retailer (Hypotheses H_{2f-s} is positive). Both hypotheses are not supported by our empirical results (for retailer: b= -.06; p=.25; for supplier: b= +.04; p=.34).

If the retailer-supplier relationship is positively connected with other supplier relationships in the network, then the retailer might be extra motivated to share information openly since the retailer may provoke the other supplier relationships to start sharing with the retailer (Hypotheses H_{2g-r}). We find however no support for this hypothesis either (b = +.04; p = .34). Positive connectedness is also to have a negative influence of the supplier’s shared content (Hypotheses H_{2g-s}). We do not find evidence for this relationship. The shared content by the supplier appears to be unrelated with the level positive connectedness (b = -.09; p=.18).

Recapitulating the supplier network effects on shared content in channel relationships; it occurs that this is primarily driven by two main factors. First, the concentration within the supplier network enhances the retailer’s shared content on the one side but it diminishes the supplier’s shared content on the other side. Second, the greatest influence on retailer’s shared content appears to come from the information sharing norms in the supplier network. As information sharing norms in the supplier network exist, retailers feel obliged to share higher degrees; the shared content by suppliers is however not affected by these sharing standards. The network horizon, competition intensity, positive and negative connectedness do not have a significant influence on the shared content from any channel member.

<i>Supplier Network</i>	<i>Retailer's degree of Shared Content</i>	<i>Supplier's degree of Shared Content</i>
5: Network Horizon	n.s.	n.s.
6: Network Concentration	++	-
7: Competition Intensity among Suppliers	n.s.	n.s.
8: Competition Intensity among Retailers	n.s.	n.s.
9: Information Sharing Norms	++	n.s.
10: Negative Connectedness	n.s.	n.s.
11: Positive Connectedness	n.s.	n.s.

-- = negative relationship with $p<.01$; - = negative relationship with $p<.05$;
 ++ = positive relationship with $p<.05$; + = positive relationship with $p<.05$;

Relationship Characteristics. The influence of relationship characteristics on the shared content was theorized in hypotheses H_{3a-r} to H_{3f-s}. We expect the age of the relationship to have a positive effect on the sharing of both channel members, because older relationships have survived different and maybe difficult episodes; channel members are more

accustomed to each other and are likely to be more open to each other (H_{3a-r} and H_{3a-s}). Since relationship age had a lot of missing values and was never significant in the bivariate analyses, it was dropped from further consideration.

Based on the numerous results from previous marketing channel studies (Morgan and Hunt, 1994; Geyskens, 1998) and the abundance of citations in the trade press stating the critical importance of trust in ECR-projects (e.g., the ECR Europe's CPFR Guide to Implementation, 2001), we hypothesize that trust in the channel counterpart (i.e. supplier) plays a pivotal role in collaborative channel communication (H_{3b-r} and H_{3b-s}), or in this particular case, in market information sharing in channel relationships. Our study demonstrates that no positive effect of trust on the shared content from the retailer can be found ($b = +.03$; $p = .38$). Apparently, retailers do not prefer to share more content with suppliers that they trust more; it seems that their decision to choose a sharing partner is largely driven by more professional considerations, like as we will report later, dependency and competency, rather than sympathetic relationship sentiments as trust is.

Despite the significant bivariate correlation score between the supplier's degree of shared content and trust ($r = .21$; $p < .05$; see Appendix VI.7), trust does not significantly influence the shared content by the supplier ($b = .00$; $p = .49$). Probably, the influence of trust on the degree of shared content by the supplier is taken away by other variables: most likely by market sensing and relating capabilities of suppliers, because retailers tend to trust more suppliers with good market-sensing and market-relating capabilities ($r = .22$ and $r = .28$ respectively; see Appendix VI.6). As we will see later, suppliers with good relevant capabilities have largely a positive impact on shared content. An alternative might be that trust is a consequence of supplier's degree of shared content; and that higher degrees of shared content (relatively higher openness) are in fact clear trust signals to the retailer that the supplier can be relied upon.

The investments specially made by the retailer to cater to the supplier relationships, we theorize as having both a positive and a negative influence on the sharing of market information in the channel relationship (H_{3c-r} and H_{3c-s}), for the retailer and the supplier, respectively. On the one hand, the retailer is motivated to share market information after it has invested a lot in the supplier relationship, because the loss of this investment when the supplier relationship is terminated must be prevented (H_{3c-r} is positive). Yet on the other hand, the investments made by the retailer can be considered a hostage to suppliers. Having such a hostage does not really stimulate them to put extra effort in the relationship with the retailer and therefore we expect suppliers not to share more market information (H_{3c-s} is negative). We find support for both hypotheses that the amount of relationship-specific investments increases the retailer's shared content ($b = +.16$; $p = .06$) while – although marginally significant – it decreases the supplier's shared content ($b = -.15$; $p = .10$); suggesting that the supplier refrains from sharing more content with the retailer, when

the retailer has dedicated more investments to its relationship with the supplier and becomes *locked-in* the supplier relationship. We can say that the amount of relationship-specific investments leads to a hostage situation by the supplier.

Contract formalization can perhaps safeguard all the information sharing efforts (and relationship-specific investments) made by channel parties. The hypotheses for both retailer’s and supplier’s shared content are that a well-formalized contract encourages channel members to share more market information (H_{3d-r} and H_{3d-s} are positive). Our research does not find that the contract formalization protects the extra market sharing investments by the channel members, does not stimulate shared content from either side (respectively $b = -.00$; $p = .50$; $b = +.07$; $p = .19$).

The hypotheses about the effect of the total interdependence on the retailer’s and supplier’s shared content (H_{3e-r} and H_{3e-s}) are both positive. As for the retailer’s shared content, we expect that retailers choose to share higher degrees with suppliers they have more common interests with. The chance of misuse, leakage and loss of negotiating power might be less in more interdependent relationships. When it comes down to the supplier’s shared content, the supplier cannot afford to withhold information when he and the retailer are both very much dependent on each other; that might harm to his position to a too great extent. We find support for both effects: H_{3e-r} for retailer’s shared content is accepted ($b = +.22$; $p = .01$), and H_{3e-s} for the supplier’s shared content ($b = +.12$; $p = .02$).

The expected effects of dependence asymmetry on the shared content of the two channel members (from H_{3f-r} to H_{3g-s}) are totally the opposite of the previous hypotheses. The benefits and costs of sharing information are respectively lower and higher because, in general, asymmetry in dependence creates an instable and conflictual situation with possibilities of exploitation and retaliation. We do not find any support for any of the four hypotheses.

<i>Relationship Characteristics</i>	<i>Retailer's degree of Shared Content</i>	<i>Supplier's degree of Shared Content</i>
13: Trust in the Supplier	n.s.	n.s.
14: Relationship-specific Investment	+	-
15: Contract Formalization	n.s.	n.s.
16: Total Interdependence	++	++
17a: Relative Retailer Dependence	n.s.	n.s.
17b: Relative Supplier Dependence	n.s.	n.s.

-- = negative relationship with $p < .05$; - = negative relationship with $p < .10$;
++ = positive relationship with $p < .05$; + = positive relationship with $p < .10$;

All-in-all, sharing of market information with respect to the influence of relationship characteristics begins to look like a *power game*, much more than a *trusting-game*. Trust in

the supplier does not play a major role. Channel parties only share with counterparts when they are mutually dependent; or they share perhaps out of fear of losing their relationship-specific investments.

Supplier Characteristics. We expect to find additional explanations for the shared content in supplier characteristics. In the first place, the shared content may depend on the supplier's capabilities to give good quality market information (market sensing capabilities) and to be good at processing the received market information (market relating capabilities). In the second place, the sharing may be influenced by the supplier's willingness to behave on behalf of the retailer's objective (goal congruency) and to invest extra time and effort in channel collaborations (top management support and incentive structure).

In accordance to hypotheses H_{4a-r} and H_{4a-s} , the impact of the supplier's *market sensing capabilities* on shared content is different for the supplier's shared content and the retailer's. On one hand, suppliers with good capabilities to sense the marketplace share more content with their retailers ($b=+.30$; $p=.01$; H_{4a-s} is accepted), while on the other hand these skilled suppliers receive less market information content from the retailer ($b=-.22$; $p=.03$; H_{4a-r} accepted). Probably the explanation is that these suppliers can (better) collect market information themselves; retailers are not in the position to make a valuable contribution and basically listen to what these suppliers have to tell them about the market developments.

In agreement with hypothesis H_{4b-r} about the effect of the supplier's market-relating capabilities, we find that the relationship is significant ($b=+.20$; $p=.06$). This means that retailers give more of their market information to suppliers having the capabilities to interpret the market information well and to translate it into marketing actions.

As posited by hypothesis H_{4b-s} , we find a positive effect of supplier's market capabilities on the shared content by suppliers; albeit marginally significant ($b=+.22$; $p=.08$). It demonstrates that the supplier's good skills in relating to the market seem to go hand-in-hand with collaborative sharing practices as an integral part of their channel bonding strategy. This finding provides a tentative support to H_{4b-s} and also matches a previous study by Siguaw, et al. (1999) that found that market-oriented channel parties tend to collude and engage in collaborative practices with one another.

Hypotheses H_{4c-r} to H_{4e-s} concern the effects of the three other supplier characteristics: goal congruency, top management given to collaborations with the retailer, and the extent to which the supplier's incentive structure rewards collaboration with the retailer. All of the hypotheses are positive because they are factors allegedly inviting retailers to share market information (H_{4c-r} to H_{4e-r}) and stimulating the shared content by the supplier (H_{4c-s} to H_{4e-s}).

We find no support for the positive effect of goal congruency on the retailer's or supplier's shared content ($b = +.09$; $p = .19$ and $b = +.13$; $p = .18$). The strong bi-variate correlations of goal congruency with the supplier's shared content ($r = .37$; $p < .01$) do not appear to result into effects; perhaps due to the correlations with other explanatory variables. The supplier's goal congruency is strongly related to the supplier's market-relating capabilities.

Some evidence is found that top management of the supplier supporting collaboration efforts with the retailer does have a stimulating impact on the supplier's shared content. The effect that suppliers do share more information with the backup from their top managers ($b = +.18$; $p = .08$) (H_{4d-s}) reaches marginal significance. Yet, top management support from the supplier is apparently not effective in inviting retailers to share higher degrees of content ($b = -.15$; $p = .92$).

An incentive structure that rewards cooperation with the retailer does not directly result in more shared content from either side (retailer: $b = +.03$; $p = .37$ and supplier $b = .06$; $p = .36$). However, a cooperative incentive structure at the supplier's side shows to have significant positive associations with the degree of shared content of the retailer ($r = .21$; $p < .05$); it might be that some of the effect is taken away from this variable by the total interdependence ($r = .17$; $p < .05$). Interdependent supplier-retailer relationships embrace a more cooperative incentive structure to work together with the retailer. The incentive structure is also significantly related to the supplier's shared content ($r = .23$; $p < .01$), but its effect does not surface perhaps due to the correlations with other explanatory variables, like top management support from the supplier ($r = .40$; $p < .01$).

Summarizing the effect of supplier characteristics on shared content in channel relationships, we find that the most dominant factors are both supplier's capabilities of market-sensing and market-relating. Retailers care to share with suppliers good at market-relating; not with market-sensing suppliers. Suppliers good at market-sensing and –relating are prone to tell their retailers about their market findings. They share even more when they take extra measures by giving top management support for the retailer collaboration.

<i>Supplier Characteristics</i>	<i>Retailer's degree of Shared Content</i>	<i>Supplier's degree of Shared Content</i>
18a: Market Sensing Capabilities	--	++
18b: Market Relating Capabilities	+	++
19: Goal Congruency	n.s.	n.s.
20a: Top Management Support Supplier	n.s.	+
20b: Incentive Structure Supplier	n.s.	n.s.

-- = negative relationship with $p < .05$; - = negative relationship with $p < .10$;
++ = positive relationship with $p < .05$; + = positive relationship with $p < .10$;

Retailer Characteristics. Not only explanations for the degree of shared content in channel relationships are to be found in the supplier characteristics, but also in the characteristics of the retailer. The retailer's capabilities to collect market information (*market-sensing*) are expected to stimulate the sharing by retailers (H_{5a-r}), while it is to bring a halt to the sharing of suppliers (H_{5a-s}). Retailers are then able to collect market information themselves and find less need for the supplier's information. However, no support is found for these hypotheses (respectively, $b = +.02$; $p = .43$; $b = +.05$; $p = .67$). It seems that not all retailers with good market sensing capabilities automatically share their well-collected market intelligence with suppliers ($b = +.02$; $p = .43$). A nuance should be added here: the direct effect may have been taken away by the correlation with the next variable: the retailer's market-relating capabilities ($r = .53$; $p < .01$).

The capabilities to make good use of market information (*market-relating*) are expected to affect the sharing from both sides positively (H_{5b-r} and H_{5b-s}). First, retailers with good market-relating skills are expected to involve their suppliers to implement their market ideas. The notion of channel bonding (Day, 1994) is very much compatible with such types of retailer skills. Second, suppliers feel invited to share their information with retailers having these types of skills, because it gives them the opportunity to reflect and think about alternative strategies to implement their marketing ideas. We only find support for H_{5b-r} on the retailer's sharing ($b = +.25$; $p = .01$). As for H_{5b-s} , the effect on supplier's degree of shared content we cannot find confirmation ($b = +.13$; $p = .17$), in spite of the significant bivariate correlation between them ($r = .25$; $p < .01$). The influence of this variable might have been diluted by its correlations with other independent variables. Strong correlations with the retailer's market-relating capabilities and supplier's sensing capabilities (see Appendix VI.6) that have a significant effect on the supplier's shared content ($r = .16$; $p < .05$). Retailers with good market-relating capabilities seem to team up with market-sensing suppliers to share more information content (conform the reference group theory as tested among channel members by Siguaw et al., 1998).

Indicators for the retailer's willingness to share information are the retailer's predisposition to ally with supplier, the support given by top management to collaborate and the incentive structure lenient to work together with the supplier and all assist (possibly) the sharing in the channel (H_{5c-r} to H_{5e-s}). Our study finds that the only positive impact from this set of variables is the effect of the retailer's disposition to ally with suppliers on the shared content by retailer ($b = +.15$; $p = .06$; marginally significant). Retailer's top management support and an incentive structure lenient to cooperate with the supplier do not materialize in more shared content by the retailer (respectively, $b = +.01$; $p = .48$, and $b = -.05$; $p = .66$). No impact of these variables is found to positively affect the supplier's degree of shared content (retailer's top management support, $b = -.19$; $p = .97$;

retailer's incentive structure, $b = +.01$; $p = .47$; predispositions to ally with suppliers, $b = +.07$; $p = .34$).

Concluding, we find that two retailer characteristics affect the retailer's shared content: the retailer's marketing-relating capabilities, and the retailer's predisposition to ally with suppliers. Other retailer characteristics do not lead to extra shared content by the retailer; and do not elicit the supplier to share more with the retailer either.

<i>Retailer Characteristics</i>	<i>Retailer's degree of Shared Content</i>	<i>Supplier's degree of Shared Content</i>
21a: Market Sensing Capabilities	n.s.	n.s.
21b: Market Relating Capabilities	++	n.s.
22: Predisposition to ally with suppliers	+	n.s.
23a: Top Management Support Retailer	n.s.	n.s.
23b: Incentive Structure Retailer	n.s.	n.s.

-- = negative relationship with $p < .05$; - = negative relationship with $p < .10$;
 ++ = positive relationship with $p < .05$; + = positive relationship with $p < .10$;

Covariates (Food Industry and Supplier Type). Considering the results found in the previous Chapter 5, paragraph 5.4.4, it is interesting that we did not find any industry effects (from food) on the actual degree of shared content from neither channel member (respectively, $b = .08$; $p = .17$; $b = +.39$; $p = .25$) in the multiple regression. A possible explanation for not finding these industry-specific differences is that sharing higher degrees of content does not lie in the type of industry, but can be brought into connection with more fundamental factors. As shown above in Table 6.7, the food industry is characterized by less channel inertia (mean score of food is 2.23 significantly higher than non-food; $t = 4.31$, $p < .01$), a structure of high supplier network concentration (mean score 2.71 versus non-food 2.27; $t = -2.77$; $p = .01$), and a bit more favorable climate for collaborative channel strategies in terms of well-established norms about information sharing (mean score is 4.18 versus the mean score of non-food of 3.85; this difference is not statistically significant) that promote the exchange of market information sharing.

The second covariate, supplier type (brand manufacturer versus private label manufacturer), does not have an independent effect on shared content either (resp. $b = -.01$; $p = .52$ and $b = .11$; $p = .36$). Probably the influence of this variable is also taken over by other variables in the regression. Also two other variables are linked to the supplier types: retailer's dependence and supplier's capabilities (see Appendix VI.6). Retailers are more dependent on brand manufacturers ($t = -2.05$; $p = .04$) than on their private label producers. Brand manufacturers outperform their private label competitors in their capabilities of market-sensing and market-relating (respectively, $t = -2.41$; $p = .02$; and $t = -1.68$; $p = .10$).

Table 6.7 Industry and Supplier Type Comparisons with Related Antecedent Variables

	Industry			
	Food	Non-Food	Overall	t-value (sign.)
Market Channel Environment				
Consumer Demand Turbulence	4.14	4.62	4.57	1.27 (.21)
Consumer Demand Growth	4.38	4.24	4.26	-.35 (.73)
Purchase Complexity	3.03*	3.62*	3.57	1.68 (.10)
Channel Inertia	2.23***	3.56***	3.43	4.31 (<.01)
Supplier Network Characteristics				
Network Horizon	13.00	15.28	15.06	.50 (.62)
Network Concentration	2.71**	2.27**	2.31	-2.77 (.01)
Competition Intensity among suppliers	4.50	4.04	4.08	-1.30 (.20)
Information Sharing norms	4.18	3.85	3.88	-.96 (.34)
Negative Connectedness	2.92	2.80	2.81	-.35 (.72)
Positive Connectedness	3.39	2.93	2.98	-1.39 (.17)
	Supplier Type			
	Brand Manufacturer	Private Label Manufacturer	Overall	t-value (sign.)
Relationship Characteristics				
Trust	5.20	5.33	5.23	.82 (.42)
Relationship-specific investments	3.59	3.86	3.68	1.18 (.24)
Supplier Dependence on Retailer	4.09	3.85	4.03	-.94 (.35)
Retailer Dependence on Supplier	3.59**	3.08**	3.43	- 2.05 (.04)
Supplier Characteristics				
Supplier's Market-Sensing Capabilities	4.55***	3.97***	4.38	- 2.41 (.02)
Supplier's Market-Relating Capabilities	4.58*	4.21*	4.47	-1.68 (.10)
Goal Congruency	5.00	4.89	4.97	-.56 (.58)
Top Management Support	4.61	4.85	4.66	1.03 (.31)
Incentive Structure	4.73	4.62	4.68	- .54 (.59)
*p<.10; **p<.05; ***p<.01				

*p<.10; **p<.05; ***p<.01

In summary, we can draw the following preliminary conclusions as to the antecedents found to be significant in affecting the degree of content shared in a channel relationship. The first conclusion is that we are able to separate the important antecedents from the less influential ones. The latter antecedents have appeared to be of little importance in helping to explain the degree of shared content. One of these factors, *trust*, will later be discussed more specifically. The second conclusion to be drawn is that from those factors having an influence, we can qualify them as either being an *endorser* or as an *inhibitor* of shared content in channel relationships. In Table 6.8, the endorsers are marked by a (+) while the inhibitors have a (-).

Endorsers and Inhibitors. The degree of shared content by retailers is mainly enhanced through seven factors: by supportive information-sharing norms in the supplier network, by more concentration in the supplier network, by relationship-specific

investments made by the retailer, by the retailer’s relationship-specific investments, by the total interdependency in the channel relationship, by the retailer’s market-relating capabilities and by the retailer’s disposition to ally with suppliers. The retailer’s degree of sharing is inhibited by three factors: supplier’s market-sensing capabilities, turbulence in consumer demand and channel inertia.

Table 6.8 *Endorsers and Inhibitors of Shared Content in Channel Relationships*

<i>Antecedents</i>	<i>Retailer's degree of shared content</i>	<i>Supplier's degree of shared content</i>
<i>Market Channel Environment</i>	<ul style="list-style-type: none"> • consumer demand turbulence (-) • channel inertia (-) 	
<i>Supplier Network</i>	<ul style="list-style-type: none"> • network concentration (+) • information sharing norms (+) 	<ul style="list-style-type: none"> • network concentration (-)
<i>Relationship Characteristics</i>	<ul style="list-style-type: none"> • total interdependence (+) • relationship-specific investments (+) 	<ul style="list-style-type: none"> • total interdependence (+) • relationship-specific investments (-)
<i>Supplier Characteristics</i>	<ul style="list-style-type: none"> • market- sensing capabilities (-) • market-relating capabilities (+) 	<ul style="list-style-type: none"> • market-sensing capabilities (+) • market-relating capabilities (+) • top management support (+)
<i>Retailer Characteristics</i>	<ul style="list-style-type: none"> • market-relating capabilities (+) • predisposition to ally with suppliers (+) 	
(+) = endorser, (-) = inhibitor.		

The degree of shared content by the supplier is endorsed by four factors: the total interdependency in the channel relationship, the supplier’s market sensing capabilities, supplier’s market relating capabilities, and the supplier’s top management support. Two inhibitors cease a supplier to share higher degrees of content: higher concentration in the supplier network, and relationship-specific investment by the supplier.

With the detection of these inhibitors and endorses, it becomes clear that five factors have a two-sided effect on the sharing of market information between channel members: total interdependency, relationship-specific investments by the retailer, supplier’s market-relating capabilities, supplier’s market-sensing capabilities, and supplier network concentration. Suppliers that have good market-relating capabilities share higher degrees of market information and also invite their retailers to share with them. An increase in total interdependency in the channel relationship also encourages both channel members to

share higher degrees of their market information. Relationship-specific investments, supplier's market-sensing capabilities and supplier network concentration have a more complicated upshot: they are both the endorser for one party, but simultaneously an inhibitor for the other.

Lessons learnt from this list of endorsers and inhibitors are that market information sharing is predominantly a matter of the channel firms' capabilities and their interdependencies. And it is not so much a trusting game. We draw this conclusion from analyzing the channel member's characteristics and the types of decisions the firm needs to make; and we notice then that they primarily choose for the option in which it occupies a position of strength.

In the first place, information sharing can be in the retailer's genes: a retailer with good market-relating capabilities and with a predisposition to ally with suppliers is keener to share information with suppliers. These two characteristics show that a retailer feeling confident of its strengths discloses much more about its own market position. Besides that a retailer's information sharing strategy can also be influenced (adjusted) by a number of contingencies and the two types of decisions it needs to make: (1) in *which product category*, and (2) *with whom* to share (higher degrees of content) with. As for the first decision, a retailer would exhibit a preference for a product category where consumer demand is less turbulent, where channel inertia is low, where supplier network is concentrated and surveyable, and where channel members have an established a norm for information sharing. Clearly, such an environment is characterized by stability, flexibility, and munificence; that is easier to control for the retailer.

As for the second decision needed to make – *with whom to share information?* – , a retailer would opt for sharing in channel relationships in which it add a valuable contribution and where it is not dominated and exploited by the supplier. A retailer shares its information in relationships where it manages to consolidate its position of strength and thus with an *interdependent* supplier with whom the informational investments will pay off sooner or later into its own benefits. Still, an interdependent supplier needs to convince the retailer its added value, because if a supplier is also good at market-relating, a retailer is tended to share more information, but if a supplier would be good at collecting market information itself, a retailer would prefer to stay silent and keep the market information. One exception on this rule is the situation when the retailers feel that they have made many relationship-specific investments and have a lot to lose; in this lock-in case, retailers share more of their market information.

Similarly, a supplier discloses more of their own market information when it finds itself in a position of strength. First of all, the supplier with good market-sensing and – relating capabilities and top management support confidently shares higher degrees of their market information with retailers. Its practices of market information sharing is not

dependent on the market channel characteristics; because the product category they choose to enter has been taken at a more corporate level and can (now) only be treated as a given. A suppliers *does* depend its market information sharing decision on *with whom* to share. In the supplier's information sharing partner selection, it shares information with a retailer who has a common interest and benefits from strengthening the supplier's position. Retailers with a high concentrated supplier network are not considered to be instrumental in that sense and therefore avoided. So, a supplier seeks out retail information sharing partners that cannot play off big competitors against each other. But when the interests of the retailer becomes larger than the supplier, for instance when the relationship-specific investments by the retailer is bigger, then it refrains from sharing.

Hence, we conclude that channel members (both retailers and suppliers) share higher degrees of content only from a *position of strength*. Only when they think of themselves to be in a channel leadership position relative to or together with their counterpart, they may share higher degrees of market information; and when they are able to regard themselves as the *director of the channel*.

Non-Influential Factors. Several factors show to have little power for explaining the degree of shared content in channel relationships: consumer demand growth, product complexity, competition intensity, connectedness, age of the relationship and *trust*. Of all of these factors, it is the finding of no influence by trust that counters much anecdotal evidence given by practitioners and theoretical hypotheses by academics.

6.4 Hypothesis Testing: Antecedents of Sharing Mode

Concerning the Sharing Mode, in order to test our hypotheses (from H_{1a-rs} to H_{5f-rs}) we performed seven OLS-regressions; one for each sharing mode variable: contact frequency by the retailer and by the supplier, the contact frequency of higher management from retailer and from supplier, exclusivity given by retailer, and by supplier, and the formalization of the market information sharing process. The results of these analyses are shown in Table 6.9. The explained variance per model differs to a rather large extent. The adjusted R-square scores range from .06 (exclusivity given by retailer) to .25 (formalization).

Table 6.9 Antecedents of Sharing Mode

Independent Variables			Dependent Variables			
			Overall		Contact Frequency	
			Contact Frequency		Higher Management	
			By retailer	By supplier	From Retailer	From Supplier
<i>Market Channel Environment</i>						
1: Consumer Demand Turbulence	H _{1a-rs} :	*	-.02(.43)	.00(.49)	.03(.77)	-.01(.45)
2: Consumer Demand Growth	H _{1b-rs} :	+	.24(<.01)	.27(<.01)	-.04(.60)	.13(.08)
3: Purchase Complexity	H _{1c-rs} :	+	-.09(.14)	-.12(.91)	-.07(.38)	.05(.31)
4: Channel Inertia	H _{1d-rs} :	-	-.02(.43)	-.04(.33)	.13(.18)	.03(.41)
<i>Supplier Network</i>						
5: Network Horizon	H _{2a-rs} :	-	.10(.11)	.01(.43)	.08(.32)	-.04(.34)
6: Network Concentration	H _{2b-rs} :	*	.01(.43)	.04(.69)	.06(.42)	-.03(.36)
7: Supplier Competition Intensity	H _{2c-rs} :	*	.24(.99)	.21(.01)	.16(.92)	.04(.35)
8: Retailer Competition Intensity	H _{2f-rs} :	*	.06(.24)	.03(.61)	.03(.38)	.03(.63)
9: Information Sharing Norms	H _{2d-rs} :	+	.02(.41)	.02(.40)	-.04(.64)	-.02(.41)
10: Negative Connectedness	H _{2e-rs} :	*	-.11(.10)	-.14(.05)	-.11(.17)	-.00(.52)
11: Positive Connectedness	H _{2f-rs} :	*	-.06(.77)	-.04(.32)	-.07(.65)	-.03(.36)
<i>Relationship Characteristics</i>						
12: Age of the Relationship	H _{3a-rs} :	+	**	**	**	**
13: Trust in the Supplier	H _{3b-rs} :	*	.05(.29)	.04(.32)	-.02(.79)	.02(.42)
14: Relationship-specific Investment	H _{3c-rs} :	*	.15(.05)	.11(.88)	.21(.02)	.16(.95)
15: Contract Formalization	H _{3d-rs} :	+	.02(.39)	.01(.45)	.08(.30)	.02(.40)
16: Total Interdependence	H _{3e-rs} :	+	.16(.03)	.10(.12)	.14(.09)	.30(<.01)
17a: Relative Retailer Dependence	H _{3f-rs} :	-	.01(.54)	.08(.82)	-.10(.27)	.02(.58)
17b: Relative Supplier Dependence	H _{3f-rs} :	-	-.05(.28)	.01(.54)	-.12(.17)	-.01(.44)
<i>Supplier Characteristics</i>						
18a: Market Sensing Capabilities	H _{4a-rs} :	*	-.21(.03)	-.11(.84)	.03(.81)	-.14(.89)
18b: Market Relating Capabilities	H _{4b-rs} :	+	.06(.31)	-.02(.56)	.03(.78)	.14(.13)
19: Goal Congruency	H _{4c-rs} :	+	.13(.09)	.18(.03)	-.05(.60)	-.14(.92)
20a: Top Management Support Supplier	H _{4d-rs} :	+	-.11(.88)	-.09(.83)	.08(.37)	-.04(.66)
20b: Incentive Structure Supplier	H _{4e-rs} :	+	.27(<.01)	.33(<.01)	.28(<.01)	.12(.13)
<i>Retailer Characteristics</i>						
21a: Market Sensing Capabilities	H _{5a-rs} :	*	.09(.15)	-.11(.89)	.15(.10)	-.12(.90)
21b: Market Relating Capabilities	H _{5b-rs} :	+	.06(.24)	.11(.11)	.06(.52)	.15(.06)
22: Predisposition to ally with suppliers	H _{5c-rs} :	+	-.05(.73)	-.13(.92)	.01(.92)	.08(.21)
23a: Top Management Support Retailer	H _{5d-rs} :	+	-.04(.69)	.06(.24)	.03(.77)	.10(.14)
23b: Incentive Structure Retailer	H _{5e-rs} :	+	-.16(.93)	-.15(.93)	-.22(.96)	-.07(.28)
<i>Covariates</i>						
Industry (1 = Food; 0 = other industries)		*	-.13(.06)	-.22(<.01)	-.19(.02)	-.12(.09)
Supplier Type (1 = brand manufacturer; 0 = private label)		-	-.23(<.01)	-.15(.04)	-.27(<.01)	-.08(.20)
R-square			.35	.36	.38	.26
Adj. R-square			.21	.21	.23	.09
F (sign.)			2.37 (<.01)	2.43 (<.01)	2.65 (<.01)	1.51 (.06)
N			158	158	158	158

Continued

Table 6.9 Continued

Independent Variables		Dependent Variables		
		Exclusivity		Formalization
		Given by Retailer	Given by Supplier	Information Sharing
<i>Market Channel Environment</i>				
1: Consumer Demand Turbulence	H _{1a-rs} :	*	-.17(.05)	-.19(.97)
2: Consumer Demand Growth	H _{1b-rs} :	+	.07(.23)	.18(.02)
3: Purchase Complexity	H _{1c-rs} :	+	.08(.20)	-.07(.21)
4: Channel Inertia	H _{1d-rs} :	-	-.04(.36)	.04(.34)
<i>Supplier Network</i>				
5: Network Horizon	H _{2a-rs} :	-	-.00(.48)	.01(.47)
6: Network Concentration	H _{2b-rs} :	*	-.07(.80)	-.17(.02)
7: Supplier Competition Intensity	H _{2c-rs} :	*	-.13(.09)	.02(.40)
8: Retailer Competition Intensity	H _{2f-rs} :	*	-.00(.51)	.05(.71)
9: Information Sharing Norms	H _{2d-rs} :	+	-.07(.21)	-.01(.45)
10: Negative Connectedness	H _{2e-rs} :	*	.15(.94)	-.01(.54)
11: Positive Connectedness	H _{2f-rs} :	*	-.01(.56)	.09(.85)
<i>Relationship Characteristics</i>				
12: Age of the Relationship	H _{3a-rs} :	+	**	**
13: Trust in the Supplier	H _{3b-rs} :	*	.09(.17)	.11(.12)
14: Relationship-specific Investment	H _{3c-rs} :	*	.21(.02)	.23(.99)
15: Contract Formalization	H _{3d-rs} :	+	-.03(.35)	-.03(.37)
16: Total Interdependence	H _{3e-rs} :	+	.09(.16)	.13(.07)
17a: Relative Retailer Dependence	H _{3f-rs} :	-	.01(.54)	-.11(.11)
17b: Relative Supplier Dependence	H _{3f-rs} :	-	.07(.77)	.12(.90)
<i>Supplier Characteristics</i>				
18a: Market Sensing Capabilities	H _{4a-rs} :	*	.10(.80)	-.08(.75)
18b: Market Relating Capabilities	H _{4b-rs} :	+	.12(.17)	.26(.01)
19: Goal Congruency	H _{4c-rs} :	+	-.13(.89)	-.03(.62)
20a: Top Management Support Supplier	H _{4d-rs} :	+	-.12(.88)	-.12(.88)
20b: Incentive Structure Supplier	H _{4e-rs} :	+	.15(.08)	.23(.01)
<i>Retailer Characteristics</i>				
21a: Market Sensing Capabilities	H _{5a-rs} :	*	-.07(.76)	.03(.64)
21b: Market Relating Capabilities	H _{5b-rs} :	+	-.11(.87)	-.04(.66)
22: Predisposition to ally with suppliers	H _{5c-rs} :	+	-.02(.57)	-.12(.91)
23a: Top Management Support Retailer	H _{5d-rs} :	+	-.07(.75)	-.04(.65)
23b: Incentive Structure Retailer	H _{5e-rs} :	+	.10(.19)	-.01(.48)
<i>Covariates</i>				
Industry (1 = Food; 0 = other industries)	*	-.08(.19)	-.00(.48)	.05(.28)
Supplier Type (1 = brand manufacturer; 0 = private label)	-	-.07(.23)	-.19(.01)	.00(.48)
R-square		.23	.28	.39
Adj. R-square		.06	.13	.25
F (sign.)		1.37 (.13)	1.79 (.02)	2.78 (<.01)
N		158	158	158

* Notes: the direction of the hypothesis is explained in the text, ** we have tested the models with inclusion of the variable "relationship age" and found no significant effect. Due to the large number of missing values in this variable, we decided to take out this variable. Doing so did not have any effect on the structure of the results shown here.

Table 6.9 above shows the direction of hypotheses by a + or a – when the direction is the same for all sharing mode aspects. The asteroid * indicates that the directions of the hypotheses can differ for the different sharing mode aspects. Further on, during the discussion of the test of these *-hypotheses, we will elaborate on the specific hypothesis directions for each of the seven sharing modes.

Market Channel Environment. Sharing mode aspects are hypothesized to be influenced by four market channel environment factors: consumer demand turbulence, consumer demand growth, purchase complexity, and channel inertia. H_{1a-rs} poses the relationship between consumer demand turbulence and seven aspects of the sharing modes, all reflecting a degree of collaborative communication between channel members. The directions of the hypotheses are based on the notion that retailers in general prefer to have loosely-coupled supplier relationships in turbulent environments, while suppliers prefer to tighten their buyer relationships as a response to reduce (environmental and buyer) uncertainty. That is why, we assume a negative effect of consumer demand turbulence on the retailer's contact frequency, contact frequency of higher management, and exclusivity given by retailer. Whereas we expect a positive effect for the supplier's contact frequency, contact frequency of higher management, and exclusivity given by supplier. We only find partial support for H_{1a-rs} in one sharing mode aspect: the exclusivity given by retailer. The retailer is found to give less exclusivity to the supplier in these turbulent circumstances ($b = -.17$; $p = .05$). The hypothesis that consumer demand turbulence leads to more exclusivity given by the supplier cannot be accepted ($b = -.19$; $p = .97$). Otherwise than expected, it is perhaps the case that suppliers do not prefer to give out exclusivity in turbulent environments either. They would rather spread their odds among more than one retailer in these risky circumstances.

Consumer demand growth is hypothesized to have positive effects on all of the sharing mode aspects (H_{1b-rs}). Both parties feel the need to communicate collaboratively with each other in growing markets. Furthermore, there exists not much of competition between channel members in such a growing demand environment. We find this effect to occur for contact frequency, by both channel parties (retailer: $b = +.24$; $p < .01$, and supplier $b = +.27$; $p < .01$), contact frequency of supplier higher management ($b = +.13$; $p = .08$), and exclusivity by the supplier ($b = +.18$; $p = .02$). Interestingly, we did not find an effect for consumer demand growth on shared content (see previous findings in Table 6.6). Apparently, higher consumer demand growth leads to more frequent interaction and tighter relationships without immediately resulting in higher degrees of shared content.

In buying situations with higher purchase complexity, more a collaborative sharing mode is expected to take place (H_{1c-rs}). Purchase complexity does not affect the sharing mode, neither the shared content. We do not find any support for this hypothesis.

Higher levels of channel inertia make a collaborative sharing mode less fruitful; hence we hypothesize the effect to be negative (H_{1d-rs}). We only find partial support for the hypothesis; in particular it counts for the formalization of sharing mode ($b = -.14$; $p = .07$). The larger the structural inertia of the channel to react to market changes, the lesser need channel partners see to formalize their sharing mode.

Overall, different aspects of the sharing mode are influenced by three different market channel environment variables. Consumer demand turbulence reduces the exclusivity in market information that parties share. The sharing of market information becomes more frequent when consumer demand is growing. In a growing consumer demand, suppliers give out exclusivity more easily and involve more often higher management in the dealings with retailers. Channel inertia impedes the formalization of the sharing mode.

Supplier Network. As for the effects of the supplier network on the sharing mode we posed six hypotheses (from H_{2a-rs} to H_{2f-rs}). In a supplier network with a large horizon, the sharing mode is expected to be less collaborative (H_{2a-rs}). We find this effect to be true for formalization, for the horizon of the supplier network negatively affects formalization ($b = -.17$, $p = .02$). Larger supplier networks lessen the need for formalization; perhaps due to the increased inconvenience of reviewing all of the growing number of supplier relationships to verify their compliance to the formalized rules by the retail buyer.

Supplier network concentration is expected to have different influences on different aspects of the sharing mode (as is indicated by the *). A more concentrated supplier network makes it easier for retailers to engage in more collaborative relations with a smaller number of their suppliers. However, a more concentrated supplier network means that the retailer also deals with other big (competing) suppliers. Leakage of market information from the supplier is in such a case extra harmful for the sharer. That is why, suppliers are assumed to be careful in engaging in higher levels of collaborative sharing modes with retailers in more concentrated supplier networks. We find some support for these hypotheses; two sharing modes are negatively affected; viz. the exclusivity of the sharing of suppliers ($b = -.17$; $p = .02$) and formalization ($b = -.13$; $p = .05$). The more concentrated the supplier network, the less exclusive sharing from suppliers takes place. This finding supports the idea that stronger ties of the retailer with other suppliers discourages a supplier to be more exclusive in their sharing due to potency of detrimental leakage; and they also refrain from formalizing the information sharing arrangement with the retailer.

The hypothesis for the effect of supplier competition intensity is indicated by an asteroid and also needs further specification, because we expect competition intensity within the supplier network to have diverse effects on the sharing mode. H_{2c-rs} varies from negative for retailer sharing mode variables to positive for supplier sharing mode variables. The idea behind these hypotheses is that more intensive competition among suppliers is that suppliers please harder to get the retailer's preference and wish to start collaborative efforts to receive their competitive advantage. Retailers see to it that they take advantage of the most of suppliers' competition and rather not limit their collaborations with only one of them. We find that the intensity of competition among suppliers makes supplier to have

more frequent contact with their retailers (supplier: $b=+.21$; $p=.01$). The hypothesized negative effect of competition intensity on contact frequency by the retailer is not supported by our findings ($b=+.24$; $p=.99$); it looks like that the opposite is true: the contact frequency by the retailer increases when competition among suppliers goes up; it looks like that retailers intensify their shopping for the best deal among competing suppliers – also by giving less exclusivity to them ($b= -.13$; $p=.09$). Rather than a hypothesized negative effect, competition tends to stimulate more involvement of higher management from retailers ($b= +.16$; $p=.92$). We do find marginal support for the hypothesis that competition intensity among suppliers encourages channel members to make explicit formalized arrangements concerning market information sharing ($b=+.15$; $p=.96$). Of all supplier network characteristics, we can thus far conclude that competition intensity among suppliers has one of the biggest and diverse impacts on sharing mode.

The hypotheses for retailer competition intensity is reserved to the previous ones. H_{2d-rs} is positive for retailer's sharing mode variables, and negative for the supplier's sharing mode. None of the effects are found to be significant. The competition intensity of retailer's does not impact the sharing mode in channel relationships.

Our research model theorizes that the information sharing norms would be echoed in collaborative sharing modes (H_{2d-rs}). However, our study only shows that the maximum positive beta-value is .02 for contact frequencies by the retailer ($p = .41$) and by the supplier ($p = .40$). Furthermore, we find hardly any support for this hypothesis in the bivariate correlations (see Appendix VI.1). Apparently, information-sharing norms have an impact on shared content of the retailer (Table 6.6), but not on the way of information sharing (Table 6.9).

In negatively connected supplier relationships, we assume a dual collaborative mode of sharing (H_{2c-rs}): the retailer rather avoids collaborative sharing, while the supplier tends to share its information in a more collaborative way. We find a marginal indication for this effect in the contact frequency by the retailer ($b= -.11$; $p=.10$). Stronger evidence is given in the effect on the formalization ($b= -.13$; $p=.06$): in negatively connected supplier relationships at least one of the channel partners does not want to formalize their information practices; perhaps to shun further harm. Although our findings do not support the hypothesis on the impact on the exclusivity given by retailer, we do find an indication that this relationship might be positive ($b= +.15$; $p= .94$), rather than negative. It is however difficult to exclude the possibility that the exclusivity given by the retailer has worsened the negative connectedness and therefore it might be that exclusivity is a cause rather than the consequence of negative connectedness.

The hypothesized dual relationship of positive connectedness with sharing mode aspects (H_{2f-rs}) gets no support from our research findings. The highest absolute beta-value of .10 ($p=.89$) for formalization is too low and insignificant. In the bivariate correlations,

we find one significant relationship between positive connectedness and formalization ($r = +.16$; $p = .04$). In the multiple regression, this effect disappears; possibly due to the correlations of positive connectedness with other explanatory variables. Positive connectedness is correlated with relationship-specific investments ($r = .20$; $p < .01$), as which we will see later, also influences information sharing formalization.

Our conclusion is that the effects of supplier network characteristics on sharing mode are limited, yet very different from the effects on shared content. We find four supplier network characteristics to affect the sharing mode. First, a larger supplier network horizon makes it difficult to formalize of the sharing mode. Second, the concentration in the supplier network trims down both the exclusivity given by suppliers and the level of formalization in the sharing mode. Third, competition intensity among suppliers plays an important role in the sharing mode; it affects the sharing mode in more than one manner: competition intensity increases the (overall) contact frequency between retailer and supplier organization, and it induces the contact frequency of high management of retailers (counter-intuitively). Fourth, a high level of negative connectedness discourages contact frequency by the retailer but stimulates the exclusivity given by the retailer.

Relationship Characteristics. The research model also poses hypotheses on the influences of relationship characteristics on sharing mode. The sharing mode is allegedly to become more collaborative as the retailer-supplier relationship ages, yet due to earlier mentioned reasons we do not include this variable in the multiple regression analysis. Besides, indications are that no effect could be expected, because the bi-variate correlation scores are relatively low (maximal r -value is $.15$; see Appendix VI.7).

We expect trust to play an important but mixed role in sharing information in a collaborative way: trust enhances the (overall) contact frequency between channel parties and promote exclusivity given to each other, but also it substitutes the immediate need for other sharing modes aspects with safeguarding features, such as contact with higher management and formalization (H_{3b-rs}). Again (surprisingly!), trust does hardly have any significant influence on the way market information between channel parties is exchanged. Except one, all of the beta-values in the regression analyses are in the expected direction, but none of them are significant. The general conclusion for trust must be that its influence is much less than expected. It might be that variance is taken away by other variables; however, the highest bivariate correlations of trust with some sharing mode aspects are $r = .11$ ($p = .13$) (contact frequency by retailer), $r = .12$ ($p = .13$) (contact frequency by supplier), and $r = .12$ ($p = .10$) (exclusivity given by supplier) and are rather low and statistically non-significant (see Appendix VI.7).

Hypothesis H_{3c-rs} states that the relationship-specific investments made by the retailer would have a varying effect on the sharing modes (in the same direction as competition

intensity): these investments would be favorable for the retailer's sharing mode aspects (overall contact frequency by retailer, higher management from the retailer and the exclusivity given by the retailer), yet unfavorable for the supplier's sharing mode aspects. It turns out that the relationship-specific investments have the most important impact on the sharing mode. Retailers do not only monitor the supplier relationships with higher relationship-specific investments by an intensified contact frequency ($b=+.15$; $p=.05$), but also by involving higher management ($b=+.21$; $p=.02$), and through the formalization of the sharing mode ($b=+.16$; $p=.04$). Furthermore, retailers continue to make investments by sharing their market information on a more exclusive basis ($b=+.21$; $p=.02$ for the retailer). Contrary to the hypothesis, suppliers are also inclined to share on a more exclusive basis ($b=+.23$; $p=.99$ for the supplier; we reject our hypothesis). The supplier's higher management is more likely to have more frequent contact when the retailer have made some relationship-specific investments ($b=+.16$; $p=.95$). This counters our initial hypothesis expecting a negative relationship; it might be that the involvement of higher management is part of the supplier's lock-in strategy. It can be just paying lip-service without actually giving more market information. Thus in addition to the above reported two-edged impact on shared content, relationship-specific investment has a large, perhaps mystifying, influence on different sharing mode aspects.

Contract formalization serving as a safeguard for relation-specific investments and making ties between firms stronger is theorized as having a positive influence on sharing mode aspects (H_{3d-rs}). Six of the seven sharing mode aspects are not influenced by contract formalization; contract formalization only has an effect on formalization of information sharing ($b=+.33$; $p<.01$).

The interdependency structure is proposed to affect the sharing mode rather straightforwardly (H_{3e-rs} and H_{3f-rs}). We detect an impact from the total interdependency on four sharing mode aspects. When the two channel members are more mutually dependent, the retailer has more frequently contact with the supplier ($b=+.16$; $p=.03$), higher management from both parties have more often contact in the exchange ($b=+.14$; $p=.09$ and $b=+.30$; $p<.01$, for retailer's and supplier's higher management respectively). Moreover, the total interdependence has an additional positive influence on the exclusivity from the supplier ($b=+.13$; $p=.07$).

The dependence asymmetry is thought to be minimizing the collaborative style of information sharing. Hardly any evidence is found to support this hypothesis. We only find that the relationships in which the supplier is relatively more dependent on the retailer, the sharing mode is less formalized ($b=-.20$; $p=.01$). Preferably, under such conditions the more dependent supplier stays away from concluding a stricter agreement on market information sharing with a more dominant retailer. By the same token, another speculation could be that a more dominant retailer does not see the need for formalization. If

necessary, its power difference may well be enough to extract market information from the more dependent supplier.

In line with the conclusion drawn in the case of shared content, the sharing mode is a power-game too, and not a trusting game. Trust in the supplier has little impact on the way market information is shared. Safeguarding relation-specific investments, and dependency structure are influential antecedents determining the way in which market information is shared between channel members.

Supplier Characteristics. The hypotheses concerning the supplier's characteristics affecting the sharing mode are classified in two groups. The first group deals with the supplier's capabilities to share market information (H_{4a-rs} and H_{4b-rs}). The effect of supplier's market-sensing capabilities on sharing mode is assumed to be positive for supplier's collaborative style, yet negative for the retailer's sharing mode. We find that only the retailer's contact frequency is negatively affected ($b=-.21$; $p=.03$) and the formalization ($b=.25$; $p=.01$). The supplier's sharing mode is not significantly influenced by the supplier's sensing capabilities. When we turn to the supplier's market-relating capabilities, we expect a overall positive effect on the collaborative style in sharing information and also inviting retailers to have more contact, involve higher management, and ask for exclusivity. We detect, however, only one effect for the supplier's market relating capabilities: they promote the exclusivity given by the supplier in the sharing mode ($b = +.26$; $p = .01$); other sharing mode aspects seem unaffected by the supplier's market-relating capabilities.

We expect the supplier's goal congruency, top management support, and collaborative incentive structure to enhance the collaborative sharing mode (H_{4c-rs} to H_{4e-rs}). Our results shows some support that both goal congruency (respectively, retailer: $b=+.13$; $p=.09$ and supplier: $b=+.18$; $p=.03$) and the supplier's incentive structure (respectively, retailer: $b=+.27$; $p<.01$ and supplier: $b=+.33$; $p<.01$) foster the contact frequency of both channel parties. The supplier's collaborative incentive structure has three additional effects, because it also promotes the contact frequency with higher management from the retailer ($b=+.28$; $p<.01$) and makes both channel parties to give out their market information on a more exclusive basis (by the retailer $b=+.15$; $p=.08$; by the supplier $b=+.23$; $p=.01$).

As for the supplier characteristics we can infer that mainly the supplier's goal congruency the collaborative incentive structure of the supplier play a major role in the stimulating a collaborative sharing mode. This conclusion somewhat contrasts the previous paragraph's findings that the supplier's market-sensing, market-relating capabilities and top management drive shared content. Thinking ahead about managerial implications, practitioners should be wary that an incentive structure which promotes the collaboration efforts with retailers primarily results in more frequent contact ("quantity of contacts")

rather than in exchanging higher levels of shared content (“quality of contacts”). Note that, in the previous paragraph we reported that top management support does stimulate the supplier to share more content (“quality”).

Retailer Characteristics. Hypotheses H_{5a-rs} to H_{5f-rs} regard the influence of the retailer characteristics on the aspect of the sharing mode. We mainly expect that all of the characteristics assist in a more collaborative mode of sharing, except for the retailer’s market-sensing capabilities. Possessing good market-sensing capabilities is expected to only enhance the collaborative style of the retailer’s sharing mode, not the one of the supplier. We find some support for this idea with regard to three sharing mode aspects. Retailers share their market information in a more formalized way ($b=+.15$; $p=.10$) and the higher management of the retailer also have more frequent contact in their dealings with the supplier ($b = +.16$; $p = .04$). More formalization seems that they are alert to only pass on their dearly collected market information under the condition of well-made regulations with their suppliers. Their cautiousness is also reflected in the involvement of their higher management. The supplier’s sharing mode is negatively affected, yet marginally significant ($p = -.12$; $p = .10$).

Support for the positive hypothesis of having good market-relating capabilities (H_{5b-rs}) is limited to the significant effects on (marginally) the contact with higher management of the supplier ($b = .15$; $p = .06$). Still, we find that formalization has a strong bivariate correlation with the retailer’s market-relating capabilities ($r = .22$; $p < .01$). The direct effect may have been taken away by the correlation between retailer’s market-sensing and market-relating capabilities.

For the other retailer characteristics we do not find any confirmation of our hypotheses; the retailer’s predisposition to ally with suppliers, top management support, and the incentive structure to promote collaborative efforts with the supplier do not significantly influence the way in which the information is shared in the channel relationship.

Covariates (Industry and Supplier Type). In contrast to the analyses for the degree of shared content, these analyses do show some effects coming from the two covariates. First, industry-specific influences on sharing mode exist. In the food industry, channel members have less contact with their counterparts ($b=-.13$; $p=.06$, and $b=-.22$; $p<.01$). Furthermore, it look like that in the food it is less common to have contact with higher-level management (retailer; $b= -.19$, $p=.02$, and supplier, $b=-.12$; $p=.09$). One explanation for this industry effect is that the retail purchasing in the food has had a longer history of professionalization; retail buying in the food industry is more according to an established

pattern. Yearly meetings, vendor rating and the request for sales promotions are consolidated in solid frameworks.

Second, the covariate supplier type keeps its autonomic influence on the sharing mode: brand producers have less frequent contact with retailers ($b = -.23$; $p < .01$), and initiate less contact themselves ($b = -.15$; $p = .04$). They are less in contact with higher management of the retailer ($b = -.27$; $p < .01$), and give out their information on a less exclusive basis ($b = -.19$; $p = .01$). Explanation for this finding is two-folded; first, retailers have more strategic links with their private label producers. Second, brand manufacturers are known to have a broader customer base and thus more contact with other retailers.

Table 6.10 *Overview of the Found Antecedents of Shared Content and Sharing Mode*

Antecedents	Shared Content		Sharing Mode				Formalization Information Sharing	
	Retailer's Shared Content	Supplier's Shared Content	Contact Frequency		Contact Frequency of Higher Management			Exclusivity
			By Retailer	By Supplier	From Retailer	From Supplier		
<i>Market Channel Environment</i>								
1: Consumer Demand Turbulence	increasingly --	--	++	++	+			
2: Consumer Demand Growth								
3: Purchase Complexity								
4: Channel Inertia								
<i>Supplier Network</i>								
5: Network Horizon							--	
6: Network Concentration	++	-					--	
7: Supplier Competition Intensity							+	
8: Retailer Competition Intensity				++				
9: Information Sharing Norms	++							
10: Negative Connectedness				--	-		--	
11: Positive Connectedness			-	--				
<i>Relationship Characteristics</i>								
12: Age of the Relationship								
13: Trust								
14: Relationship-specific Investment	++	-	+		++	++	++	
15: Contract Formalization								
16: Supplier Dependence on Retailer	++	+			++	++		
17: Retailer Dependence on Supplier		+	+		++			
<i>Supplier Characteristics</i>								
18a: Market Sensing Capabilities	--	++					++	
18b: Market Relating Capabilities	++	+				++		
19: Goal Congruency			+	++				
20a: Top Management Support Supplier		+		++	++	++		
20b: Incentive Structure Supplier			++	++	++	++		
<i>Retailer Characteristics</i>								
21a: Market Sensing Capabilities					++		++	
21b: Market Relating Capabilities	++				+			
22: Predisposition to ally with suppliers	+							
23a: Top Management Support Retailer								
23b: Incentive Structure Retailer								
<i>Covariates</i>								
Industry (food versus others)			F (-)	F (-)	F (-)	F (-)		
Supplier Type			BM (-)	BM (-)	BM (-)	BM (-)		
(BM = Brand Manufacturer)							BM (-)	

-- = negative relationship with $p < .05$;
- = negative relationship with $p < .10$

++ = positive relationship with $p < .05$;
+ = positive relationship with $p < .10$

-- = negative relationship with $p < .05$; ++ = positive relationship with $p < .05$;
 - = negative relationship with $p < .10$ + = positive relationship with $p < .10$

6.5 Conclusions

This chapter has analyzed the antecedents of both *Shared Content* and *Sharing Mode* and aims to answer our second research question: *what are the antecedents of market information sharing in channel relationships?* The outcome of our regression analyses explaining the degree of shared content and the sharing mode is that 33 of the hypotheses are (partially) accepted, and the 48 others are rejected.

Other than testing the hypotheses from the research model, our study finds that the antecedents of *Shared Content* largely differ from the antecedents of *Sharing Mode* (see Table 6.10 for an overview of the found effects). We will first start by giving a list of all of the most important effects found per building block. Then, we will begin to combine all of the given findings and conclude about the fundamental common grounds.

Market Channel Environment. All four market channel environment factors play their proprietary role in market information sharing. Their influence is not as diverse as hypothesized, but far more selective. Before listing the effects we did find, it is interesting to mention that the shared content by suppliers remains unaffected by market channel conditions. The retailer's shared content and four of the sharing modes are significantly influenced by the characteristics in the market channel environment. In a situation with high turbulent consumer demand, retailers share lower degrees of content, and neither of two channel parties give exclusivity to the other. When consumer demand is growing, retailers and suppliers do not share more information, they have more frequent contact with each other, supplier's higher management is more often involved, and suppliers give more exclusivity. More purchase complexity makes the retailer to share more. Channel inertia impedes the retailer to share more and puts a halt to the formalization of the sharing mode.

Supplier Network. Five out of the six factors of the supplier network affect the market information sharing in the channel relationship. The three main influential factors are network concentration, competition intensity among suppliers and negative connectedness. First, a more concentrated supplier network leads to more shared content from retailer, but to lower degrees of shared content by the suppliers. Network concentration also negatively affects the exclusivity given by suppliers and the formalization. Second, the competition intensity stimulates not only the contact frequency by the supplier, but also the formalization of sharing. Third, negative connectedness hampers the contact frequency of both channel members, reduces the frequency of retailer's higher management, and limits formalization. Network horizon, and information sharing norms have a limited influence on the overall sharing practices in channel relationships.

Relationship Characteristics. Four of the six tested relationship characteristics affect the sharing of market information. The most prominent factor of these four is the interdependency between the channel members. In situations of more mutual interdependence, both channel members share more content, but it also results in information sharing with a higher contact frequency of the retailer with the supplier, in more often contact between either party's higher management, and in more exclusivity given by the suppliers.

The second important relationship characteristic is the relationship-specific investment by the retailer, due to the following two reasons. In the first place, relationship-specific investments have a two-edged impact on the shared content in the channel relationship: more relationship-specific investments stimulate the retailer to share higher degrees, whilst the supplier's degree of shared content is lowered; and hereby worsening the *locked-in* situation for the retailer. In the second place, the investments made result in drive different sharing modes that may serve as safeguard mechanisms at the same time. Retailers running the risk of losing investments specially catered to a specific supplier relationship when that relationship is terminated, they are sharing their information in a certain protective style: they monitor the information sharing process better by increasing their overall contact frequency, by involving their higher management, by increasing their exclusivity of shared information, and by formalizing it. We also find indications that in cases of more relationship-specific investments made by the retailer, higher management from suppliers are more in contact with the retailer; this involvement is not more than a *ritual dance*, because it does not appear to materialize into more shared information from their side. Trust in the supplier turned out not to play an influential role in the shared content nor in the sharing mode. The idea raised from our analysis is that the sharing of market information appears to be a power game, instead of a trusting-game. This finding is quite interesting because in previous studies (e.g., Dwyer et al., 1987; Morgan and Hunt, 1994, Geyskens, et al, 1998) have argued that the role of trust is a very prominent one. It plays a central role in relationship building and maintenance. As a 'key mediating variable', trust is thought to be the key variable, mediating the relations between important antecedents (e.g., communication) and consequences (e.g., satisfaction). In our analyses, we find however that trust has hardly any impact on either shared content or sharing mode. We do find a significant bivariate correlation of trust with the supplier's shared content. That could give us the argument to believe that trust might be a consequence of sharing instead of an antecedent. Higher degrees of shared content by suppliers signal their trustworthiness to retailers. Another explanation for not finding an effect might be that trust is especially linked with the capabilities of the supplier (see Appendix VI.6). It seems that trust is not a separate (psychological) factor, but perhaps important for the effectiveness of information

sharing. Hence, in the next chapter (on consequences) we will take a closer look at the role of trust on the effect of information sharing.

Suppliers Characteristics. The characteristics of the supplier turn out to have the widest and diverse influence on both shared content and sharing mode. The three major characteristics are: the supplier's market-sensing and market-relating capabilities, and the incentive structure of the supplier. In particular, the supplier's market-sensing capabilities have a heterogeneous effect: (rather obviously) it stimulates suppliers to tell more about their observations made in the marketplace, whereas these suppliers make retailers to shy away from sharing higher degrees of content and reducing the retailers' contact with suppliers. Furthermore, it seems that these well-market-sensing suppliers call for more formalization in the sharing mode.

Compared to market-sensing capabilities, the supplier's market-relating capabilities have a somewhat different effect. In addition to the positive effect on supplier's degree of shared content, they also do encourage the retailers to share higher degrees of content with suppliers. Suppliers with good market-relating capabilities do not only receive more content from the retailer, but also know how to emphasize the exclusivity of their own market information to their retail partners, perhaps due to their ability to make local tailor-made marketing efforts.

The third important supplier characteristic is the incentive structure to promote collaboration with the retailer: especially the sharing mode becomes more collaborative in terms of more frequent contact with each other, involvement of higher management from the retailer, and more exclusivity given to each other.

Two other supplier characteristics, goal congruency and top management support, have a more restricted influence. If the supplier's goals are seen as more congruent with the retailer's objectives, then channel parties have a more frequent contact with each other. Top management support may indicate higher degrees of shared content by the supplier.

Retailer Characteristics. The influence of retailer characteristics on market information sharing is rather limited. Only three factors have a major impact. First, the retailers with good market-sensing capabilities do not automatically share more content of their collected market information, but these retailers clearly wise enough to safeguard their sharing through more contact of their own higher management and through a more formalized sharing mode. Second main driver of market information sharing is the market-relating capabilities of retailer having a positive effect on the degree of content shared by the retailer. Third retailer characteristic is the retailer's predisposition to ally with suppliers. This predisposition makes retailers to share higher degrees of content with disregard to all other conditions.

All in all, sharing market information in channel relationships predominantly hinges on the firm's capabilities and interdependencies. Besides these two main types of antecedents, we found that there are also antecedents that only affect the Sharing Mode without influencing the Shared Content.

After determining in which conditions channel members share information, it would be interesting to see whether or not the sharing of market information pays off in a better functioning of the channel relationship. The following chapters are going to focus on the consequences of market information sharing in channel relationships.

PART III

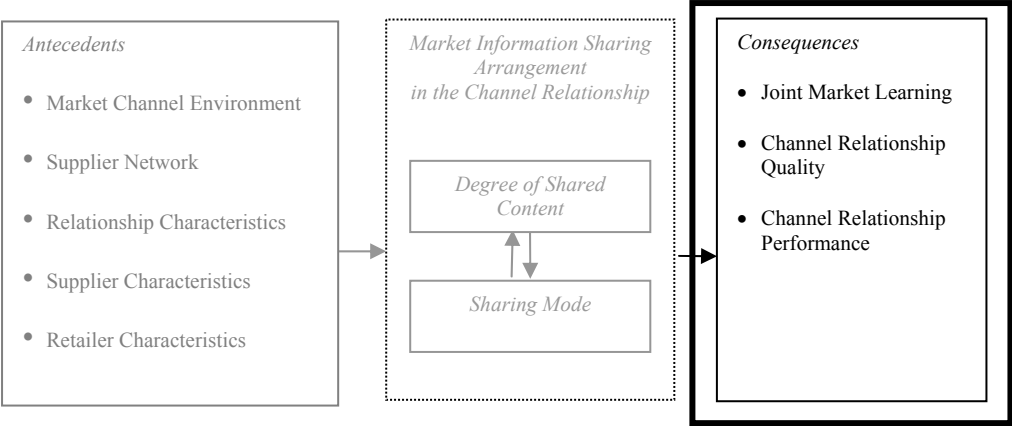
THE CONSEQUENCES OF MARKET INFORMATION SHARING IN CHANNEL RELATIONSHIPS

CHAPTER SEVEN THE CONSEQUENCES OF MARKET INFORMATION SHARING IN CHANNEL RELATIONSHIPS

7.1 Introduction

After having gained insights into which factors actually drive channel members to share their market information with each other, the next important issue to be addressed is knowing whether or not market information sharing in channel relationships really impacts the improvement in the channel relationship. This chapter therefore concentrates on our third research question: *What are the consequences of market information sharing?* As stated in our research framework, we expect market information sharing to have an impact on three indicators of a successful transformation of the supply chain into a consumer demand-driven chain: (1) *joint market learning*, (2) *channel relationship quality* and (3) *relationship performance*. Figure 7.1 illustrates the focus of this chapter lying at the right-hand side of our research framework. In the same way as with the analyses of the antecedents, we employ Anderson and Gerbing (1988)’s two step approach to analyze the consequences.

Figure 7.1 Focus of This Chapter: Consequences



7.2 Operationalization and Measurement Validation of the Consequences

The first step is to validate our measurements of the consequences. As explained in our research framework, we look at three different measures as success indicators for the transformation from the supply chain into a consumer demand-driven chain. The latter two indicators concern a more objective and a more subjective measurement of success, while the first refers to the process: (1) joint market learning, (2) channel relationship quality, and (3) channel relationship performance. With the exception for *joint market learning*, we used multi-item measurement scales from previous research for the constructs for consequences; and applied them to our context. For each multi-item scale, the response categories were anchored by 1 (strongly disagree) and 7 (strongly agree). In verifying the quality of our measurement, we took the following three steps. We first examined the intercorrelations among the items (except for the formative index of *joint market learning*) designed for each scale, removing items that exhibit low correlations. We then conducted principal component factor analyses to determine the unidimensionality and discriminant validity and further refined the scales when necessary. Finally, we conducted the confirmatory factor analysis on the scale items using Lisrel (cf. Anderson and Gerbing, 1988).

Joint market learning. A relatively new measurement scale is the assessment of the quality of joint market learning in the channel relationship. Based on the steps in market learning as mentioned by Day (1994), we composed a formative scale to assess the quality in which channel parties are together good at (1) joint detection of market developments, (2) jointly interpretation of the market information, (3) joint utilization of the market information, and (4) joint reviewing on their market learning process. Per aspect, the scale items used in the study are provided in the Tables 7.1. Because of the formative characteristics of this scale there is no need to perform a confirmatory factor analysis. The validity of this measure must be tested in relationship with other constructs (cf. Jarvis, 2002; the formative nature of the scale is comparable to the measure of ECR-adoption by Corsten and Kumar, 2005).

Channel relationship quality. Information sharing is also expected to positively impact the quality of the channel relationship. To measure relationship quality we looked at two evaluative measures of channel relationship quality: the retailer's satisfaction with, and the retailer's commitment to the relationship with the supplier. Two separate types of satisfaction, economic and social, are measured by established multiple items scales from Geyskens and Steenkamp (2000). Exact details about which items are employed to measure these constructs are provided in Table 7.2. In the scale purification process, we need to delete three items for economic satisfaction, due to too low inter-item-correlations. For the same reason, one item is dropped from the social satisfaction scale. The retailer's perceptions of commitment to the supplier relationship are measured by its willingness to

invest further in the relationship affective commitment, and continuity expectancy. For each of these aspects, one item is dropped.

Table 7.1 *Construct Measures of Joint Market Learning*

Operationalization					
<i>Joint Detection of Market Developments (5 items)</i>			<i>Joint Interpretation of Market Developments (5 items)</i>		
Concerning the detection of market developments in this product category, we together with this supplier are very good at ...			Concerning the understanding of consumer demand development in this product category, we together with this supplier are very good at...		
<ul style="list-style-type: none">• Collecting market information.• Sensing the consumer market• Analyzing the product offerings of competitors• Investigating latent consumer needs• Experimenting with new products or consumer promotions.			<ul style="list-style-type: none">• Ordering the collected market information• Selecting market information on the basis of relevance• Clarifying the structure of the market• Discovering our assumptions about the market• Broadening our focus on the market		
<i>Joint Utilization of Market Information (4 items)</i>			<i>Joint reviewing of Joint Market Learning Process (3 items)</i>		
Concerning the use of market information about this product category we together with this supplier are very good at ...			Concerning the exchange of information with this supplier, we together with this supplier are very good at...		
<ul style="list-style-type: none">• Accurately forecasting consumer demand• Quickly responding to consumer demand changes• Adequately anticipating consumer demand changes• Effectively influencing consumer demand.			<ul style="list-style-type: none">• Critically reviewing the ways market information is collected• Critically reviewing the dessimination of this market information• Critically reviewing the systematic analysis of our collaboration results.		
Descriptive Statistics					
<i>Construct</i>	<i>mean</i>	<i>s.d</i>	<i>min</i>	<i>max</i>	<i>n</i>
<i>Joint Market Learningg</i>	3.66	1.24	1.00	6.14	174
Joint Detection	3.90	1.29	1.00	6.80	174
Joint Interpretation	3.66	1.50	1.00	7.00	174
Joint Utilization	3.85	1.30	1.00	6.50	174
Joint Reviewing	3.23	1.43	1.00	6.33	174

Channel relationship performance. The channel performance is gauged by two success indicators: attainment of in competitive channel advantages and joint profits. The competitive advantage concern “the benefits gained over competing dyads that enable the [channel] dyad to compete more effectively in the marketplace.” (cf. Jap, 1999, 2000). We used 5 items to measure it, but 2 items were deleted from further analysis ($\alpha = .88$). The extent in which joint profits are generated is the second more objective success measurement. Two items are used to measure this construct ($\alpha = .89$).

In order to validate the measures, we specified a measurement model with all five factors of the channel relationship quality and the two performance constructs. This model showed a good fit ($\chi^2 = 141.16$; $p < .01$; CFI = .97; TLI = .96; RMSEA = .053). For each construct, every factor loadings were (highly) significant (the minimum t-value = 5.15, $p < .01$) and larger than .50. These measures were also tested for discriminant validity by the χ^2 -difference tests (similar procedure as explained in paragraph 6.1). The results of these tests can be found in Appendix VII.1. The bivariate correlations among the different consequences are presented in Appendix VII.2.

Table 7.2 *Construct Measures of Channel Relationship Quality and Performance*

Operationalization	
<i>Economic Satisfaction</i> (3 items; $\alpha = .76$; adapted from Geyskens and Steenkamp, 2000)	<i>Willingness to invest in the relationship with the supplier</i> ($\alpha = .85$; adapted from Kumar, et al.1995)
1. The relationship with this supplier has provided our firm with a dominant and profitable market position in this product category. 2. The relationship with this supplier is very attractive with respect to economic results. 3. The marketing policy of this supplier helps our firm to get more results. 4. This supplier provides our firm with marketing support of high quality.* 5. In the relationship with this supplier, the activities with our firm are very efficiently coordinated.* 6. Our firm is very satisfied with the flexibility by which we and this supplier react to market changes.* 7. The relationship with this supplier is very “consumer demand driven”.*	1. If the supplier requested it, our firm would be willing to make further investment in the relationship with this supplier. 2. We are willing to put more effort and investment in expanding the business dealings with this supplier. 3. In the future our firm will work more with this supplier to serve the consumer better.* <i>Affective Commitment to the relationship with this supplier</i> ($\alpha = .78$; adapted from Kumar, et al.1995) 1. Even if our firm could, we would not drop the supplier because we like being associated with them.* 2. Our firm wants to remain a member of the supplier's network, because we genuinely enjoy our relationship with them. 3. The positive feelings of our firm towards the supplier are a major reason we continue working with them.
<i>Social Satisfaction</i> (3 items; $\alpha = .71$) (adapted from Geyskens and Steenkamp, 2000)	<i>Continuity Expectations</i> ($\alpha = .89$; adapted from Kumar, et al.1995)
1. The working relationship of our firm with this supplier is characterized by feelings of hostility.(R) 2. Interactions between my firm and this supplier are characterized by mutual respect. 3. This supplier is very open about things our firm ought know.(R) 4. This supplier refuses to explain the reasons for its policies.(R)*	1. Our firm expects our relationship with the supplier to continue for a long time. 2. Renewal of relationship with supplier is virtually automatic.* 3. It is likely that our firm will still be doing business with this supplier in 2 years.

Continued

Table 7.2 Continued

<i>Joint Profits</i> (2 items, $\alpha = .89$; adapted from: Jap 1999)		<i>Attainment of competitive channel advantage</i> (3 items, $\alpha = .88$; adapted from: Jap, 1999)				
1.	Together with this supplier we have achieved a high level of joint profits between us.	1.	With this supplier we have gained strategic advantages over our competitors.			
2.	Together with this supplier we have generated a lot of extra sales in this product category.	2.	The relationship with this supplier has resulted in strategic advantages for us. (R)*			
		3.	The benefits from this supplier relationship enabled us to compete more effectively in the consumer marketplace.			
		4.	The benefits from this supplier relationship enabled us to compete more effectively in the purchasing market.*			
		5.	This supplier relationship has resulted in strategically important outcomes.			

Descriptive Statistics						
Construct	mean	s.d	min	max	α	n
<i>Relationship Quality</i>						
Economic Satisfaction	3.93	1.20	1.00	7.00	.76	171
Social Satisfaction	5.56	.94	1.33	7.00	.71	172
Willingness to Invest	4.23	1.43	1.00	7.00	.85	172
Affective Commitment	4.16	1.49	1.00	7.00	.78	171
Continuity Expectation	5.81	1.19	1.00	7.00	.89	173
<i>Relationship Performance</i>						
Joint Profit	4.81	1.32	1.00	7.00	.89	161
Competitive channel advantage	4.35	1.39	1.00	7.00	.88	170

Confirmatory Factor Analysis								
Group of constructs	χ^2	df	χ^2/df	TLI	CFI	RMSEA	t-value (min)	t-value (max)
Performance	141.16	98	1.44	.96	.97	.053		
Joint Profit (1,2)							12.73	14.55
Competitive channel advantage (3,5,7)							11.33	14.94
Satisfaction								
Economic Satisf. (1,2,3)							5.77	12.90
Social Satisfaction (8,9,10)							5.15	12.05
Commitment								
Willingness to invest (1,2)							10.65	12.34
Affective Commitment (5,6)							8.33	13.33
Continuity Expectation (7,9)							9.73	15.16

* item was deleted from scale

7.3 Hypothesis Testing: Three Impacts by Market Information Sharing

In the previous paragraph, we have assessed the validation of our construct measurements. According to Anderson and Gerbing (1988)'s approach, we will now take the second step to conduct the tests for our hypothesized relationships between the constructs. The research framework in Chapter 3 hypothesizes three types of impacts of market information sharing in channel relationships. Information sharing is assumed (1) to

enhance the joint market learning, (2) to improve the relationship quality, and (3) yield extra performance in terms of joint profits for the channel members and creation of competitive advantages for the channel as a whole.

7.3.1 The Impact on Joint Market Learning

The first impact expected to be made by the information sharing arrangement is the positive stimulation of joint market learning in the channel relationship. As we noted earlier, the joint market learning consists of four activities: joint detection of market developments, joint interpretation of market developments, joint utilization of market information, and the joint reflection on the market information sharing process. To test our hypotheses we perform five different OLS regressions: one for every joint market learning activity and one for the total (see Table 7.3). All five have a good model fit with minimal adjusted R-square of .21 and an F-value of 3.92 ($p < .01$).

Our results show that the sharing of higher degrees of market information leads to better quality of joint market learning. Not only is the total joint market learning well stimulated by the supplier's shared content ($b = +.32$; $p < .01$), but also each of the market learning processes are supported with the supplier's disclosure of information: channel members are better at joint detection of market developments ($b = +.34$; $p < .01$), at joint interpretation ($b = +.25$; $p = .01$), at effectively using market information in their marketing efforts ($b = +.29$; $p = .01$), and at the reflection on the market information exchange in the channel relationship ($b = +.26$; $p = .01$), when suppliers share higher degrees of their market information. The contribution of the retailer's market information to the total joint market information appears to be marginally significant, and positive ($b = +.13$; $p = .08$); if we look at the specific joint market learning processes, the effect on the total joint market learning is mainly derived from the assistance in better interpreting of the marketplace ($b = +.18$; $p = .04$) and reflecting on the market information sharing process ($b = +.12$; $p = .09$). We conclude that H_{6a} can be accepted.

Not all of the sharing mode aspects appear to play an important and constructive role in how channel members jointly learn about the consumer marketplace. Three aspects seem to have a significant positive influence. In the first place, the formalization of the information sharing arrangement is found to support the quality of total joint market process ($b = +.28$; $p < .01$), plus every of the individual joint market learning sub-processes: detection ($b = +.24$; $p = .01$), interpretation ($b = +.27$; $p < .01$), and reflection on the market information exchange itself ($b = +.35$; $p < .01$), and, albeit marginally significant, utilization of the market information ($b = +.15$; $p = .07$).

Table 7.3 The Effects of Shared Content and Sharing Mode on Joint Market Learning

Joint Market Learning*					
	Joint detection	Joint Interpretation	Joint Utilization	Reflection on Market Information Sharing (4)	Total Joint Market Learning (1) + (2) + (3) + (4)
	(1)	(2)	(3)		
<i>Degree of Shared Content</i>					
H _{6a}					
By Retailer (SHCO_RET)	.12 (.12)	.18 (.04)	.02 (.44)	.12 (.09)	.13 (.08)
By Supplier (SHCO_SUP)	.34 (<.01)	.25 (.01)	.29 (.01)	.26 (.01)	.32 (<.01)
<i>Sharing Mode</i>					
H _{6b}					
Contact Frequency by Retailer	-.18 (.87)	-.27 (.95)	-.27 (.94)	-.38 (.99)	-.30 (.97)
Contact Frequency by Supplier	.19 (.12)	.19 (.12)	.30 (.05)	.38 (.01)	.29 (.03)
Higher Management from Retailer	.20 (.02)	.15 (.07)	.21 (.03)	.10 (.13)	.18 (.03)
Higher Management from Supplier	-.12 (.89)	-.13 (.90)	-.05 (.69)	-.14 (.94)	-.13 (.92)
Exclusivity given by Retailer	.10 (.14)	.12 (.11)	-.00 (.51)	.13 (.07)	.10 (.13)
Exclusivity given by Supplier	-.03 (.61)	.01 (.48)	.08 (.23)	.08 (.19)	.03 (.36)
Formalization of Information Sharing	.24 (.01)	.27 (<.01)	.15 (.07)	.35 (<.01)	.28 (<.01)
R-square	.40	.38	.28	.48	.46
Adj. R-square	.34	.32	.21	.43	.41
F (sign.)	6.60 (<.01)	6.05 (<.01)	3.92 (<.01)	9.26 (<.01)	8.51 (<.01)
N	100	100	100	100	100
Missing values listwise deleted					
* p-values are one-tailed					

The second sharing mode assisting the joint market learning in the channel relationship is the contact of higher management from the retailer organization. The positive impact on the total of joint market learning ($b=.18$; $p=.03$) mainly stems from better joint detection ($b=.20$; $p=.02$), better joint interpretation ($b=.15$; $p=.07$), and joint utilization of market information ($b=.21$; $p=.03$).

The third sharing mode of the information sharing arrangement playing a role in improving the joint market learning is the contact frequency of supplier ($b=.29$; $p=.03$). The contact frequency significantly helps to improve the effective usage of market information ($b=.30$; $p=.05$) and the reflection of market information exchange ($b=.38$; $p=.01$). A specific significant effect is found for the exclusivity given by the retailer: it positively influences the reflection of market information sharing ($b=+.13$; $p<.07$) (H_{6b} is partially accepted).

Interestingly, our analyses show a negative association between the retailer's contact frequency and the quality of joint market learning. We could speculate about a reversed effect: if the joint market learning process is of low quality, the retailer increases its contact with the supplier to repair or prevent the immediate operational problems in trying or in failing to be more consumer-demand driven.

7.3.2 *The Impact on Channel Relationship Quality*

The second type of impact anticipated from market information sharing is the positive influence on the relationship quality between retailer and supplier. As important dimensions for relationship quality we included satisfaction with and commitment to the supplier relationship. For satisfaction we make a distinction between economic and social satisfaction (Geyskens and Steenkamp, 2000). The retailer's commitment to the supplier relationship is measured by three aspects (cf. Kumar et al., 1995): first, the retailer's willingness to invest further in the supplier relationship. Second, the extent to which the retailer feels bonded to the supplier in terms of affective commitment, and third, the retailer's expectancy of continuity of its relationship with the supplier. Several highly significant bivariate correlation scores between channel relationship quality and market information sharing (shared content and sharing mode) already suggest that a certain explanatory power is to be expected (Appendix VII.2).

In order to test our hypotheses we perform five OLS regressions; one for each channel relationship quality dimension (see Table 7.4). The regressions for economic and social satisfaction have a good model fit (R^2 are higher than .08) and a significant high F-value (higher than 1.96; $p<.05$). For the three channel relationships commitment variables – willingness to invest, affective commitment, continuity expectations – we find only a poor model fit (F-value lower than 1.27; $p>.27$); it could be that there are better variables to

explain commitment in a channel relationship. For all five regressions, the highest VIF value is 3.89 (for contact frequency by the retailer); which is much lower than the critical height of 10; allowing us to draw the conclusion that multicollinearity is not a problem (Hair, et al., 1999).

We theorized that the relationship quality (as perceived by the retailer) increases when the channel members disclose higher degrees of market information to each other. We find this effect to be significant for economic satisfaction and social satisfaction. When both channel members share higher degrees of content with each other, the retailer seems to be more economically satisfied with the channel relationship (retailer's shared content, $b = .26$; $p=.01$; and supplier's shared content, $b = .17$; $p=.08$). The shared content by supplier also contributes to the social satisfaction of the retailer with the channel relationship ($b=+.35$; $p<.01$). None of the relationship commitment dimensions – willingness to invest, affective commitment, continuity expectations – are affected by the shared content. We therefore can only partially accept H_{7a} . We assume that other factors than investigate in this study must explain commitment; also regarding the low bivariate correlation scores (see Appendix VII.2).

The collaborative style of how market information is exchanged was also expected to have an (additional) stimulating effect on the channel relationship quality. Our data only gives partial support for that idea. Two of seven sharing mode aspects appear to have a significant impact on one of the five relationship quality dimensions. The continuity expectation of the channel relationship is positively influenced by the contact frequency of the retailer ($b= .46$; $p=.01$), and marginally significant for the contact frequency of higher management from the supplier ($b=.18$; $p=.07$).

Since we need to reject H_{7b} (on the effect of sharing modes on relationship quality) for social satisfaction and affective commitment, we automatically have to reject of the next hypothesis expecting that the impact of sharing mode on social satisfaction and affective commitment is stronger than the impact of shared content.

7.3.3 *The Impact on Channel Relationship Performance*

The prime motivation for market information sharing is that through this mutually beneficial collaborative process the channel members work on improving the functioning of their channel relationship to delivering the “right product in the right amounts at the right time”. Obviously, these improvements should pay back to both (or at least one) of them, and information sharing is bound to result in the expansion of the size of joint benefits (*pie-expansion*) for both of the channel members. The two more objective performance measurements reflecting this outcome are joint profits and competitive advantages for the channel as a whole. Joint profits are measures for the past outcome from the relationship with the supplier in terms of sales and gross margins. Furthermore,

information sharing channel parties are assumed to gain competitive advantages over their rivals, and attain strategic advantages.

To test these hypotheses we perform two OLS regressions; one for joint profits, the other for competitive channel advantages (see Table 7.4). Only the latter regression has a good model fit (adjusted R^2 is .20) and a significant high F-value (3.82: $p < .01$). The first regression – joint profit – has a poor model fit (F-value = 1.55; $p > .14$); apparently there are other variables that explain joint profit. For both regressions, the highest VIF value is 3.89 (for contact frequency by the retailer); which is much lower than the critical height of 10.00; allowing us to draw the conclusion that multicollinearity is not a problem (Hair, et al., 1999).

Our results show that the hypothesis positing that higher degrees of shared content leads to higher joint profits and stronger competitive advantages can only be partially accepted. In particular the retailer's degrees of shared content contributes to joint profits ($b = +.20$; $p = .05$) and competitive channel advantages ($b = +.29$; $p < .01$). The effect of the supplier's shared content appears to be insignificant (respectively $b = +.12$; $p = .18$; and $b = +.14$; $p = .12$).

We expected the sharing mode of the information sharing arrangement also to have an direct influence on the final outcome of joint profits and gain in competitive advantages. We however do not find support for that hypothesis. Sharing information in a more collaborative style does not immediately pay off in results. The highest absolute values of beta's are $b = .12$ ($p = .12$) from higher supplier management contact frequency on the amount of joint profits, and $b = .11$ ($p = .16$) from the supplier's exclusivity on the attainment of competitive channel advantage. There are significant bivariate correlation between sharing mode aspects and the channel performance, but these effects disappear in the multivariate analyses; probably due to their associations with the shared content measures. Without finding a significant relationship between any of sharing mode aspects and the channel relationship performance in the regression analyses, and the discovered positive significant impact between shared content on joint profits and competitive channel advantages, we can draw the conclusion to accept H_{8c} . The impact of shared content on channel relationship performance (joint profits, attainment of competitive advantages) is greater than the impact of sharing mode.

Table 7.4 *The Effects of Shared Content and Sharing Mode on Channel Relationship Performance and Quality*

		Relationship Quality*				Relationship Performance*			
		Satisfaction		Commitment		Joint Profits		Competitive Channel Advantages	
		Economic Satisfaction	Social Satisfaction	Willingness to invest	Affective Commitment	Continuity Expectancy			
<i>H</i>		beta (sign.)	beta (sign.)	beta (sign.)	beta (sign.)	beta (sign.)	beta (sign.)	beta (sign.)	beta (sign.)
<i>H_{7a}</i>	<i>Degree of Shared Content</i>								
	By Retailer (SHCO_RET)	.26 (.01)	.11 (.17)	-.07 (.71)	-.08 (.75)	-.04 (.62)	.20 (.05)	.29 (<.01)	
<i>H_{8a}</i>	By Supplier (SHCO_SUP)	.17 (.08)	.35 (<.01)	.16 (.11)	.15 (.13)	.16 (.11)	.12 (.18)	.14 (.12)	
<i>H_{7b}</i> <i>H_{8b}</i>	<i>Sharing Mode</i>								
	Contact Frequency by Retailer	-.14 (.79)	.17 (.19)	-.02 (.53)	.22 (.14)	.46 (.01)	.12 (.28)	.08 (.33)	
	Contact Frequency by Supplier	.07 (.36)	-.09 (.68)	.22 (.13)	-.05 (.60)	-.31 (.94)	-.13 (.74)	.01 (.47)	
	Higher Management from Retailer	.11 (.16)	-.10 (.81)	-.02 (.56)	-.12 (.84)	-.20 (.95)	.11 (.18)	.10 (.18)	
	Higher Management from Supplier	.09 (.22)	.02 (.42)	.15 (.12)	.12 (.16)	.18 (.07)	.14 (.12)	.02 (.42)	
	Exclusivity given by Retailer	.04 (.36)	-.05 (.69)	-.02 (.36)	.10 (.19)	-.01 (.55)	-.03 (.59)	.06 (.30)	
	Exclusivity given by Supplier	.14 (.12)	-.11 (.82)	-.02 (.58)	.03 (.40)	.04 (.37)	.06 (.33)	.11 (.16)	
	Formalization of Information Sharing	-.05 (.67)	.03 (.39)	.02 (.42)	.03 (.39)	-.09 (.79)	-.10 (.82)	.03 (.38)	
R-square		.24	.16	.11	.09	.11	.13	.28	
Adj. R-square		.16	.08	.02	<.01	.02	.05	.20	
F (sign.)		3.14 (<.01)	1.96 (.05)	1.17 (.33)	1.02 (.43)	1.27 (.27)	1.55 (.14)	3.82 (<.01)	
N		100	100	100	100	100	100	100	
Missing values listwise deleted									

* p-values are one-tailed

7.4 Interaction effects

After testing the hypotheses of this chapter and thinking about the results of the previous chapter on antecedents, a number of extra questions are raised and that gives us the need to perform several post-hoc analyses. One of the first issues that would be interesting to look into was the question whether or not the impacts of information sharing on relationship quality and performance would be mediated by joint market learning. Theoretically, there are good reasons to think about an ordering of information sharing as an “input” for the “process” of joint market learning with quality and performance as “outputs”. We subsequently performed mediation tests conform the recommendations made by Baron and Kenny (1986), but we found that none of these impacts was completely mediated.

The other issue raised as a result from the previous analyses, is that some antecedents still play an inhibiting or perhaps an unclear role that is worth investigating. For instance, the roles of four antecedents, consumer demand turbulence, channel inertia, negative connectedness in the supplier network, and trust are still slightly unclear role in the sharing of market information in channels. That is for the following reasons.

Consumer demand turbulence and channel inertia. Our analyses on the antecedents in Chapter 6 demonstrate that retailers naturally tend to share lower degrees of information when consumer demand turbulence increases and the channel becomes more inert. These findings are difficult to reconcile with the results and recommendations from the majority of Supply Chain optimization studies. These optimization studies have just shown that the sharing of down-stream market information (from consumers via retailers to suppliers upstream) is by far more valuable in situations where consumer demand is more turbulent and channel inertia are greater (i.e., delivery lead times are longer). Yet, it would be interesting to check the contingency effects of information sharing and therefore we theorize the expected interactions as follows. What if, despite the retailers’ normal information sharing habit, a retailer has higher degrees of content in a more turbulent consumer demand situation, ... would it then (extra) help both channel members to respond to consumer demand even better and consequently would sharing information pay back in terms of higher joint profits, stronger competitive advantages, and/or a better relationship quality?

Negative connectedness and trust. Furthermore, two other antecedent variables – negative connectedness and trust – did not show to have any impact on the shared content from the channel members. Their roles remain somewhat vague, and we make an attempt to seek further explanation; because in management anecdotes, the negative connectedness in the supplier network and the lack of trust are often regarded as obstacle to share market information in channel relationships. Yet, our findings in Chapter 6, however, could not attribute a direct significant influence to them. It would be interesting to explore the role of these variables further, and perhaps we find that they lessen the good outcomes of

information-sharing. That might explain the negative-laden stories from practitioners: information sharing in low trusted in channel relationships might lower its effectiveness. In trusted channel relationships, trust may increase the impact of information sharing. A negative interaction effect can be expected from negative connectedness in relationships; it may hamper the effectiveness of information sharing.

To explore these possible interaction effects, we performed another eight OLS regressions on the (total) joint market learning, the five channel relationship quality measures, and two channel relationship performance measures, but this time with the inclusion of the interaction terms for these four variables with the degree in shared content by each channel member.¹⁰ The regressions in Table 7.5 partly confirm these new hypotheses. In situations with more turbulent consumer demand, the shared content by the retailer (market information going upstream) proves to be more valuable because it pays off in an extra lift in the joint market learning (marginally significant $b=.17$; $p = .06$), economic satisfaction (marginally significant, $b=.18$; $p=.08$), social satisfaction ($b=.23$; $p=.02$), and higher willingness to invest in the supplier relationship ($b=.20$; $p=.06$) and stronger competitive advantage ($b=.16$; $p=.09$). This interaction effect can be quite strong, because the top part of Figure 7.2 shows that the impact of information sharing in higher consumer demand turbulent circumstances has a very sharp positive slope; information sharing in situations with high consumer demand turbulence delivers extra economic satisfaction. The impact of the retailer's shared content on the competitive advantage of the channel is also significantly higher. The value of the supplier's shared content does not depend on the consumer demand turbulence (the higher absolute beta-value is $b=.15$ ($p=.11$) for continuity expectations).

The reverse seems true for channel inertia. In inert channels with longer time lags to react to consumer demand changes, the impact from the shared content by the retailer appears unchanged, while the impact of supplier's content is greater then. It stimulates the joint market learning process ($b=.39$; $p<.01$), makes retailers more economically and socially satisfied (respectively, $b=.25$; $p=.05$; $b=.25$; $p=.03$), contributes extra to the joint profits ($b=.22$; $p=.09$), and creates competitive advantages (marginally significant, $b=.16$; $p=.08$).

Although, negatively connected supplier relationships did not appear to discourage or encourage the channel members to share higher degrees of content (it only affects the sharing mode, see Chapter 6), they are neither an ideal situation for an extra positive

¹⁰ In total we added eight interaction terms: [TRB*shared content by retailer], [TRB*shared content by supplier], [INERT*shared content by retailer], [INERT*shared content by supplier], [CNNC*shared content by retailer], [CNNC*shared content by supplier], [TRUST*shared content by retailer], and [TRUST*shared content by supplier]. We mean-centered all of these variables and included all of the four main effects to reduce multicollinearity and misinterpretation of the effects (Irwin and McClelland, 2001).

impact of shared content on the three sorts of consequences. The extent of negative connectedness in a relationships reduces the contribution of shared content by the retailer on joint market learning ($b = -.16$; $p = .06$). Under these conditions the shared content by the retailer is less effective: it reduces the impact on joint profits ($b = -.33$; $p = .01$), and the creation of competitive advantage is obstructed ($b = -.17$; $p = .06$). Interestingly, when suppliers share higher degrees of content in negatively connected relationships, the continuity expectations drop significantly ($b = -.25$; $p = .02$).

Finally, the role trust plays may depend on its effectiveness. We find that trust has significant interplays with the degrees of shared content by the retailer. In trusted relationships, the positive influence of the retailer's degrees of shared content on joint market learning is even significantly greater ($b = .25$; $p = .01$) and the creation of competitive advantages for the channel relationship is facilitated ($p = .28$; $p = .01$). This finding corroborates with the study by Corsten and Kumar (2005) who also found a facilitating role for trust in ECR-effectiveness. The bottom part of Figure 7.2 depicts the differences in impact of information sharing for channel relationships with (i) low and (ii) high trusted relationships. These graphs clearly show that the effectiveness of information sharing in high trusted relationships is much greater. In low trusted relationships, the effect of retailer's degree of shared content is even severely negative. If a retailer would increase its degree of shared content, it might hurt the quality of the joint learning process, and harm the competitiveness of the channel.

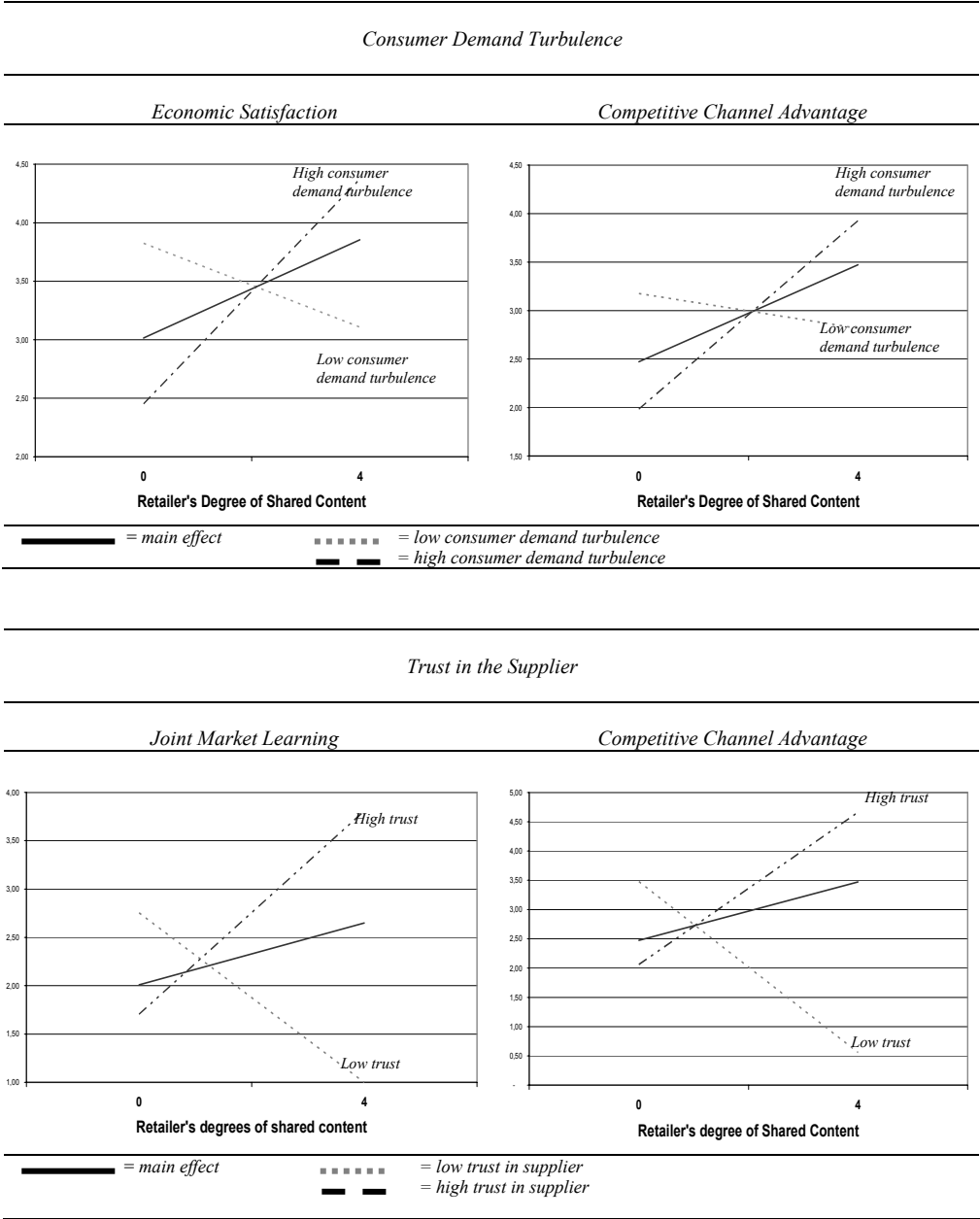
Being aware of the moderating effects of these four antecedents, channel parties can really improve the effectiveness of their information sharing practices. When faced with a turbulent consumer demand, the retailer should not refrain from information sharing; instead it should share higher degrees of information with his supplier, because it pays off in extra competitiveness and joint profits. In trusted relationships, information sharing proves to be much more effective in joint market learning and creating competitive channel advantages.

Table 7.5 The Interaction Effects of Shared Content with Four Antecedents on Consequences

Joint Market Learning			Relationship Quality			Relationship Performance		
H	Satisfaction		Willingness to invest	Commitment		Joint Profit	Competitive Advantage	
	Economic Satisfaction	Social Satisfaction		Affective Commitment	Continuity Expectancy			
Degree of Shared Content								
By Retailer (SHCO_RET)	+ .19 (.03)	.25 (.02)	-.16 (.91)	-.14 (.87)	-.10 (.82)	.29 (.01)	.29 (.00)	
By Supplier (SHCO_SUP)	+ .23 (.02)	.18 (.09)	.08 (.26)	.04 (.39)	.02 (.43)	.16 (.13)	.13 (.15)	
Sharing Mode								
Contact Frequency by Retailer	+ -.48 (.99)	-.22 (.87)	-.04 (.42)	.19 (.17)	.48 (.00)	.01 (.49)	-.04 (.60)	
Contact Frequency by Supplier	+ .42 (.00)	.14 (.24)	.27 (.08)	-.06 (.62)	-.31 (.96)	-.04 (.57)	.16 (.19)	
Higher Management from Retailer	+ .22 (.01)	.17 (.08)	.15 (.11)	.03 (.40)	-.01 (.53)	.07 (.30)	.15 (.08)	
Higher Management from Supplier	+ -.10 (.85)	.13 (.14)	.07 (.27)	.12 (.17)	.27 (.01)	.18 (.08)	.09 (.21)	
Exclusivity given by Retailer	+ .06 (.29)	.06 (.31)	-.10 (.80)	.01 (.48)	.09 (.23)	.03 (.42)	.05 (.32)	
Exclusivity given by Supplier	+ -.01 (.56)	-.07 (.69)	-.08 (.76)	.05 (.35)	-.04 (.62)	-.15 (.87)	-.07 (.74)	
Formalization of Information Sharing	+ .30 (.00)	.03 (.40)	.12 (.14)	.12 (.16)	-.17 (.94)	-.10 (.79)	.08 (.23)	
Main Effects								
Consumer Demand Turbulence (TRB)	-.06 (.28)	.00 (.50)	.09 (.21)	.20 (.05)	.04 (.37)	.02 (.43)	-.02 (.58)	
Channel Inertia (INERT)	.17 (.05)	.22 (.05)	.19 (.07)	.05 (.35)	-.03 (.61)	.17 (.11)	.27 (.01)	
Trust (TRUST)	.20 (.03)	.14 (.13)	.37 (.00)	.37 (<.01)	.36 (<.01)	-.06 (.69)	.18 (.06)	
Negative Connectedness (CNNC)	.13 (.08)	.19 (.05)	.20 (.04)	.11 (.18)	-.06 (.71)	.12 (.16)	.25 (.01)	
Interaction Effects								
TRB × SHCO_RET	+ .17 (.06)	.18 (.08)	.16 (.09)	.04 (.39)	.15 (.11)	.01 (.48)	.16 (.09)	
TRB × SHCO_SUP	+ -.13 (.89)	-.05 (.64)	.12 (.17)	.13 (.17)	.15 (.11)	.06 (.32)	.08 (.25)	
INERT × SHCO_RET	+ -.31 (.99)	.06 (.31)	.13 (.14)	.02 (.44)	-.13 (.87)	-.07 (.71)	.05 (.33)	
INERT × SHCO_SUP	+ .39 (.00)	.25 (.05)	.09 (.27)	.09 (.29)	-.20 (.92)	.22 (.09)	.24 (.04)	
CNNC × SHCO_RET	- -.16 (.06)	-.10 (.21)	.11 (.18)	.02 (.55)	.00 (.51)	-.23 (.01)	-.17 (.06)	
CNNC × SHCO_SUP	- .11 (.86)	.03 (.58)	-.12 (.15)	-.13 (.16)	-.25 (.02)	.01 (.53)	.05 (.69)	
TRUST × SHCO_RET	+ .25 (.01)	.04 (.38)	.05 (.34)	.03 (.42)	.09 (.23)	.14 (.14)	.28 (.01)	
TRUST × SHCO_SUP	+ -.04 (.64)	.01 (.48)	-.16 (.12)	-.10 (.76)	-.25 (.97)	.08 (.29)	-.13 (.84)	
R-square								
	.58	.35	.40	.33	.45	.28	.47	
Adj. R-square	.46	.17	.24	.15	.30	.08	.32	
F (sign.)	5.00 (<.01)	1.98 (.02)	2.49 (<.01)	1.79 (.04)	2.97 (<.01)	1.43 (.13)	3.22 (<.01)	
N	99	99	99	99	99	99	99	
Missing values listwise deleted								

Missing values listwise deleted

Figure 7.2 Examples of the Interaction Effects



7.5 Conclusions

This chapter has investigated the third research question: *what are the consequences of market information sharing?* Central in this question has been which characteristics of the information sharing arrangement contribute to the success of transforming the channel relationship into a better-performing “demand-driven chain”. We therefore have specifically looked at the impact on three sets of consequences: (1) joint market learning, (2) channel relationship quality, and (3) channel performance.

We find at least partial support for five out of our eight hypotheses stated in our research framework (Chapter 3). With respect to the direct effect of the shared content, all of the three hypotheses are (partially) confirmed. When channel firms share higher degrees of content, this leads to:

- *Better joint market learning*; by disclosing higher degrees of their market information to each other, channel firms are better in detecting, interpreting, utilizing and critically reviewing their market information.
- *Improved relationship quality*; the shared content by the supplier makes the retailer more economically and socially satisfied about the channel relationships.
- *Higher relationship performance*; the retailer’s degrees of shared content also positively contribute to the joint profits and attainment of competitive advantages.

As for the effects of the sharing mode, only one of the three hypotheses is (partially) confirmed; the sharing mode only plays a role in the joint market learning; in particular, three of the sharing mode aspects appear to play a facilitating role in enhancing joint market learning: viz., formalization of the information sharing arrangement, contact frequency of the retailer’s higher management, and the contact frequency of the supplier.

Our conclusion therefore is that the shared content in the channel relationship is much more important for the success in transforming the supply chain into a more consumer demand-driven chain.

We have also performed posthoc analyses to explore the presence of some interaction effects of four important antecedent factors. We find that in certain circumstances, shared content has a significant extra impact on the consequences. In inert channels, the positive effect of supplier’s shared content on joint market learning, economic satisfaction, social satisfaction, joint profit and competitive advantages becomes stronger. In trusted supplier relationships, the positive impact of the retailer’s shared content increases. Negatively connected supplier relationships may reduce the effect of retailer’s shared content on joint

market learning, joint profits and competitive advantages. Interestingly, we find that when consumer demand becomes more turbulent, the positive impact of the retailer's shared content on joint market learning, economic and social satisfaction, willingness to invest, and competitive advantages becomes larger. This finding implies that there is a possible pitfall retailer should be aware of. In Chapter 6, we found that consumer demand turbulence diminishes the retailer's shared content, while findings in this chapter show that this "pavlov"-reaction by retailers to turbulence is not an intelligent one. It is not very sensible for a retailer to limit the shared content because sharing because in such turbulent circumstances it leads an extra increase in the quality of joint market learning, better relationship quality, and extra competitive advantage over other channels.

CHAPTER EIGHT THE IMPACT OF INFORMATION SHARING ON THE SUPPLIER'S PERCEPTION OF RELATIONSHIP QUALITY¹¹

8.1 Introduction

In the previous chapters, data was collected from the retailer's perspective. Since a marketing channel is a set of interdependent organizations, it is interesting to examine the consequences of information sharing from the other channel member's viewpoint as well. This chapter therefore takes on the supplier's viewpoint. In the Chapter 7, we have demonstrated that information sharing can produce good results for the channel relationship. It is subsequently also important to know how suppliers react to information sharing initiatives from a retailer.

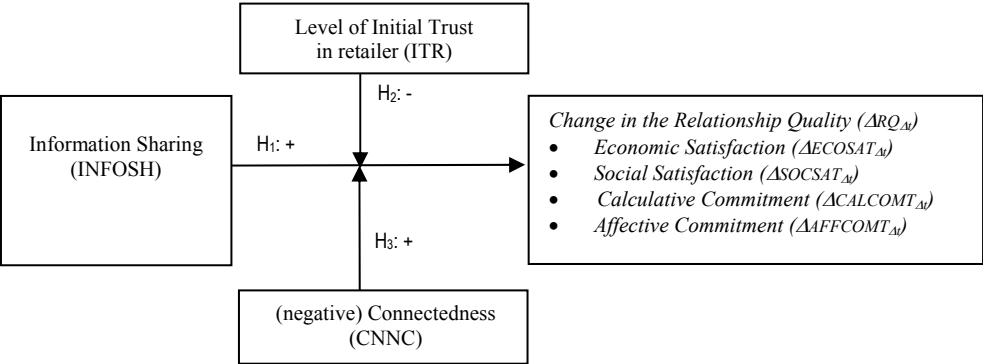
Looking at the supplier's reaction in detail means that we are also looking at some of the consequences of market information sharing, hence this chapter adds to the insights of the third research question "*what are the consequences of market information sharing in channel relationships?*" Not only is the other perspective different from the previous two studies, but it also has a dynamic approach with two measurements in time. Due to the experimental design we can make stronger inferences about the causal-relationship between information sharing and its consequences.

Our research model for this particular study aims at describing the effect of the retailer's information sharing activities on the development of its relationships with suppliers. Relationship development is defined here as the change in the quality of the relationship as perceived by the receiving party (i.e., the supplier). Our research model is graphically presented in Figure 8.1 and shows the influence of information sharing on the development of the relationship. We expect that the relational effect of information sharing will be moderated by two variables.

The first moderating variable is the amount of trust in the retailer-supplier relationship before market information is being shared (initial trust). The second moderator is the extent to which relationships with various suppliers in the retailer's portfolio of supplier-relationships are being connected, i.e., compete with each other.

¹¹ This Chapter is an adapted version of the ERIM working paper ERS-2002-84-MKT "Building Stronger Channel Relationships Through Information Sharing"

Figure 8.1 Focus of This Chapter: Impact on Relationship Quality



8.2 Research Model

A firm’s critical resources may span firm boundaries and may be embedded in interfirm resources and routines. Information sharing between organizations is an important potential source of inter-organizational competitive advantage (Dyer and Singh, 1998). However, organizations may not automatically be willing to share valuable information with trading partners especially not if they are not credibly assured that this knowledge will not be readily shared with competitors. Organizations that receive information from partners can be expected to appreciate this and to evaluate relationships in which such information is being shared more positively. Given the sensitive character of such information, especially within a competitive environment, one can expect that the relational effects of information sharing activities of a partner will be stronger if such behavior exceeds existing expectations. This will be the case if partners, who are not highly trusted, are sharing information. Furthermore, the relational effects of information sharing can be expected to be stronger if takes place on an exclusive basis with a specific partner in a competitive environment.

Our research model describes the expected effects of the retailer’s information sharing activities on the quality of the relationship with suppliers. Our research model is graphically presented in Figure 8.1 and shows the hypothesized influence of information sharing on relationship quality. We propose that the effect of information sharing will be moderated by two variables. The first moderating variable is the amount of trust of the supplier in the relationship before market information is being shared (initial trust). The second moderator is the extent to which relationships with various suppliers in the retailer’s portfolio of supplier-relationships are being connected, i.e., competing with each other.

8.2.1 Relationship Quality

In building a consumer-driven supplier network, it is important for retailers to develop strong relationships with their suppliers. Suppliers in strong relationships are less prone to leave the network and perform better (e.g., Morgan and Hunt, 1994; Cannon and Perreault jr., 1999). The construct relationship quality characterizes the state of the retailer-supplier relationship.

In our study the evaluation of the relationship quality is characterized by two measures: the amount of satisfaction, and the level of commitment in the relationship. Whereas satisfaction predominantly evaluates the past performance of the relationship and measures its state retrospectively, commitment takes on a prospective perspective. Most frequently a channel member's (i.e. supplier) satisfaction is defined as a positive state resulting from the appraisal of all the aspects of a firm's working relationship with another firm (in this case, the sharing retailer) (e.g., Frazier, Gill, and Kale, 1983; Gaski and Nevin, 1985). Two types of satisfaction can be distinguished: economic and social satisfaction (Geyskens, Steenkamp and Kumar, 1999; Geyskens and Steenkamp, 2000). Economic satisfaction is defined as a channel member's evaluation of economic outcomes that flow from the relationship with its partner such as sales volume, margins, and discounts (Geyskens and Steenkamp, 2000). It concerns the evaluation of a relationship with respect to goal attainment. Social satisfaction is defined as a channel member's evaluation of psycho-social aspects of the relationship. It concerns the satisfaction with the social outcomes of the relationship, whether interactions within the exchange are fulfilling, gratifying, and facile.

Commitment is viewed as a critical indicator of future interactions in the relationship. It has been defined as "an implicit and or explicit pledge of relational continuity between exchange partners" (Dwyer, Schurr and Oh, 1987). Different forms of commitment have been distinguished. First, when organizations want to continue relationships because they like and identify with the other, it is called affective commitment (e.g., Anderson and Weitz, 1992). Second, calculative commitment exists when a firm continues a relationship because of high switching costs (Kumar, Hibbard and Stern, 1994).

8.2.2 The Impact of Information Sharing on Relationship Quality

Sharing marketing information can improve the quality of relationships through three mechanisms comparable to the different conceptualizations discussed earlier in Chapter 2: (1) as a form of improved channel communication, (2) as an exercise of non-coercive power, and (3) as a credible pledge for commitment or demonstration of relationship bonding.

As improved communication: "channel communication is the formal as well as informal sharing of meaningful and timely information between firms" (Anderson and

Narus, 1990). Qualitatively good communication exists when the relationship is characterized by open communications and sharing of information (Anderson and Weitz, 1992), which occurs frequently, bi-directionally, formal, and non-coercive (Mohr and Nevin, 1990). Better communication and information sharing contribute to improved channel operations, satisfaction and commitment (e.g. Mohr, Fisher and Nevin, 1996). Improved communication indirectly reduces the level of conflict through trust. Firms that have developed strong trust in their partners are more likely to work out disagreements with these partners (Anderson and Narus, 1990, p. 45). Through its impact on trust, information sharing also indirectly affects commitment. (Morgan and Hunt, 1994). Altogether, information sharing as a means of communication leads to more satisfaction and commitment.

As an exercise of non-coercive power: information sharing contributes to supplier relationships through a second mechanism. Because suppliers value real-time market intelligence, retailers who collect timely and detailed shopper information have created a base of power over their suppliers. Sharing marketing information with a supplier can be conceived of as exercising a non-coercive power base: giving reward and assistance (as an influence strategy, see Boyle et al. 1992). As such, the bestowal of marketing information will be evaluated as desirable and leading to more satisfaction with the relationship (Hunt and Nevin, 1974; Gaski and Nevin, 1985).

As a credible pledge for commitment or a demonstration of relationship bonding: information sharing also improves relationship quality because it can be regarded as a strong pledge of commitment of the retailer to the supplier. A pledge is an action undertaken by a channel member that demonstrates good faith and that binds it to the relationship (Anderson and Weitz, 1992). Interpreting marketing information as being of strategic value (as an asset) makes exclusive sharing comparable to an investment into the supplier relationship. The impact of such idiosyncratic investments in relationships is known to discourage abandoning each other and to increase commitment (Anderson and Weitz, 1992).

In this study we investigate the effects of sharing information with a channel partner on an exclusive basis (similar to “Category Management”-arrangement as presented in Figure 3.3). This means that only one organization will receive the information from its owner, which will be an advantage for the receiver. Based on these arguments described above we expect that sharing information with channel partners in exclusive arrangements will improve relationship quality. We hypothesize that:

H₁: Information Sharing has a positive effect on the relationship quality as perceived by the receiving channel member.

Table 8.1 *The Expected Effects of Information Sharing in different Trust Conditions*

	<i>Distrusting Channel Relationships</i>	<i>Trusting Channel Relationships</i>
<i>No Information sharing</i>	No information sharing has no effect on relationship quality ($\Delta RQ = 0$) (1)	No information sharing has a negative effect on relationship quality ($\Delta RQ = -$) (2)
<i>Information sharing</i>	Information sharing has a positive effect on relationship quality ($\Delta RQ = +$) (4)	Information sharing has no effect on relationship quality ($\Delta RQ = 0$) (3)

8.2.3 *The Moderating Effect of Initial Trust*

It is interesting to study how trust moderates the impact of retailer information sharing. The perception of the other party as not being sufficiently reliable has often been an impediment for making any substantial partnership investment, like an intangible asset as sharing critical market information is (Wilson and Mummalaneni, 1988). Moreover, trust defined as “the extent to which a firm believes that its exchange partner is honest and/or benevolent” (Geyskens, et al., 1998) plays a central role in relationships. It is generally considered as a “critical” (Wilson, 1995) or “key” variable (Morgan and Hunt, 1994) for relationship quality. Only once trust is established, firms learn that joint efforts will lead to outcomes that exceed what the firm would have achieved, had it acted solely in its own interest (Anderson and Narus, 1990). In this study we distinguish between distrusting relationships and relationships characterized by trust. We think of distrust as a barrier for further improving relationship quality.

Table 8.1 presents the expected effects of information sharing under the two different trust conditions. If the retailer refrains from sharing information the effect of such behavior will be different when the supplier trusts the retailer relative to a situation of distrust. In a situation of distrust not sharing information (Cell 1) will only confirm existing expectations and will, therefore, not have an effect on relationship quality. In a situation where the supplier trusts the retailer, not sharing information (Cell 2) with the channel partner will conflict with the retailer’s expectations and, therefore, have a negative effect on relationship quality.

If a retailer decides to share market information, it may encounter different supplier responses, depending on the supplier’s level of trust in the retailer. In the situation of high supplier trust, a retailer’s decision to share information basically responds to expectations

already formed by the partner and we, therefore, expect no effect of information sharing on relationship quality (Cell 3). If a supplier distrusts the retailer it will not expect this retailer to share information. In such circumstances, a retailer's decision to share information exceeds the supplier's expectations with the retailer. Hence, it will have a positive effect on the quality of the relationship (Cell 4). These expected effects of information sharing under different trust conditions lead to an expected negative moderating effect of initial trust on the effect of information sharing (relative to not sharing information). Therefore, we hypothesize the following moderating effect of initial trust on the impact of information sharing on relationship quality:

H₂: The positive impact of information sharing on the relationship quality is negatively affected by the level of initial trust. The relative effect of information sharing will be more positive in relationships characterized by distrust than in trusting relationships.

8.2.4 The Moderating Effect of Connectedness between Supplier Relationships

A key characteristic of sharing marketing information lies in the effects that it may have on relationships of the sharing organization with channel partners other than the one with which information is shared. Most marketing channel studies take dyadic relationships as their unit of analysis. Such dyadic studies draw a boundary around the focal relationship but ignore other significant relationships that the actors involved may have. Since organizations will often be part of a business network, significant network phenomena may make their appearance (Easton and Håkansson 1996). A business network can be defined as a set of two or more connected business relationships. Connected means that the extent of exchange in one relationship will be contingent upon (non) exchange in other (connected) relationships. Therefore, a second factor that we expect to influence the impact of information sharing on relationship quality, is the extent to which the various supplier relationships of the retailer are connected (Anderson, Hakansson, and Johanson, 1994). Connectedness is defined as: "the degree to which the exchange in one relationship is contingent on the other." (Cook and Emerson, 1978). One specific form is negative connectedness, implying that exchange in one relationship has negative consequences for exchange in the other relationship (Ritter, 2000). If the relationships of a retailer with various suppliers compete they will be negatively connected.

In making strategic channel decisions about information sharing on the basis of exclusivity, retailers realize that teaming up with one supplier may have consequences for relationships with other (competing) suppliers. Since marketing information is especially valuable in competitive markets (Raju and Roy, 2000), suppliers with a retailer relationship that is embedded in a network with other negatively connected (competing)

retailer-supplier relationships, will especially benefit from receiving information and appreciate it. Since an information-sharing arrangement and associated efforts (i.e., the retailer's dedication) represent a scarce resource, receiving channel partners will perceive exclusive information sharing as a privilege over their direct competitors. Therefore, retailer information sharing will have a larger impact on relationship quality if relationships with suppliers are more strongly (negatively) connected. In competitive environments with connected relationships receiving marketing information on the basis of exclusivity will be an important asset for organizations. Maintaining relationships with information sharing organizations will, therefore, be important for the competitive position of organizations.

We hypothesize that:

- H₃: The effect of information sharing is positively moderated by the level of (negative) connectedness of the dyadic relationship with other relationships. When the supplier-relationships are strongly negatively connected, the impact of information sharing on relationship quality is higher. When supplier-relationships are weakly negatively or not connected, the impact of information sharing on the relationship quality is lower.

8.3 *Research Method*

To test our hypotheses we conducted a laboratory experiment. The experimental methodology has been used regularly in research in marketing channels (e.g. Stern, et al, 1973; Busch and Wilson, 1976; Roering, 1977; Dwyer and Walker, 1981; Schurr and Ozanne, 1985; Eliashberg, et al., 1986; Scheer and Stern, 1992). We used the experimental approach because it enabled use to test the causal direction of relationships between our variables of interest.

Since our dependent variable is change in relationship quality, we had to be able to measure the quality of the relationship at different points in time with the same participants. Using a laboratory setting made this possible. The set-up of our experiment is comparable with experiments as designed by Andaleeb (1996) and Pilling et al. (1994). Subjects had to solve a business case while adopting the role of a manager.

We systematically manipulated three experimental variables: information sharing (no/yes), initial trust (distrust/high trust), and connectedness (low/high). All three variables had two levels, resulting in a 2 (between) * 2 (between) * 2 (between) factorial design, with eight experimental groups.

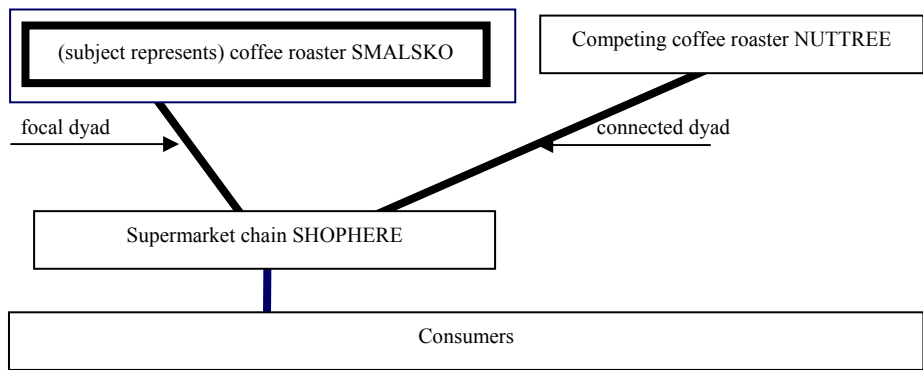
8.3.1 Experimental Materials and Procedure

We developed a web-based presentation of a business case. The subjects were asked to adopt the role of an account-manager of a coffee roaster, called SMALSKO, and evaluated the quality of the relationship with a retailer, the supermarket chain SHOPHERE. By reading constructed company memos, trade journals, and market reports (e.g., Andaleeb, 1996; Pilling et al., 1994), the subjects understood that the coffee roaster distributed its brand to consumers through a large supermarket chain (called SHOPHERE).

It was emphasized that the coffee roaster’s marketing department valued marketing information and that industry experts saw the supermarket chain as highly knowledgeable concerning consumer purchase behavior and shopping habits. The coffee roaster (SMALSKO) faced one major competitor (called NUTTREE) that also did business with the supermarket chain SHOPHERE (see Figure 8.2).

At the start of the experiment (see Figure 8.3 for a presentation of the sequential steps of the experimental procedure), subjects received information about the focal company (the coffee roaster SMALSKO), its major competitor (NUTTREE), and the industry conditions (market size, growth, and distribution). Then, dependent on the experimental group they were in, subjects received information about the initial trust in the supermarket chain (distrust/high trust) and the connectedness (low/high).

Figure 8.2 Marketing Channel Situation as Depicted in Scenario

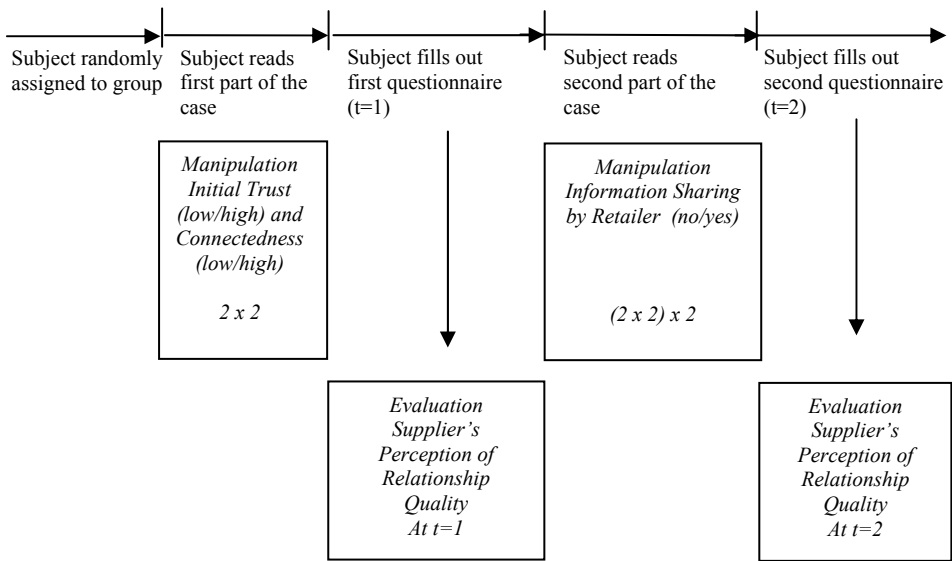


The subjects’ company’s initial trust in the retailer was manipulated through a memo from a colleague account manager that dealt with the supermarket in the past (see Appendix I for an example of the memos). In the distrust condition the memo stated: “you should not trust SHOPHERE. I don’t have many good things to say. I don’t trust these people to be very ‘up front’ with us.” An illustration of SHOPHERE’s bad credibility from a former

incident was also given. In the high trust condition the memo advised: “you should trust SHOPHERE. I have many good things to say. I trust these people to be very 'up front' with us.” and gives an illustration of the SHOPHERE's good credibility from a former incident. The manipulation proved to be successful. Subjects in the initial distrust conditions viewed the retailer’s honesty and benevolence significantly lower than subjects in the high-trust conditions. In the high trust condition, the mean scores for honesty and benevolence were 2.93 and 2.50 respectively. Significantly lower than 4.60 for honesty ($t = -13.73$; $p < .01$) and 4.52 for benevolence ($t = -9.65$; $p < .01$) in the high-trust condition.

Market reports and an article from a renowned trade journal were presented to the subjects to manipulate connectedness. In the high-connectedness conditions, it was made clear that the positioning strategies of the focal coffee coaster and its competitor NUTTREE were similar and that both coffee brands competed for the same consumers. Also, the habit of price wars was reported and that as a consequence consumers displayed brand-switching behavior. Furthermore, an article from a trade journal described that joint sales promotion efforts by the competitor in cooperation with the retailer had hurt SMALSKO’s sales.

Figure 8.3 Experimental Procedure



In the low-connectedness conditions, a market report stated that the positioning strategies differed and that SMALSKO and NUTTREE served different consumer groups. Price wars were uncommon and consumers were brand-loyal. This time, the article from the trade

journal stated that joint sales promotion efforts by the competitor in cooperation with the retailer had *not* hurt SMALSKO's sales (see Appendix VIII for the texts in each condition).

To determine whether our manipulation of the connectedness factor had been successful, subjects rated items from Anderson, Håkansson and Johanson (1994)'s connectedness scale. This scale gauges the degree to which the exchange in one relationship depends on exchange of the partner with a third party. The connectedness manipulation proved to be successful: the participants in the high-connected condition perceived their relationship with the retailer to be higher connected to the competitor-retailer relationship (mean score 5.67) than the participants in the low-connected condition (mean score 4.48) ($t = -3.48$; $p < 0.01$).

After reading the case materials, the subjects evaluated the quality of the relationship with the retailer (measure $t=1$ of relationship quality). To stimulate the processing of the business case information, the questionnaire began with a few open-ended questions (e.g., "In your opinion, what is the business problem that the coffee roaster faces?" and "What would be your course of action?"). The assessment of relationship quality at this point in time was based the case materials the participants read and was influenced by the initial trust manipulation.

In the second part of the business case information was provided about the retailer's decision whether or not to start sharing (no/yes) information with the coffee roaster. The information that was being shared on the basis of exclusivity was Category Management Information (see Figure 3.3) and comparable to sharing the *fourth degree* of shared content. Whether information was provided depended on the manipulation of the third experimental variable (Information Sharing). After reading this part of the business case (see Appendix VIII.3 for details on the information sharing manipulation), the subjects were again asked to evaluate the relationship quality of the coffee roaster with the retailer.

Finally, several control questions were asked to check whether the subjects had an idea about the specific research goals. Content analysis on the answers learned that this was not the case. Our web-based approach of administering the experiment provided us the opportunity to present our subjects high-quality stimulus materials (see Appendix VIII.1, VIII.2 and VIII.3 for examples of screens presented to the subjects). Finally, to assess the realism of the task, the business case was also shown to 12 managers from the food industry. Their average judgment on a scale ranging from unrealistic (1) to realistic (7) was 5.1, showing that they found it a realistic case.

8.3.2 Subjects

Eighty master-level students participated in the experiment. They had all followed several courses in marketing. Their average age was 23 years and 60% was male. The students

were paid for participating in the study, and to stimulate their involvement they were told that the person with the best business solution would win a prize. The subjects were randomly assigned to the experimental groups and the task took them approximately 30 minutes to finish.

8.3.3 Measures

As mentioned earlier we used two evaluative measures of the relationship quality: satisfaction and commitment. In measuring channel member satisfaction, we used the two separate multiple item scales from Geyskens and Steenkamp (2000): one for economic and one for social satisfaction. To measure commitment the multiple-item scale of Kumar, et al. (1995) was used. This scale distinguishes between calculative and affective commitment. The anchors for all items were 1 = strongly disagree and 7 – strongly agree (see Appendix VIII.4 and VIII.5 for the list of items). Altogether we thus measured four different relationship quality dimensions: economic satisfaction, social satisfaction, affective commitment, and calculative commitment.

8.3.4 Measurement Validation

Conform the approach recommended by Anderson and Gerbing (1988) we separated measurement validation from testing our hypotheses. We validated the measurements of the four latent relationship quality variables – economic and social satisfaction and calculative and affective commitment – for the two points in time we measured them (t=1 and t=2; see Figure 8.3).

First, we looked at the factor loadings of each item on their respective construct by performing an exploratory factor analysis. One item for economic satisfaction and three items for commitment were deleted from further analyses because they had factor loadings that were lower than the cut-off value of .6 (cf. Hair et al., 1998) at one or both measurement times (t=1 and/or t=2).

Second, to confirm construct validity and reliability of the measurements of the constructs, we performed confirmatory factor analyses (CFA) using LISREL 8.5. Consistent with our conceptualization, we estimated the measurement model of relationship quality consisting of the four factors. The fit for both measurement times (t=1 and t=2) was acceptable. The overall fit indices for t=1 were: $\chi^2 = 102.85$, RMSEA = 0.074 and CFI=0.96 and for t=2: $\chi^2 = 130.16$ and RMSEA = 0.10 and CFI=0.93. All items in the 4-factor model demonstrated adequate convergent validity: their loadings on the hypothesized construct were significant with t-values ranging from 4.86 to 12.57 (for t=1) and from 4.59 to 11.59 (for t=2) while no substantial cross-loadings were retained. Furthermore, when testing for discriminant validity, we looked at the constructs with the highest correlations (see Table 8.2), and checked whether they were significantly different

from unity. Assuming a perfect correlation between social satisfaction and affective commitment, the model showed a much worse model fit ($\Delta\chi^2(1) = +38.11$ ($t=1$) and $\Delta\chi^2(1) = +47.08$ ($t=2$)). Similarly, when we assumed a perfect correlation between social satisfaction and calculative commitment, the model showed a worse fit ($\Delta\chi^2(1) = +74.13$ ($t=2$) and $\Delta\chi^2(1) = +63.61$ ($t=2$)). All measures had a composite reliability (α) greater than the minimum recommended level of 0.60 and 6 out of 8 measures (i.e., 4 constructs measured twice) exceeded the preferred level of 0.70 (Churchill, 1979; Nunnally, 1978; see Appendix VIII.4 for details).

Third, we also checked for alternative structures of the relationship quality construct, like the 1-overall-factor model (with 1 higher-order relationship quality construct) and several 2-factor models. All of these models showed substantially worse fits.

The fourth and last step in our measurement validation was testing whether the measurements at the different times ($t=1$ and $t=2$) were structurally comparable. For this purpose we assessed metric equivalence between both measurement times (cf. Steenkamp and Baumgartner, 1998)¹². Configural invariance between $t=1$ and $t=2$ is ascertained by showing that the 4-factor model fits best in both times ($t=1$ and $t=2$). Furthermore, multi-group CFA retrieves a good fit when invariant factor loadings, invariant factor correlations and invariant error are assumed ($\chi^2 = 276.62$ ($df = 162$); RMSEA = 0.095; CFI = 0.93). These results provide evidence of metric equivalence across the two measurement times, and shows that a comparison between them can be made in further analyses.

¹² Metric equivalence problems are typically related to cross-cultural comparisons where samples are independent (see Steenkamp and Baumgartner, 1998; an example in channel research is Cannon and Homburg, 2001). Rather than independent samples, this study has dependent samples, meaning that, the probability of having a comparable factor structure between the two measurements is higher.

Table 8.2 Summary Statistics and Correlations for Relationship Quality Variables

	Mean(s.d.)	Correlations*		
		Economic Satisfaction	Social Satisfaction	Calculative Commitment
<i>t=1</i>				
Economic Satisfaction (ES ₁)	5.04(1.48)			
Social Satisfaction (SS ₁)	3.55(1.81)	.227 (.043)		
Calculative Commitment (CC ₁)	5.10(1.13)	.355 (.001)	.433 (<.001)	
Affective Commitment (AC ₁)	3.85(1.64)	.266 (.018)	.761 (<.001)	.439 (<.001)
<i>t=2</i>				
Economic Satisfaction (ES ₂)	5.33(1.06)			
Social Satisfaction (SS ₂)	4.18(1.57)	.348 (.002)		
Calculative Commitment (CC ₂)	5.78(0.97)	.468 (<.001)	.556 (<.001)	
Affective Commitment (AC ₂)	4.36(1.34)	.161 (.153)	.710 (<.001)	.349 (.002)

*Note: Two-tailed probability stands between brackets.

The values for all four relationship quality variables were developed by calculating the unweighted averages of the subject’s ratings on the individual items belonging to these constructs. Table 8.2 contains descriptive statistics for the constructs and the correlations between them.

8.4 Results

The data were analyzed using four ANOVAs with two repeated measures (measurements at t=1 and t=2) for each of the four dependent variables. The tested models contain three main effects: information sharing, initial trust in the retailer, and connectedness, and the interaction terms of information sharing with initial trust (Information Sharing x Initial Trust) and with connectedness (Information Sharing x Connectedness). As we are interested in the (intra-supplier) change in relationship quality caused by retailer information sharing, we report the significance tests for the within-subject-effects in Table 8.3. In Tables 4, 5, and 6 we present the descriptive results of our experiments.

Table 8.3 The Effect of Information Sharing on Satisfaction and Commitment: Results of Analysis of Variance

<i>Dependent variable: Change in Relationship Quality</i>	<i>Degrees of freedom</i>	<i>Mean Square</i>	<i>F Value</i>	<i>p-value</i>	<i>η^2</i>
<i>Economic Satisfaction</i>					
- Constant	1	3.84	5.50	0.02	0.07
- Information Sharing	1	5.67	8.13	0.01	0.10
- Initial Trust in Retailer	1	0.01	0.02	0.90	<0.01
- Connectedness	1	0.17	0.25	0.62	<0.01
- Information Sharing x Initial Trust	1	0.62	0.89	0.35	0.01
- Information Sharing x Connectedness	1	8.84	12.67	<0.01	0.15
- Error	73	0.70			
<i>Social Satisfaction</i>					
- Constant	1	16.71	41.58	<0.01	0.36
- Information Sharing	1	23.94	59.56	<0.01	0.45
- Initial Trust in Retailer	1	8.75	21.78	<0.01	0.23
- Connectedness	1	0.49	1.22	0.27	0.02
- Information Sharing x Initial Trust	1	0.02	0.05	0.82	<0.01
- Information Sharing x Connectedness	1	1.58	3.92	0.05	0.05
- Error	73	0.40			
<i>Calculative Commitment</i>					
- Constant	1	18.49	26.83	<0.01	0.30
- Information Sharing	1	4.77	6.92	0.01	0.09
- Initial Trust in Retailer	1	0.52	0.75	0.39	0.01
- Connectedness	1	2.37	3.43	0.07	0.05
- Information Sharing x Initial Trust	1	0.01	0.02	0.89	<0.01
- Information Sharing x Connectedness	1	0.03	0.04	0.85	<0.01
- Error	73	0.69			
<i>Affective Commitment</i>					
- Constant	1	11.27	26.58	<0.01	0.27
- Information Sharing	1	3.55	8.37	<0.01	0.10
- Initial Trust in Retailer	1	9.20	21.71	<0.01	0.23
- Connectedness	1	0.21	0.49	0.48	<0.01
- Information Sharing x Initial Trust	1	0.11	0.25	0.62	<0.01
- Information Sharing x Connectedness	1	1.70	4.02	0.05	0.05
- Error	73	0.42			

* $p < 0.05$; ** $p < 0.01$

Table 8.4 The Effect of Information Sharing on Satisfaction and Commitment: Means and Standard Deviation

	<i>t</i> =1	<i>t</i> =2	Change { (<i>t</i> =2) – (<i>t</i> =1) }
	Mean (std. dev)	Mean (std. dev)	Mean (std. dev)
<i>Economic Satisfaction</i>			
No information sharing	5.15 (1.45)	5.09 (1.07)]*	- 0.06 (1.24)]*
Information sharing	4.92 (1.52)	5.58 (1.00)]	+ 0.65* (1.28)]
<i>Social Satisfaction</i>			
No information sharing	3.63 (1.91)	3.50 (1.49)]**	- 0.14 (1.00)]**
Information sharing	3.46 (1.71)	4.90 (1.31)]	+ 1.44** (1.05)]
<i>Calculative Commitment</i>			
No information sharing	5.18 (1.03)	5.52 (1.15)]*	+ 0.34 (1.22)]**
Information sharing	5.02 (1.23)	6.06 (0.64)]	+ 1.04** (1.12)]
<i>Affective Commitment</i>			
No information sharing	3.98 (1.59)	4.21 (1.38)	+ 0.22 (1.02)]*
Information sharing	3.71 (1.69)	4.52 (1.28)	+0.81* (1.08)]
* <i>p</i> < 0.05; ** <i>p</i> < 0.01			

8.4.1 The Impact of Information Sharing on Satisfaction and Commitment

Consistent with the first hypothesis, the results show that information sharing increases the supplier’s satisfaction with and commitment to the relationship with the retailer.

Information sharing lifts both the supplier’s economic and its social satisfaction with the retailer relationship. It leads to an increase in economic satisfaction of +0.65 points on average (*F*=8.13; *p*=0.01); relative to a –0.06 point average decline when retailers do not share information. On average, the level of social satisfaction grows +1.44 in case of an information-sharing retailer, in comparison with a small decline of –0.14 for relationships where no information is being shared. (*F*=59.56; *p*<0.01).

Additionally, information sharing leads to a greater willingness to make further investments in the relationship. A supplier becomes more calculative committed (*F*=6.92; *p*=0.01). The rise in calculative commitment is on average +1.04, when the retailer shares information, compared to a non-significant increase of +0.34 for the situation where no information is being shared. Furthermore, a supplier feels stronger associated with an information-sharing retailer and is more pleased being a business partner of that retailer; as indicated by a greater increase in affective commitment caused by retailer information sharing (*F*=8.37; *p*<0.01).

All in all, the results show that information sharing is good for building better supplier-relationships. The supplier’s social satisfaction experiences the strongest effect of information sharing (eta squared = 0.45; see Table 8.3). We accept Hypothesis 1 for all

four relationship quality dimensions.

Table 8.5 *The Effect of Information Sharing on Satisfaction and Commitment in Low-Trust and High-Trust Relationships*

	<i>t=1</i> <i>Mean</i> <i>(std.dev)</i>	<i>t=2</i> <i>Mean (std.dev)</i>	<i>Change { (t=2) – (t=1) }</i> <i>Mean (std.dev)</i>	
<i>Economic Satisfaction</i>				
- Distrusting Relationships				
No information sharing	4.53 (1.57)	4.60 (1.14)	+ 0.08 (1.57)	+0.42
Information sharing	5.11 (1.67)	5.61 (0.98)	+ 0.50 (1.67)*	
- Trusting Relationships				
No information sharing	5.74 (1.04)	5.55 (0.77)	- 0.19 (1.04)	+0.99
Information sharing	4.75 (1.37)	5.55 (1.05)	+ 0.80 (1.37)*	
<i>Social Satisfaction</i>				
- Distrusting Relationships				
No information sharing	1.89 (0.72)	2.26 (0.85)	+ 0.37 (0.78)*	+1.54
Information sharing	2.06 (0.62)	3.97 (1.09)	+ 1.91 (0.89)**	
- Trusting Relationships				
No information sharing	5.29 (0.94)	4.67 (0.87)	- 0.62 (0.96)**	+1.60
Information sharing	4.79 (1.30)	5.78 (0.81)	+ 0.98 (1.00)**	
<i>Calculative Commitment</i>				
- Distrusting Relationships				
No information sharing	4.67 (1.10)	5.10 (1.15)	+ 0.43 (1.41)	+0.76
Information sharing	4.68 (1.39)	5.88 (0.68)	+ 1.19 (1.24)**	
- Trusting Relationships				
No information sharing	5.66 (0.67)	5.92 (1.03)	+0.25 (1.02)	+0.65
Information sharing	5.33 (0.99)	6.23 (0.56)	+0.90 (1.00)**	
<i>Affective Commitment</i>				
- Distrusting Relationships				
No information sharing	2.75 (0.88)	3.42 (1.09)	+ 0.67 (0.64)**	+0.70
Information sharing	2.41 (1.12)	3.79 (1.10)	+ 1.37 (0.83)**	
- Trusting Relationships				
No information sharing	5.16 (1.17)	4.97 (1.21)	- 0.19 (1.14)	+0.49
Information sharing	4.88 (1.19)	5.18 (1.05)	+ 0.30 (1.03)	
* p < 0.05; ** p < 0.01				

8.4.2 *The Moderating Impact of Initial Trust*

Our second hypothesis states that the impact of information sharing on relationship quality is higher if the level of initial trust is low. Like hypothesized, in situations where a supplier distrusts the retailer, the impact of information sharing is larger for calculative

commitment (+0.76 versus +0.65) and for affective commitment (+0.70 versus +0.49) relative to relationships characterized by high initial trust (see Table 5). These findings indicate that information sharing is extra helpful in relationships with distrust, which confirms Hypothesis 2. However, none of reported effects is statistically significant (calculative commitment, $F=0.02$, $p=0.89$; affective commitment, $F=0.25$, $p=0.62$). Furthermore, the results in Table 5 show that the increase in social and economic satisfaction caused by retailer information sharing is even higher (though not significantly different) in situations where initial trust in the retailer is high relative to initial situations characterized by distrust. It thus appears that regardless the initial level of trust, retailer-supplier relationship quality always benefits from information sharing. Satisfaction and commitment are equally lifted in distrusting as well as in high-trust relationships.

The only significant interesting effect we do find is the effect of information sharing on social satisfaction in high initial trust conditions. Under high initial trust social satisfaction drops (-.62) significantly ($t=-2.96$; $p<0.01$), when the retailer does not share information. It means that under these high initial trust circumstances, the retailer harms the relationship by withholding information. A possible explanation is that in high-trust relationships, strong relational norms (Heide and John, 1992) have developed. Often relational norms relate to expectations about information sharing. In high-trust relationships, channel partners count on each other to be timely and accurately informed. Withholding information will be regarded as a violation of that rule resulting in supplier disappointment and lower social satisfaction with the relationship.

8.4.3 *The Moderating Impact of Connectedness*

The third hypothesis poses that retailer information sharing will have a larger effect in instances where the relationships of the retailer with various retailers are negatively connected, i.e., where these suppliers thus face fierce competition. Overall, our results show support for the hypothesis (see Table 8.6).

In low-connected relationships information sharing hardly affects economic satisfaction (-0.17) ($t = 0.73$; $p=0.48$). However, when supplier relationships are in strong competition (high-connected), suppliers appreciate information sharing and find it economically desirable. Consequently economic satisfaction increases (+1.61) ($F=12.67$; $p<0.01$). The impact of information on social satisfaction is even larger in high-connected relationships (+1.97), compared with a rise of +1.16 in low-connected relationships (+1.16) ($F=3.92$; $p=0.05$).

With respect to future commitment to the relationship, the impact of information sharing only changes affective commitment ($F=4.02$; $p=0.05$). No increase in calculative commitment ($F=0.04$; $p=0.85$) is being realized. A possible explanation for this result might lie in the magnitude of the scores of calculative commitment that are already high

(i.e., around six on a seven-point scale). This makes it difficult to raise calculative further (i.e., a ceiling effect).

In sum, we accept Hypothesis 3 for economic and social satisfaction, and for affective commitment.

Table 8.6 The Effect of Information sharing on Satisfaction and Commitment in Low-Connected and High-Connected Relationships

	<i>t=1</i> <i>Mean (std.dev)</i>	<i>t=2</i> <i>Mean (std.dev)</i>	<i>Change { (t=2) – (t=1) }</i> <i>Mean (std.dev)</i>	
<i>Economic Satisfaction</i>				
- Low-Connected Relationships				
No information sharing	4.76 (1.63)	5.10 (1.21)	+0.33 (1.29)	-0.17
Information sharing	5.50 (1.07)	5.66 (1.09)	+0.16 (0.94)	
				**
- High-Connected Relationships				
No information sharing	5.55 (1.13)	5.08 (0.94)	-0.48 (1.07)	+1.61
Information sharing	4.38 (1.69)	5.50 (0.93)	+1.13 (1.39)**	
<i>Social Satisfaction</i>				
- Low-Connected Relationships				
No information sharing	3.78 (2.05)	3.71 (1.60)	-0.06 (1.14)	+1.16
Information sharing	3.86 (2.11)	4.96 (1.58)	+1.10 (1.11)**	
				*
- High-Connected Relationships				
No information sharing	3.48 (1.79)	3.27 (1.37)	-0.22 (0.84)	+1.97
Information sharing	3.08 (1.15)	4.84 (1.04)	+1.75 (0.90)**	
<i>Calculative Commitment</i>				
- Low-Connected Relationships				
No information sharing	5.19 (1.04)	5.79 (0.95)	+0.60 (1.24)*	+0.65
Information sharing	4.91 (1.43)	6.16 (0.66)	+1.25 (1.38)**	
- High-Connected Relationships				
No information sharing	5.17 (1.05)	5.23 (1.30)	+0.07 (1.16)	+0.78
Information sharing	5.12 (1.04)	5.97 (0.62)	+0.85 (0.78)**	
<i>Affective Commitment</i>				
- Low-Connected Relationships				
No information sharing	4.13 (1.58)	4.48 (1.24)	+0.35 (1.05)	+0.18
Information sharing	3.96 (1.83)	4.49 (1.42)	+0.53 (1.00)*	
				*
- High-Connected Relationships				
No information sharing	3.83 (1.63)	3.93 (1.49)	+0.10 (0.99)	+0.99
Information sharing	3.46 (1.56)	4.52 (1.14)	+1.09 (1.10)**	
* p < 0.05; ** p < 0.01				

* p < 0.05; ** p < 0.01

8.5 *Conclusions*

Information-intensive retailer-supplier collaboration promises important benefits in turbulent market environments. However, it is not taking place on a broad scale yet. One frequently named obstacle for retailers to refrain from extensive information sharing is that relationships between retailers and suppliers are often characterized by distrust.

In this second study on consequences of market information sharing we examined the effects of information sharing by a retailer on the quality of its relationships with suppliers. Our results show that retailer information sharing improves the supplier relationship quality. The receiving supplier party not only becomes more economically and socially satisfied with the retailer, but also feels more committed (affective commitment) and promises to put more effort in the relationship with the retailer (calculative commitment). Our findings show that the improvement in supplier-relationship quality is as large in distrusting relationships as in high-trust relationships. Regardless of the level of initial trust in the retailer, the supplier appreciates the retailer's information.

With respect to the retailer portfolio of competing supplier relationships, we expected that the degree of connectedness between the relationships would moderate the relationship-strengthening effect of information sharing. Our findings indeed show that in more fierce competition with another supplier, reflected by negative connectedness, the positive impact of information sharing is amplified for economic satisfaction, social satisfaction, and affective commitment.

This study responds to a number of calls in previous research. Myers et al. (2000) suggested conducting further research on how channel cooperation affects relationship closeness. Instead of implementing an operational partnership, like automated replenishment programs (ARP) (in this paper referred to as CRP and VMI), we examined a more strategic form of interfirm partnerships (as mentioned in Mentzer, et al., 2000), category management, which implies a relationship adaptation to a higher degree. An important lesson from our study is that such strategic information sharing has an additional pay-off in improving the relationship quality. Our examination of relational effects of information sharing also meets Frazier (1999: p.229)'s call for research on the consequences of sharing intelligence.

Within the boundaries of our experimental setting, we conclude that our study encourages retailers to share information with suppliers because this improves the relationship quality. The increase in trust caused by information sharing in relationships characterized by initial distrust is of the same magnitude as in relationships where initial trust is high. The positive implication of this is that efforts to establish trust by starting sharing information are not deemed to fail because of initial distrust. Retailers should know this to avoid that they get stuck in a circular scenario. In such a scenario the supplier does not trust the retailer. Consequently, the retailer may feel that it does not make sense to

share information, which in turn makes that the supplier's trust stays low. Starting to share information is an effective way for a retailer to establish trust on the part of the supplier, and a more trustful supplier is more likely to share his information with the retailer. In that way a productive (mutual) exchange will develop. This will improve the performance of the channel. Consequently, we recommend retail managers (e.g., category managers, purchasing agents) to start sharing information already in the early stages of their relationships with suppliers. This may help to accelerate the process of improving relationship quality. Another interesting finding from our study is, that relationships require active maintenance. Refraining from, in this case sharing information, can deteriorate initially high-trust relationships.

A final implication for retail managers concerns their dealings with competing suppliers. In competitive environments, suppliers appreciate receiving retailer information much more, and it would thus be interesting to pursue information sharing-strategies in such competitive settings. However, in these situations retailers will be confronted with a dilemma. When engaging into an exclusive information-sharing arrangement with one supplier and enhancing that particular relationship, the retailer may damage the relationships with other competing suppliers. This latter effect was not included in this study.

One needs to take into consideration that this study focuses on the rosy view of information sharing (cf. interfirm-learning, Mohr and Sengupta, 2002): eliciting favorable relationship responses with the intention to build better performing supplier relationships. Undeniably, there are notable risks associated with sharing market information. Not only leakage and misuse of the information, but also outlearning by the receiving info-partner can make the sharing firm to become obsolete in the (near) future. All these concerns reflect the risky view of information sharing and raise the issue of controlling the risk of opportunistic behavior by the partner firm. Further research is needed on how retail firms can safeguard these information-sharing risks without restraining relationship quality improvement. Despite the fact that information sharing can improve the quality of a relationship it is thus not always advisable to actually pursue this activity. Organizations have to make a trade-off between information-sharing benefits and costs (i.e., loss of power and a possible negative impact on other channel relationships).

As with any laboratory study, it is important to be prudent in generalizing from the findings. However, the fact that business managers from the food industry have judged our business case as realistic supports its external validity of the results from this first study on understanding the effect of information sharing.

CHAPTER NINE CONCLUSIONS, IMPLICATIONS, AND SUGGESTIONS FOR FURTHER RESEARCH

A new era has dawned on the retailing industry, the *Back-End Revolution of Retailing*. The latest advances in information communication technology together with a growing standardization in product coding, and the rapid adoption of rich web-based communications have expanded the digital possibilities for retailers to rethink their supply chain relationship management. In their renewed dealings with suppliers, retailers can roughly choose between two types of strategies. Either they decide to *compete head-on* with suppliers, or to *collaborate side-by-side* with them. The competition strategy is to organize e-marketplaces and reverse auctions in order to drive prices down and stimulate competition among suppliers. The other strategy is to seek collaboration and to work actively together with suppliers in order to transform the channel into a demand-driven channel, to fulfill consumer wishes better, faster, and at lower costs. Essential for making such a channel partnership a success is that both channel members, retailers and suppliers, keep each other updated about the latest market developments. Informing each other about what they know about the marketplace is the topic on which this dissertation has focused: market information sharing. Our objective with this dissertation has been to study the nature, antecedents and consequences of market information sharing in channel relationships. In this concluding chapter, we discuss our main findings, the implications of our results for channel firms, the limitations of our studies, and several suggestions for future research.

9.1 Main Findings

We have defined a market information sharing arrangement is as an *arrangement between two vertical channel parties to share market information with the intention to strengthen the performance of the channel for their mutual benefit*. The reach of this definition is broad; because it does not only relate to explicitly arranged inter-firm agreements to share information, but it also includes the exchanges of market information which channel firms have implicitly arranged. The basic philosophy of such a collaborative channel arrangement is that the two firms in a channel relationship integrate each others' market information in order to respond better to the continuously changing consumer demands. In Chapter 2, we have systematically laid out the similarities and differences among three main research perspectives on information sharing in channels: supply chain optimization

studies (e.g., Lee, et al., 2000; Gavirneni, et al., 1999, Cachon and Fisher, 2000), the game-theoretical approach (e.g., Niraj and Narasimhan, 2003; Kurtuluş, 2004), and the empirical behavioral approach. While the empirical studies at the heart of this dissertation (Chapters 4, 5, 6, 7, and 8) follow the latter research tradition, our subsequent research framework has been built around the key insights provided by all three research perspectives. The theoretical underpinning of the framework has been an extension of social exchange theory, called social penetration theory (Chapter 3), with the purpose to seek explanations for the differences in actual information sharing behaviors of firms in their channel relationships.

Because a firm may not share its market information with all of its channel parties in the same way, we have taken the channel relationship as the unit-of-analysis. Unlike, the recent study from Kulp et al. (2004), where supplier firms were asked about their information sharing practices with their retail firm customers in general, thereby ignoring the possible variation in firms' information sharing practices within their portfolio of channel relationships. Our work particularly wants to formulate answers to our three research questions: (a) what is the actual nature of market information sharing by channel members? (Chapter 5), (b) What are the antecedents of market information sharing in channel relationships? (Chapter 6), And (c) what are the consequences of market information sharing in channel relationships? (Chapters 7 and 8).

9.2 The Nature of Market Information Sharing

In studying the nature of market information sharing we have made a distinction between two dimensions of such arrangements: the shared content, and the sharing mode. Much of channel research has examined the sharing mode, viz. the way in which channel members communicate with each other, in term of contact frequency, formalization and exclusivity. The other dimension: what information content is actually being shared in channels has thus far been overlooked and a new measurement scale needed to be developed. We have proposed a hierarchical scale for the shared information by a channel party. The motivation for suggesting such a type of scale comes from the different sets of arrangements found in channel management practice: running from very basic EDI/QR to sophisticated CCRM/CM arrangements. Likewise, this new scale runs from elements that are easily shared to elements for which there is a major reluctance to share. A hierarchical scale implies that in the shared market information content there are different levels or degrees; organizations first have to share a lower level of information before they give any disclosure of a higher degree of more confidential market information to their channel parties. And if channel firms share a higher degree of content, they automatically share the lower degrees of content. In our data we fit a reasonable fit for this hierarchical structure with five different layers in the shared content. Nearly 80% of retailers and 64% of the

suppliers in our sample, share at least the lowest degrees of shared content with a channel party. In general, firms give scanty higher degree information to their channel members: in only 24% of the channel relationships, retailers share market information to their highest degree, and in 16% of the channel relationships, the suppliers share market information to the highest degree.

With respect to the way channel firms share information, the mode of sharing is on average somewhat collaborative. Although the typical sharing mode is with high frequency, it is seldom exclusive and rarely formalized. Higher management from either side of the channel dyad is only sporadically involved in the process of market information sharing. In market information sharing practices between channel members, the shared content coincides to some extent with aspects of the sharing mode. When higher degrees of content are shared between channel partners, the sharing mode is more formalized, becomes more exclusive and involves higher-level managers from the retailer. The shared content is unrelated with the frequency rate at which channel members have contact with each other. Even though there is a positive association between the shared content and several of the sharing mode aspects, they are clearly distinct aspects of the information sharing arrangement. This notion of separate dimensions is enforced by our finding that shared content and sharing mode have different antecedents and consequences. As mentioned before, in the analysis of information sharing between channel members, the emphasis in empirical behavioral stream has been on sharing mode. Distinguishing these separate dimensions is of vital importance in understanding the functioning of the channel relationship.

9.1.2 The Antecedents of Market Information Sharing

In answering our second research question, on the antecedents of market information sharing in channel relationships, we have developed and tested a comprehensive model containing antecedents drawn from the three main research perspectives.

We will discuss the main two drivers of market information sharing: the firm's strength and the mutual interdependence of firms. We will also show that sometimes information sharing has primarily ritual characteristics, and that it can be discouraged by complicated circumstances. Furthermore, we will shed light on the nature of the firms' motivations to engage in information sharing arrangements; whether or not it is a trusting game, power game or something else.

The firm's position of strength. Market information sharing occurs from a position of strength. Our research has demonstrated that the channel members do not put all their cards on the table unless they are certain of their own strengths. Once a retailer or a supplier have better developed their market information capabilities (e.g, market-sensing and/or market-relating), they feel strong enough to hand over higher degrees of market

information content. Obviously, high degrees of self-disclosures to other channel members automatically imply that firms also reveal their weaknesses to channel parties that to some extent compete for a share in the same consumer market. The observed importance of firm's capabilities corresponds with the findings from Corsten and Kumar (2005), who demonstrated that collaboration in the channel has a great deal to do with the smartness of the involved players.

The firm's interdependency with the other channel member. Retailers and suppliers share higher degrees of market information and do this in a collaborative style when they are mutually interdependent on each other. A firm's interdependency with the other channel member is the second central theme explaining why firms share information. The mutual interdependence appears to serve as a backbone and drives both the two parties' sharing of higher degrees of content and the collaborative style of the sharing mode. Mutually interdependent retailers and suppliers have a lot of intertwined interests; they make them exchange higher degrees of content more easily and more collaboratively.

Rituals or deeply embedded norms. Apart from the two central themes of the firm's position of strength, and interdependency, another important lesson learnt is that there are some antecedents only influencing the collaborative style in the sharing mode while others merely impact the degrees in the shared content. Some antecedents only influence the sharing mode, without immediately materializing into the sharing of higher degrees of market information in the relationship. The primary examples of this type of antecedents are (i) consumer demand growth, (ii) an explicit incentive structure of the supplier to collaborate with the retailer, and (iii) the negative connectedness of the relationship. Under high consumer demand growth retailers and suppliers tend to have higher contact frequency, and thus may appear to be more collaborative in style, yet this does not result in higher degrees of shared market information between two organizations. An explicit supportive incentive structure of the supplier to collaborate with the retailer also appears just to make the sharing mode more collaborative; nevertheless the supplier and retailer do not disclose more of their market information. In negatively connected supplier relationship where any forms of collaborations with the retailer have detrimental effects on other supplier relationships, the sharing of market information is less collaborative. All of these antecedents seem to elicit symbolize some sort of ritual type of sharing information, which does not lead to more shared content. But there are also antecedents affecting the shared content without influencing the sharing mode. For instance, established norms of information sharing in the supplier network are more fundamental, have a less ritual nature, but certainly have to a much stronger impact on the (retailer's) shared content in the channel relationship.

Complicating Circumstances. Two of the antecedents affecting the shared content in the channel relationship have come out as complicating circumstances making the passing

on of market information less obvious as it may seem. The first possible complication is the concentration in the supplier network. Collaborating in channels has usually to do with working together more intensively with a limited number of parties. However, our study shows that higher concentration in the supplier network leads to sharing higher degrees of content from the retailers' sides, whereas it makes suppliers to hesitate sharing more information. Probably, the reason for suppliers to hold back is that in concentrated networks, the few of their competitors with large interests at the retailer might obtain their shared information. Retail organizations should therefore be aware of the negative side-effects of concentrating their supplier network, because suppliers tend to share less market information then.

The second complicating circumstance concerns the level of consumer demand turbulence. High turbulence in consumer demand appears to *discourage* retailers to sharing their market information. Contrary to what supply chain optimization studies would recommend, in turbulent times retailers tend to keep their information to themselves. Instead of optimizing the primary process in the supply chain by information, retailers prefer loose ties with their suppliers and treasure their strategic flexibility more when they are facing uncertain consumer demand.

Altruism or self-interest-seeking. Sharing market information has unfolded much more as a calculative, rational and strategic decision for firms with primarily their own interests at heart than as an emotional decision of good faith and trust. A number of research findings point to this direction. First, trust in the supplier has demonstrated to have no influence on the information sharing practices of either channel party. Apparently, "just" trusting is not enough motivation and the sharing of market information goes beyond general perceptions of the supplier's honesty, or benevolence. Firms are much more rational and serving their self-interest in their decision to share their market information. A second indication for the self-interest-seeking motivation surfaces with respect to the influence of relationship-specific investments by the retailer. Our results show that such investments make retailers share higher degrees in order to keep the relationship intact, while on the other hand the supplier does not feel the need to pass on more information, probably because the retailer is locked-in anyway. While being locked-in, the retailer tries to safeguard its informational investments by intensifying its own sharing mode with higher contract frequency, more management involvement and more formalization. However, the supplier remains unmoved, apparently.

Our conclusion that information sharing is not a altruistic *trusting game*. However, this does not mean that it is an exploitative *power game*, because relatively dependent firms cannot be forced to hand over more of their information about the marketplace and thereby no dominating firm can take advantage of the asymmetry in dependency by exploiting the other dominated channel members.

9.1.3 *The Consequences of Market Information Sharing*

Our answers to the third research question on the consequences of market information sharing are based on data from a survey and a laboratory experiment. Whereas in the survey, the effectiveness of information sharing is studied from the retailer's perspective, the experiment zooms in into relationship quality enhancement by information sharing as perceived by the opposite side of the channel dyad, the supplier. Both studies convey the message is that information sharing is helpful in building stronger channel relationships.

With our survey we have been able to disentangle the differential effects of the shared content and the sharing mode on the consequences. Interestingly, we have found that the degree of shared content has much stronger effects on the channel relationship quality and performance than the various aspects of the sharing mode. When organizations share higher degrees of content with each other, this leads to:

- *Better joint market learning*; channel parties learn better together from developments occurring in the consumer market, due to a better joint detection of consumer trends, joint interpretation of obtained market information, joint utilization of market information and a joint reflection of their market information exchange.
- *Improved relationship quality*; Their working relationship improves, especially because they are more satisfied about what the relationship delivers in economic terms and how the relationship is gratifying and pleasing. The channel relationship quality improves, and;
- *Higher relationship performance*; The performance of the channel relationship increases, thanks to the gains in additional joint profits and extra competitive advantage for the channel as a whole.

The role of the sharing mode is confined to facilitating the joint market learning process; it does not directly lead to an out-performing channel with more joint profits and more competitive advantage over other channels. We have also explored under which conditions market information is more effective in gaining the desirable results, such as improving joint market learning, relationship quality and relationship performance. Three variables moderating the effect of market information sharing in channel relationships are: (i) consumer demand turbulence, (ii) trust in the relationship, and (iii) negative connectedness.

Consumer demand turbulence. Interestingly, we reported earlier on that the antecedent consumer demand turbulence came out as an inhibiting factor for retailers to share more of their market information; here we found that under these circumstances of consumer

demand turbulence, the impact of retailer's information sharing on relationship quality and performance appears to be much greater and makes channel relationship to become much more competitive. This implies that when faced with consumer demand turbulence, retailers should better overcome their initial reluctance to share their information, because there are plenty of examples showing it pays off.

Trust. Additional exploration has been undertaken concerning the role of trust in the effectiveness of information sharing. In the survey, we have found that for the impact on joint market learning and the attainment of channel competitive advantage, the retailer's trust in the supplier plays a facilitating role by enhancing the impact of information sharing on joint market learning and the attainment of channel competitive advantage. There is evidence that sometimes in trusted relationship not all negative or critical information is passed on because that might endanger the good atmosphere relationship and that would be an restraining role of trust limiting the effectiveness of channel collaborations (Selnes and Sallis, 2002). Like Corsten and Kumar (2005) we find the facilitating role of trust that trust increases the effectiveness of channel collaborations. Yet, the facilitating role of trust does not count for all consequences: as for the creation of more satisfaction and commitment in the relationship, trust does not play this role. Both the survey and experiment have shown that trust in the relationship does not enlarge or decline the effect of information sharing on relationship quality.

Negative connectedness. Further explorations about the exact role of negative connectedness in the consequences of information sharing have given us the following results. In the survey, from the retailer's perspective, negative connectedness has been shown to diminish the effectiveness of information shared in terms of joint market learning, joint profits and channel competitive advantage. It did not change the impact of information sharing on relationship quality from the retailer's perspective. In the experiment, looking from the supplier's perspective, information sharing has a positively moderated effect on relationship quality. Suppliers in negatively connected relationships appreciate receiving the retailer's information sharing much more than suppliers in a less competitive environment.

9.2 *Implications for Channel Management Practice*

Practitioners dealing with indirect marketing channels have always been interested in transforming their routes-to-market into consumer demand-driven channels. The relevant question for them is whether or not market information sharing can help them to accomplish that objective. In the back-end revolution of retailing this question has become more and more prevalent since it has increased the interest in strategic options centering on channel collaboration. Handbooks advocating retailer-manufacturer collaboration have emphasized the inevitable essence of information sharing, by stating that it is "the

lifeblood of partnership” (Martin, 1994) and because “competitive dominance will be achieved by an entire supply chain, with battles fought supply chain versus supply chain” (Blackwell, 1997). The results from this dissertation should be of interest to retailers and suppliers that consider pursuing a side-by-side collaboration with one of their channel parties. With the growing recognition of the competitive value of having demand-driven collaborative channel relationships, firms with a portfolio of channel relationships will want to maximize their channel relationship equity. Channel relational equity (cf. Sawhney and Zabin, (2002)’s relational equity) is the wealth-creating potential that resides in the firm’s relationships with channel parties. In this research we have demonstrated that developing information sharing arrangements can be a good instrument to upgrade a firm’s channel relationship equity, because they improve joint market learning, and increase channel relationship quality, performance. We will provide channel managers with four guidelines to make information sharing successful.

Guideline 1: Do it! Don’t sit and wait. Take the initiative!

Our first guideline is *to do it!* Information sharing with channel parties produces good results for transforming the relationship into a consumer demand driven channel. First, both information sharing channel parties will benefit from the increased joint profits and from the extra competitive advantage attained. Second, from the retailer’s perspective, information sharing in the channel relationship leads to more economically and socially satisfaction and joint market learning. Third, from the supplier’s viewpoint, our research shows that information sharing results in better appreciated and committed relationships with their downstream trading partners.

Even more importantly, channel parties should not “sit and wait”. We have shown that retailers better take the initiative in sharing market information, because our research has demonstrated that it can be a good instrument to build stronger channel relationships (Chapter 8). Even if the relationship is initially featured by distrust, initiating information sharing has shown to be a good means to improve the relationship quality.

Moreover, in contemplating their initiative, retailers should not be discouraged by constantly changing consumer demands, for we found that if retailers overcome their natural reaction not to share information under high consumer demand turbulence, they can stimulate joint market learning, reap joint profits, and attain channel competitive advantages (Chapter 7).

Low initial trust and highly turbulent consumer demand should not be excuses for *not* sharing any market information in the channel relationship. When channel firms have begun to share market information they not only improve the relational atmosphere, but also create the opportunity to sharpen their market sensing and market relating capabilities,

which in turn strengthen their own firm's position in understanding the turbulent changes in consumer demand even better.

Guideline 2: Focus on shared content!

Our second guideline is to focus on shared content. Our research has shown that sharing market information is practically not an exception, it is even quite popular. Nearly 80% of the retailers share some information with their suppliers, and 64% of the suppliers share some of their market information with retailers. Compared to previous trade journals surveys, these percentages appear to be surprisingly high. Furthermore on average, channel firms appear to have a reasonably collaborative sharing mode with a high contact frequency (Chapter 5).

The problem however is that the majority of the firms focus on the wrong aspects in sharing their market information. Our research has given evidence that the effectiveness of an information sharing arrangement depends more directly on the *shared content* than on the sharing mode (Chapter 7). When we take a closer look at the exact nature of the market information sharing arrangement, we find that few firms share higher degrees and more confidential of market information: 24% of the retailers and 16% of the suppliers. In designing market information sharing arrangements, channel firms should focus on increasing the shared content

More care is thus advisable in how to design an information sharing arrangement with channel parties. Disappointment is likely to occur when channel members sign an arrangement stating that their intention is improve the product category profits by increasing their contact frequency and giving each other a basic update with the most recent sales and promotion communication information. Then, such an arrangement could miss out on achieving extra competitive advantages and joint profits. For we have shown in this thesis that many information sharing arrangements are more effective when the degree of information shared rises. Rather than only increasing the collaborative style in the sharing mode, channel members ought to think more carefully about what type of market information they wish to share. The same holds true for when firms need to take an investment decision on the implementation of a new inter-organization information system for advancing channel communication. Managers should then be aware that the system's added-value depends very much on how this new technology is going to affect the dimensions of the information sharing arrangement. If, for instance, this new technology merely makes it easier to increase the contact frequency, between the channel firms than its contribution to make the channel more demand-driven will be fairly little. It will be far less effective than if this new technology would facilitate the increase in the degrees of shared content. Channel members should arrange information sharing on shared content.

Guideline 3: Not all partners are equal!

Our third guideline for channel managers is to be aware that not all partners are equal in their information sharing practices. Since the shared content is the key factor behind consumer demand-driven channels, it is important to select information sharing partners who are prone to share their own information content. When channel members are on the search for an information sharing candidate, they should assess the appropriateness of such an information sharing candidate on the basis of the findings from the antecedents study (Chapter 6).

If the firm wanting to share is a supplier, a retailer that would qualify for information sharing has the following characteristics: the retailer has already made some investments in the supplier relationship; it is mutually dependent on the supplier firm, and it possesses good market-relating capabilities, and it has a general disposition to collaborate with retailers.

If the firm wanting to share is a retailer, it checks for almost similar characteristics as a supplier does in estimating the other's appropriateness to share information with. The relationship-specific investments by the retailer should not be high; if so, then the supplier would sit back and even lower the degree of his shared information. A supplier that is more mutual interdependent of the retailer would be a more appropriate information sharing candidate, because such a partner would be more likely to pass on the proprietary market information to the relationship. A supplier would also be a more appropriate candidate if its market-sensing and -relating capabilities are considered to be of high quality. One misleading indicator for a retailer in finding a suitable supplier might be the explicit incentive structure of the supplier, because it merely warrants a more collaborative sharing mode; but it does not automatically guarantee that the supplier will be motivated to disclose more of its market information content.

In all, the most important criteria to find partners prone to share market information content are (1) market-sensing and market-relating capabilities, and (2) mutually dependency. Trust in the relationship has shown not to be of overriding importance in finding an appropriate candidate for an information sharing strategy. It is much more important to focus on the firm's capabilities and interdependency.

Guideline 4: Be careful with concentrating supplier portfolio!

Our fourth and final guideline concerns more of a warning to channel managers. They should be aware of how the supplier portfolio structure affects the information sharing activities of the channel members. Collaboration in the channel often coincides with rationalization of their relationship portfolio and it is fashionable to cut the number of suppliers and concentrate the buying budget on a smaller number (Emshwiller, 1991). From a retailer's standpoint, the concentration in the supplier network stimulates the

sharing of market information, but we found indications that suppliers have a reverse reaction; they tend to refrain their sharing of market information in more concentrated supplier networks, where some of their biggest rivals with high stakes are also listening in at the retailer's table (Chapter 6). Therefore, caution must be taken in considering any rationalization of the relationship portfolio. So, do not concentrate the portfolio too much, because it may shy away supplier to share their market information, or make such arrangements with the supplier that they can be assured that their information will not come in the wrong hands.

9.3 *Limitations*

As with any research, the results from the studies presented in this dissertation must be viewed in conjunction with their limitations. At the same time the limitations of our two data collections can also be regarded to be a spring-board for ideas for further research. In the survey data collection with a single informant, it is impossible for us to rule out a potential bias from common method variance, despite all of the precautions in the questionnaire development and pre-testing that were taken. Furthermore, our survey was a one-time data collection, even though the sharing of market information in channel relationships is a dynamic and sequential process. The findings from the antecedents study and the first consequences study deal with cross-sectional data. Like the vast majority of channel research, our survey study works with cross-sectional data and applies it to explain a consecutive and dynamic process. Most of our hypotheses implicitly hold a sequence in time. For instance, the set of antecedents are factors leading to information sharing, and market information sharing results in joint profits. With respect to the experiment, we have data in two points in time and thus we can be more certain about the causal-relationships that we report on.

The survey data collection, however, has also advantages over the experiment. It is for instance much stronger on external validity. While the experiment was about a fictitious (yet perceived as very realistic) business case, the survey was about the actual practices of retail buyers. The survey data also scores better on generalizability, because our sample consists of more than a single industry, but was taken from a wide variety of retail industries. We should also be careful in comparing the findings about the information sharing practices of the retailer with those of the supplier. We have reported that retailers tend to share more; however, since we asked retail buyers to fill in the questionnaire, we cannot exclude the possibility for a certain self-serving bias. Furthermore, despite the lottery procedure to randomly select one supplier relationship from the retailer's portfolio, there might still be an overrepresentation of more salient and more trusted supplier relationship in our sample. Finally, for the first time in channel research, we propose a

hierarchical scale to assess the shared content of the retailer and of the supplier. This scale requires subsequent replication and refinement.

9.4 Suggestions for Further Research

Several researchers have noted that there is a need for longitudinal studies to advance the understanding of the impact of cumulative interactions between firms in forming long-term relationships (e.g., Geyskens, Steenkamp, and Kumar 1998; Jap 1999; Narayandas and Rangan, 2004; Payan and McFarland 2005; Corsten and Kumar, 2005). It is obvious that we also would like to join their call. Ideally, we would like to examine in more detail the dynamics and evolution of the market information sharing arrangement; how long does it take until the disclosure of higher degrees in shared content materializes into success in transforming the chain into a demand-driven one? What would be the effects of sudden restrictions and other variations in the sharing of market information?

If this ideal data collection is not feasible on the short-run, we also would like to chart other directions for further research that are worth of exploring. Especially, this is the case in dynamic and increasingly knowledge-rich market environments where building and maintaining consumer-driven channel networks become a critical source for competitive advantage. It is important for marketing practitioners and scientists alike to know more about successfully managing market information sharing. This discussion of future directions for studying market information sharing management is organized according to levels and alternative contexts:

- At the relationship-level (1:1)
- At the network-level (1:n)
- In a new context: affiliate partner programs

Successful Market Information Sharing at the relationship-level (1:1)

What is the comparative advantage of information sharing over other methods to coordinate the channel? How does the division of the benefits from information sharing influence the effectiveness of information sharing? How can joint market learning optimize the effectiveness of information sharing? What will be the new role for syndicated data suppliers in making information sharing arrangements more effective?

The comparative advantage of information sharing over other methods to control the channel coordination. Information sharing is one means to coordinate the channel and make it more consumer demand-driven. There are also other methods to reach this objective; it would be interesting to know more about the relative effectiveness of information sharing compared to other coordination mechanisms. In this dissertation, we have basically looked at the advantage of information sharing relationships over “arms-

length”-transactions without any exchange of market information. In addition to the looking at the advantage over these traditional adversarial trading relationships, it would still be interesting to compare information sharing arrangements to other forms of governance, like equity-based relationships, vertical integration. These days, discounters like Aldi, Lidl, Zara, have equity stakes in their supplier relationships. Can high degree information sharing arrangements between a brand manufacturer and a retailer compete with these vertically integrated channels?

Division of benefits from information sharing. In this dissertation we have primarily focused on how much information sharing contributes to the total channel performance and how to *expand the pie* of revenues for both of the channel members in terms of joint profits and the attainment of competitive channel advantages. It is also appealing to look at the logical next step and to investigate the sharing of the (expanded) pie. How do channel parties claim their piece of the bigger pie? Some initial work is done by Corsten and Kumar (2005); they found that despite the improved economic performance and capability development, ECR adoption by suppliers of a major retailer generates greater perceptions of negative inequity on their part. Feelings of exploitation by suppliers dealing with major retailers are not uncommon. Knowing that the dependency structure affects the judgments of inequity (Kumar, et al., 1995), it is appealing to look beyond that study how a more equitable (or equal) division of the benefits may contribute to the effectiveness of information sharing.

Joint market learning. From our studies on consequences, we have learnt that joint market learning plays an important role. It would be interesting to investigate this joint learning process in greater detail. Studies on market learning of organizations (Baker and Sinkula, 1999), knowledge absorption of companies (Cohen and Levinthan, 1990; Lane and Lubatkin, 1998) have been well established. The concerns of the risks in inter-firm learning (Mohr and Sengupta, 2002) have been comprehensively laid out. However, most of these studies depart from the assumption of a strict role division between the teacher firm and the student firm. Far less is know is about the process of “reciprocal learning” where there is no such role division, but where both firms are co-discoverers and have their own specialization (Lubatkin et al., 2001). A comparable situation holds for channel relationships with a higher degree of information sharing arrangement (3rd and 4th degree), in which members simultaneously learn and teach each other about the consumer marketplace. We think it is an interesting venue to study in-dept this *channel classroom* (a CPFR-classroom, or CM-classroom) and adopt ideas from educational psychology (collaborative learning, Allport, 1954; jigsaw classroom, Vygotsky, 1986). Translating insights from that discipline could help us to hypothesize about the different characteristics of the channel-“class”-environment and their effects on learning goals. We can also wonder how the effect of competitors in this channel class room would be. Would there be

any obstructive behavior in the channel classroom of cheating, withholding information, secrecy? How are channel partners going to experiment with new products and retail concepts? Do they bring new ideas and business opportunities to the classroom that they picked up from somewhere else, for instance other product categories, or channels. What would be the effectiveness of the learning with higher-degree? To what extent does second loop learning occur in these arrangements (Lukas, et al., 1996).

The new role of syndicated data suppliers. As the popularity of information-sharing channels keeps on growing, syndicated data suppliers, like AC Nielsen and IRI, will need to reconsider their added-value to channel members that obtain more market information themselves through sharing with each other. Traditionally, these syndicated suppliers have benefited from the structural holes in the exchange of market information between suppliers and retailers. Now that retailers and suppliers are increasingly filling up these gaps through new more sophisticated information sharing arrangements, several firms have already started to change their role of brokerage by adding value to their services (consulting), by generating new consumer insights across retail channels (household panels). An interesting research question is how can syndicated data suppliers add value to higher degrees information sharing arrangements? What role do they have in enhancing the joint market learning between channel members? If they would engage in a closer long-term consulting relationship with a supplier and a retailer, how can syndicated data suppliers preserve their objectivity with other parties outside the consulted channel-dyad? (cf. Grayson and Ambler, 1999)

Successful Market Information Sharing at the network level (1:n)

How does the information sharing in one relationship affect the information sharing in the other relationship? Does the progress made in one information sharing relationship undermine the effectiveness of other channel relationships? How does the embedded network structure influence the information sharing activities? Channel firms often deal with more than one relationship and their information sharing does not occur in a vacuum but is embedded in a network of other channel relationships (e.g., Bensaou, 1999). This direction for future research concerns the question how a firm's capabilities to manage their relationship portfolio shapes the effectiveness of information sharing practices (e.g., Olsen and Ellram, 1997). The present dissertation has demonstrated that two major themes in the information sharing activities of a firm are of vital importance. Information sharing is about strengthening a firm's position by developing market information capabilities, and about building interdependencies. Our studies have also given evidence of the looming significance of a third theme: managing the network portfolio of relationships. Information sharing norms in the network, supplier concentration and negative connectedness have proven to influence the information sharing activities. The effective management of a

portfolio of competing relationships urges channel managers to be intelligent in how to deal with managing channel conflicts and exclusivity. Future studies could examine the leadership style of a channel member in orchestrating the winning performance of their whole network. Interesting questions would be: does the redundancy in ties limit the effectiveness of information sharing? How can complementarity of ties lift the effectiveness of it? What would be an optimal channel leadership style in managing the portfolio of relationships? Would frequent alteration in the assignment in a category captain be helpful in avoiding groupthink and prevent the strong channel ties cause members to rethink and act alike, and thus the market information that flows in the network becomes largely redundant. Becoming too homogenous, which hinders the creative processes found in more heterogeneous group (as Janis (1989) groupthink), can be prevented by regularly changing the portfolio in size, and structure, concentration, and exclusivity rights.

Successful Market Information Sharing in a new context: Affiliate Partner programs

As part of the professionalization in the front-end of retailing businesses, retailers have explored the ways to cater to different consumer segments through a variety of channels. This approach of multichanneling through the combination of brick-&-mortar channels with electronic (click) channels also raises the question of how market information sharing arrangements can be effectively applied in electronic consumer channels. Today's examples of information sharing in electronic channels are confined to some basic affiliate marketing programs by which companies may advertise on each other's websites other than their own ones, like Amazon's Associate-program, Dell USA Home Affiliate program (Hoffman and Novak, 2000). Usually, affiliates received a commission if merchandise is bought via the links on the affiliate's website. It would be interesting to see how the effectiveness of an affiliate marketing programs increases when it entails more than the usual passing on of elementary clickstream data sharing through third parties like LinkShare or BeFree, and when it includes the exchange of more confidential market information (higher up in the hierarchy of the shared content). These web-based alliances are much less interdependent of each other than traditional retail channels; yet they are much more information-intensive. So it would be interesting to see if such information sharing programs in electronic B2C channels are really more effective and consumer-demand driven, despite their higher instability and interdependency.

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APPENDICES

APPENDIX II.1 SUMMARY OF THE STUDIES OF THE SUPPLY CHAIN OPTIMIZATION APPROACH

Study, Authors (year), Journal	Objective	Supply Chain Structure ¹	Perspective ²	Model, nature consumer demand, supply chain costs, constraints/assumptions	Nature information shared	Findings
<i>Potential value of information sharing</i>						
Graves (1996), MngtSci	To develop a model for a multi-echelon inventory model	2-stage 1 M : n R	CP	(Periodic review inventory control model) • Stochastic non-stationary consumer demand (poisson) • Retailers have base-stock policy • Constraint: deterministic lead times between M and R	None ³	<ul style="list-style-type: none">• To ensure product availability (service levels), both manufacturer and retailers should hold safety stock in response to consumer demand uncertainty• In a situation with increased consumer demand variability, it is better to have most of the safety stock at retail sites.
Metters (1997), JOM	To study the profitability impact of the bullwhip effect due to seasonality and forecast error in a serial supply chain.	2-stage 1 M : 1 R	CP	(Periodic review inventory control model) • Consumer demand seasonality (low/medium/high) • Supply chain costs: penalty cost for unsatisfied demand (none, low, high) • Constraints: lead times (weekly, monthly), capacity limitations (low, medium, none)	None ³	<ul style="list-style-type: none">• Elimination of bullwhip effect could increase product profitability by 10 to 30%, depending on the causes of the bullwhip effect and associated conditions.• Cases with longer lead times (monthly) benefit more from demand seasonality decreases than cases with short lead times (weekly).
Lee, Padmanabhan, and Whang (1997), MngtSci	To analyze four causes of the bullwhip effect (demand signal processing, rationing game, order batching, and price variations)	2-stage 1 M : n R	CP	(Periodic review inventory control model) • Autocorrelated consumer demand • Supply chain costs: holding costs, shortage penalty, ordering costs, purchasing costs • Lead time between retailer's ordering and receiving. • Constraints: (1) past demands are not used in forecasting; (2) resupply is infinite with a fixed leadtime; (3) no fixed order costs; (4) excess inventory can be returned without costs • Constraints are relaxed one by one	None ³	<ul style="list-style-type: none">• "Double forecasting" is a possible key driver of the bullwhip effect. Longer lead times may aggravate the bullwhip effect. At an upswing of consumer demand, the rationing gaming is triggered amplifying the bullwhip effect.• Correlated ordering by retailers has the highest impact on the bullwhip effect, followed by "balanced ordering" and "random ordering", respectively. (Wholesale) price variations increases the bullwhip effect, due to forward buying practices by retailers.
Taylor (1999), ILM	To develop procedures for qualifying the bullwhip effect in supply chains.	3-stage IS : IS : 1M	n.a.	n.a. (note: weekly demand data over an 8 week period for two high volume products; in the car component industry (1 steel mill: 1 steel service center: 1 component supplier)	None ³	<ul style="list-style-type: none">• Demand amplification occurs not only due to variability in end-demand, but also due to other factors: supply capacity, machinery reliability, inventory and pricing policies.
Cachon (1999), MngtSci	To study supplier's demand variance and supply chain costs under different ordering policies by the supplier for retailers (batch sizes, order intervals).	2-stage 1 M : n R	CP	(Periodic review inventory control model) • Stochastic stationary consumer demand (independent across retailers and across periods) • Supply chain costs: holding costs (M), holding costs and shortage cost (R) • Suppliers order policy characteristics: batch sizes, length order intervals, ordering schedules (synchronized, balanced, random)	None ³	<ul style="list-style-type: none">• Demand variance depends on the nature of consumer demand turbulence (normal < poisson < negative binomial distribution)• Demand variance will generally decline as the retailer's order interval is lengthened or as their order batch size is increased.• Balancing order schedules (i.e., the same number of retailers in every period) is a means to dampen demand variance and supply chain costs
Fransoo and Wouters (2000), SCM	To discuss the measurement problems associated with quantification of the bullwhip effect.	3-stage 1M : 7DC: 500R	n.a.	n.a. (note: daily demand data throughout two supply chains during a 6 week period).	None ³	<ul style="list-style-type: none">• A certain degree of demand amplification is detected in both supply chains.• Bullwhip measures needs to be well defined, especially the correct sequence of data aggregation needs to be agreed upon in order to compare data.

Study, Authors (year), Journal	Objective	Supply Chain Structure ¹	Perspective ²	Model, nature consumer demand, supply chain costs, constraints/assumptions	Nature information shared	Findings
Chen, Drezner, Ryan and Simchi-Levi (2000), MngSci	To determine the impact of demand forecasting on the bullwhip effect.	2-stage 1 M : 1 R	n.a.	(Periodic review inventory control model) • Autoregressive i.d.d. consumer demand • Simple moving average consumer demand forecast by retailer • Order cycle lead time	None ³	• Demand variance can be decreased by the following three techniques: when more historical periods are included in retailer's demand forecast, order cycle lead time decreases, consumer demand is more correlated over time
Value of Information Sharing						
Haritharan and Zipkin (1995), MngSci	To study the impact of advance warnings of customer demand on total chain inventory performance in a make-to-stock environment.	> 2 stages 1 S : 1 M (: 1 R)	CP	(Periodic review inventory control model) • Customer demand has Poisson distribution • Lead times for supply delivery: • Supply chain costs: inventory-holding, backorder penalty	Advance warnings of consumer demand (=announcing due date of demand)	• Advance warnings are shared information that improves supply chain performance in precisely the same way as a reduction in (supply) lead times.
Bourland, Powell, Pyke (1996), EJOR	To study the impact of timely demand information on inventory and service levels both at the manufacturer and the customer firm.	2-stage 1 M : 1 R	M	(Periodic review inventory control model) • Consumer demand is normally distributed • Order cycle synchronization (N/Y) • Supply chain costs: ordering, backorder, inventory holding costs (M) • Lead time for delivery to retailer (deterministic; held constant) • Constraints: Cost of timely demand information is fixed, no lead time for delivery to supplier	Timely demand information in a single-product, make-to-stock supply chain.	• The value of sharing timely consumer demand information for the manufacturer increases when inventory holding costs, consumer demand, and offset time increase. • Larger offset times mean that the replenishment periods are not synchronized. • Value of timely information for the retailer is reflected in better service by the supplier, at lower costs.
Fisher and Raman (1996), OR	To develop methods for improving forecasting and production planning in a single capacitated supplier, multiple product seasonal demand environment to improve system performance.	2-stage 1 M : n R (two periods)	M	(Newsboy-type inventory model) • Short sales season • Supply chain costs: overproduction and underproduction costs • Constraints: limited capacitated supplier, order batch size • Note: empirical test data from actual implementation of inventory model	Retailer's order (=forecast) is based on sales of related items	• The effectiveness of Quick Response (QR) procedures are tested and compared to the actual decisions within a company. • Results show (however) no increase in sales. Profits are larger, through a better understanding of inventory costs and a better assessment of the relative risk of different items (less overproduction, and less underproduction)
Iyer and Bergen (1997), MngSci	To make a comparison between traditional approach with an application of QR in a single product M-R environment.	2-stage 1 M : 1 R (two periods)	CP	(Newsboy type (multi-stage) inventory model) • Short sales season • Supply chain costs: inventory holding costs, goodwill cost for unsatisfied demand in a season • Unlimited production capacity • Lead time order-delivery (deterministic, stochastic)	Retailer's order (=forecast) is based on sales of related items	• Implementing QR may not improve the profits of suppliers. • Volume commitments by the retailer make QR attractive for manufacturer. • Wholesale price commitments by the retailer do not make QR more lucrative to manufacturers.
Chen (1998), MngSci	To measure the value of information sharing in N-stage supply chain	Multi N-stage 1 : 1 : 1 ...	CP	(Periodic review inventory control model) • Consumer demand is discrete random variable • Supply chain costs: inventory holding cost, backorder cost • Delivery Lead time (constant) • Constraint: batch size for replenishment inventory	Centralization of demand information	• The value of information sharing is determined by the relative cost difference between echelon-stock (no information sharing) and installation-stock policies (information sharing). • The value of information is 1.75% on average (with the highest value of 9%). • There are indications that the value increases when the number of stages (N), batch sizes, or lead time increase. When backorder costs go up, information sharing is more valuable.

Study, Authors (year), Journal	Objective	Supply Chain Structure ¹	Perspective ²	Model, nature consumer demand, supply chain costs, constraints/assumptions	Nature information shared	Findings
Chen (1999), MngSci	To understand how the harm of information delays in channels can be mented by a team model or a cost-center model	N-stage 1: 1 : 1 : ...	CP	<ul style="list-style-type: none"> Periodic review inventory control model) Consumer demand is discrete random variable Supply chain costs: inventory holding cost, backorder cost Total lead time = information lead time + delivery lead time (constant) Constraint: batch size for replenishment inventory 	Delayed consumer demand information	<ul style="list-style-type: none"> Information and delivery leadtimes play exact role in the determination of optimal replenishment strategies; information delays are less costly than delivery delays; Delays in information at the downstream level are more costly than at the upstream levels If no good information on consumer demand is available to central planner, or faces too many fluctuation in demand, then decentralized decision-making should better be managed as cost-centers to optimize supply-chain-wide performance
Graves (1999), MS&O	To assess the value of letting upstream stages observe non-stationary demand.	2-stage 1 M : 1 R	M and R	<ul style="list-style-type: none"> Periodic review inventory control model) Non-stationary customer demand Lead times for downstream and upstream delivery Supply chain costs: inventory holding costs 	Consumer demand	<ul style="list-style-type: none"> It is still impossible to alleviate the bullwhip effect, when the upstream stage has more information about consumer demand. More structural changes can help to decrease demand amplification, like lead time reductions, and changing downstream order policy.
Gilbert and Ballou (1999), JOM	To study the potential benefits of sharing advanced order commitments in a 2-stage make-to-order environment.	2-stage 1 D : n M	D	<ul style="list-style-type: none"> Periodic review inventory control model) Customer demand has Poisson distribution (and independent from each other) Lead time for delivery (deterministic) Supply chain costs: ordering, inventory holding, lost sales/shortage 	Advance order commitments	<ul style="list-style-type: none"> This research shows that advance orders reduce distributor's inventory and overtime production costs. Distributors could use price discounts to get advance commitments.
Gavimeti, Kapuscinski, and Tayur (1999), MngSci	To explore the relationship between information sharing, supplier capacity, and inventory in a supply chain. And to compare partial and complete information sharing in supplier-retailer relationships to a base case of no information sharing.	2-stage 1 M : 1 R	M	<ul style="list-style-type: none"> Periodic review inventory control problem) consumer demand i.d.d. in any period (distribution: normal, uniform, erlang) Supply chain costs: inventory holding, penalty shortage Capacity supplier (low, high) 	Three levels: (1) none, (2) partial (parameters of retailer's ordering policy), and (3) full (consumer demand)	<ul style="list-style-type: none"> The benefits of partial information for the supplier increase when supplier capacity is larger and consumer demand is more turbulent. When supplier receives full information about consumer demand, larger supplier capacity increases the benefits of information sharing for the supplier.
Chen, Drezner, Ryan and Simchi-Levi (2000), part II, MngSci	To determine the impact of centralized demand information on the bullwhip effect in a multi-stage supply chain.	Multi N-stage	CP	<ul style="list-style-type: none"> Periodic review inventory control model) Autocorrelated i.d.d. consumer demand Every stage follows an order-up-to policy Lead time between ordering and delivery (deterministic / variable) 	Centralized demand information with demand forecast and inventory control procedures	<ul style="list-style-type: none"> Centralizing customer demand information can significantly reduce the bullwhip effect. Providing each stage of supply chain with complete access to consumer demand information still leads to a bullwhip effect. The increase in demand variability is highly dependent on the lead times.
Iyer and Ye (2000), M&SO	To assess the value of sharing the timing of retail promotion plans	2-stage 1 M : 1 R		<ul style="list-style-type: none"> Periodic review inventory control model) Consumer demand comes from two different segments (regular vs price-sensitive) Supply chain costs: inventory holding costs, penalty for lost sales (R), inventory holding costs (M) Constraints: outside source to the supplier has ample capacity and its replenishment lead time is constant (L); there is a minimal shipment 	Timing of retail promotion plans	<ul style="list-style-type: none"> In general manufacturer's profits benefits from sharing the timing of retail promotions, due to a decrease in its inventory holding costs; If the demand from price-sensitive consumer segments increase, the benefits from information sharing for the manufacturer go up. The benefits for the manufacturer decline when consumer demand turbulence increases (sales promotion predictability goes down); the retailer will be forced to take on extra safety stock

Study, Authors (year), Journal	Objective	Supply Chain Structure ¹	Perspective ²	Model, nature consumer demand, supply chain costs, constraints/assumptions	Nature information shared	Findings
				size		
				<ul style="list-style-type: none"> The advance timing of announcing retail promotion plans can vary (more than 1- periods in advance) No lead time of delivery to the retailer 		
Lee, So, and Tang (2000), MngtSci	To examine the impact of autocorrelated consumer demand and the leadtime on the benefits of information sharing.	2-stage 1 M : 1 R	M and R	<ul style="list-style-type: none"> (Periodic review inventory control problem) Autocorrelated i.i.d. consumer demand costs Supply chain costs: inventory holding, shortage Leadtime (deterministic, from 0 to longer) 	Consumer demand	<ul style="list-style-type: none"> Information sharing enables the manufacturer to reduce inventory holding and shortage costs These information sharing benefits become larger when the consumer demand becomes more turbulent/varying. About 23% cost reduction in scenario with highest consumer demand turbulence. Information sharing alone benefits the manufacturer, while only reducing lead time benefits the retailer primarily.
Aviv (2001), MngtSci	To quantifying the inventory and service performance of supply chains in settings where forecasts are dynamically updated at more than one location in the supply chain (the benefits of CF, collaborative forecasting)	2-stage 1 M : 1 R	M and R	<ul style="list-style-type: none"> (Periodic review inventory control problem) Consumer demand is independent, and identically distributed across time (normal distribution) (note: the analysis is restricted to cases with low variability of demand) Supply chain costs: holding costs, shortage penalty/back-order costs, for retailer and supplier. Batch order sizes. Lead time (deterministic, variable) Constraints: supplier has an unlimited source of supply 	Forecasts for future demand Diversity in forecasting capabilities of supplier and retailer	<ul style="list-style-type: none"> Demand forecasting helps to decrease supply chain cost by 11% on average. Supply chain costs are lowered by an extra 8 % if forecasting is conducted collectively. The effectiveness of collaborative increases when forecasting capabilities of channel members are diversified Benefits of collaborative forecasting are larger when lead times are smaller.
Moinzadeh (2002), MngtSci	To compare the performances of a fully informed channel with that of a channel using installation stock policies	1 M : n R (identical retailers)	CP	<ul style="list-style-type: none"> (Periodic review inventory control model) Stationary random consumer demand at retailer (Poisson) Lead time in delivery to retailer is random Supply chain costs: inventory holding costs, backorder/shortage costs Constraint: outside source to the supplier has ample capacity and its replenishment lead time is constant 	Inventory status and consumer demand activity at retailer	<ul style="list-style-type: none"> Sharing information leads to an average saving of 3.2%, with a maximum saving of 34.9% The value of information increases when: (1) supplier's lead time to deliver to retailers is long, (2) the number of retailers is not large, (3) order quantities are either not too small or too large, and (4) the ration of unit holding cost of the retailer to that of the supplier is either not too small or too large.
Cheung and Lee (2002), MngtSci	To examine the benefits of VMI programs in multiple retailer settings; specially the benefits from coordination of shipments to retailers and from rebalancing stocking positions	1 M : n R (retailers in close proximity; resupply in 1 delivery trip)	CP	<ul style="list-style-type: none"> (Periodic review inventory control model) Stationary random consumer demand at retailer (Poisson) Lead time in delivery to retailer is constant Supply chain costs: inventory holding costs, backorder/shortage costs (for the retailer) Constraints: outside source to the supplier has ample capacity and its replenishment lead time is constant; there is a minimal shipment size 	Consumer demand, inventory position, and re-order policy	<ul style="list-style-type: none"> Information sharing enables the supplier to coordinate shipments to retailers; and thereby to reduce retailer's (inventory holding) costs. This value from shipment coordination is larger when the number of participating retailers increase, and the ratio between minimum shipment size and consumer demand variability goes up. Information sharing also makes it possible for the supplier to rebalance stock in the retailer network. The value of rebalancing stock is greater when the number of participating retailers grow Both benefits experience however a decreasing return to scale (number of retailers).

<i>Study, Authors (year), Journal</i>	<i>Objective</i>	<i>Supply Chain Structure¹</i>	<i>Perspective²</i>	<i>Model, nature consumer demand, supply chain costs, constraints/assumptions</i>	<i>Nature information shared</i>	<i>Findings</i>
Zhao, et al. (2002), EJOR	To assess the impact of forecasting model selection on the value of information sharing in a supply chain with one capacitated and multiple retailers	2-stage 1 M : n R	M and R	<ul style="list-style-type: none"> Periodic review inventory control model) Four consumer demand patterns (constant, seasonal without trends, seasonal with an increasing trend, seasonal with decreasing trend). Supply chain costs: transportation costs, order-processing costs, inventory holding costs, backorder/shortage costs (for the retailers), production set-up costs, inventory holding costs, backorder/shortage costs (for the supplier) Lead time of delivery is constant (one period) Constraints: supplier has fixed capacity; there is no minimal shipment size 	Demand information, Future order plans	<ul style="list-style-type: none"> Information sharing reduces total supply chain costs, costs of the retailer, and costs of the supplier; it increases the service levels of the supplier and the retailer. The impact of future order information sharing on supply chain costs reduction is greater than demand information sharing. The benefits of information sharing go up when the retailer uses more advanced and more accurate forecasting methods.
Chen and Yu (2005), M&SO	To quantify the value of supplier's information about delivery/leadtimes to the retailer	2-stage 1 M : 1 R	R	(Periodic review inventory control model) <ul style="list-style-type: none"> i.i.d. random consumer demand at retailer Supply chain costs: inventory holding costs, backorder/shortage costs (for the retailer) Lead time of delivery is random (known by manufacturer) Constraints: outside source to the supplier has ample capacity and its replenishment lead time is constant; there is a minimal shipment size 	Lead time of delivery from supplier to retailer	<ul style="list-style-type: none"> Sharing leadtime information by the supplier allows the retailer to optimize replenishment decisions; the value of this upstream information can be significant, up to 41% The benefits increase when lead times vary a lot and when consumer demand has a high volume.
<i>Relative Value of Information Sharing</i>						
Parlar and Weng (1997), MngSci	To study the impact of joint coordination between manufacturing and supply to meet uncertain demand in limited time frame	2-stage 1 S : 1 M (two periods)	CP	(Newsboy-type inventory model) <ul style="list-style-type: none"> Probability distribution of random consumer demand is known Supply chain costs: manufacturer production set-up costs, backorder costs, salvage (markdown, or disposal cost), material ordering cost Constraint: a newsboy inventory model; viz. resupply is not possible. 	Customer (M) demand data	<ul style="list-style-type: none"> Total (channel) profit is higher in case of joint coordination is (information sharing and centralized decision making); The value of joint coordination increases when material-related costs in the second period are much than in the first period. Variations in backorder costs, unit sales prices, mean customer demand, and unit salvage have much less impact on total profits due to coordination between M and S.
Anand and Mendelson (1997), MngSci	To model the effects of alternative coordination structures on the performance of a firm facing uncertain demand in multiple horizontal markets	2-stage 1 center (M) : n branches (R)	CP	(Newsboy-type inventory model) <ul style="list-style-type: none"> Consumer demand uncertainty (low or high state), not across time Supply chain costs: marginal production costs Local specific knowledge at the branches (i.e., R) 	Consumer demand and inventory data Error in transmission of local information	<ul style="list-style-type: none"> Value of information (sharing) systems is defined as the difference in expected profits between decentralized and "no-information" coordination structures The value of information goes up as error-free transmission increases and number of branches raises

Study, Authors (year), Journal	Objective	Supply Chain Structure ¹	Perspective ²	Model, nature consumer demand, supply chain costs, constraints/assumptions	Nature information shared	Findings
Aviv and Federgruen (1998), WP	To analyze of the inventory and distribution cost benefit of information sharing and VMI	2-stage 1 M : n R	CP	(Periodic review inventory control model) • Consumer demand is stochastic, independent across retail sites, independent across periods • Supply chain costs: retailer's inventory holding cost, shipment handling costs and shortage penalty, supplier's inventory holding costs • Constraint: supplier's capacity	Centralization of consumer demand information	<ul style="list-style-type: none"> Under VMI the supply-chain wide costs is uniformly lower than that under information sharing, by an average of 4.7%. Average improvement of information sharing is 2%; that most of the savings are due to reductions of the supplier's costs. The value of information sharing and VMI increases significantly as capacity becomes tighter.
Waller, Johnson, and Davis (1999), JBL	To describe VMI, to discuss the sources of saving from VMI, and its technologies needed to make it work.	2-stage 1 M : 1 M-DC and 7 VMI-R	M and R	n.a. simulation scenarios were based on actual empirical data from a 4-weeks VMI arrangement implementation.	Retailer DC's stock position and replenishment policy	<ul style="list-style-type: none"> The magnitude of consumer demand variability does not play significant role in the benefits of VMI The adoption of VMI has a positive effect on the system-wide benefits VMI becomes more important for manufacturers with little excess capacity.
Cachon and Fisher (2000), MngtSci	To measure the value of information and to compare it to two other sources of supply chain improvement (reducing lead times, increasing delivery frequency by reducing shipment batches)	2-stage 1 M : n R (identical retailers)	CP	(Periodic review inventory control model) • Consumer demand is discrete, independent, and identically distributed across retailers and across time • Supply chain costs: inventory holding costs, back order • Constraint: batch size for replenishment retail inventory	Consumer demand and retailer's inventory data.	<ul style="list-style-type: none"> Information sharing helps the supplier to improve its order quantity decisions, and to improve its allocation decision (among retailers); calculation show that it then lowers the supply chain costs by 2.2 – 12.1% Interestingly, other channel alignment measures have a much greater impact on supply chain efficiency (e.g., cutting lead times in half reduces costs 21% on average, and cutting batches in half reduces by 22% on average).
Fry, Kapuscinski, and Olson (2001), MSOM	To compare the performances of traditional retailer-managed inventory and vendor-managed inventory	2-stage 1 M : 1 R	M and R	(combination of periodic review inventory policy and newsvoy model) • Consumer demand variance i.i.d. • Supply chain costs: holding costs and outsourcing costs for supplier, holding costs and back-order penalty for retailer • Constraints: excess demand is backlogged, no lead-time.	Inventory policy and data	<ul style="list-style-type: none"> The VMI agreement performs significantly better than retailer managed inventory in many settings, but it can perform worse in low consumer demand varying settings; The flexibility in the VMI agreement (=maximum versus minimum amount of inventory at retailer's) determines the distribution of the benefits from VMI.
Aviv (2002), MSOM	To examine three supply chain configurations in which is dealt with consumer demand uncertainty: (1) coordination of policy parameters, (2) VMI, and (3) CPFR	2-stage 1M : 1 R	CP	(Periodic review model by manufacturer) • Autocorrelated consumer demand • Supply chain costs: inventory holding costs, shortage costs • Constraint: channel members are concerned only with the overall supply chain costs	(1) Inventory policy (LMI); (2) Stock information (VMI); (3) Demand forecast (CPFR)	<ul style="list-style-type: none"> The value of information sharing (stock and demand forecasts) decreases, when consumer demand is autocorrelated (a larger portion of demand uncertainty is already explained through early demand information) If demand forecasts from channel members are uncorrelated, it depends on the relative explanation power (if demand signals observed by the retailer are more informative than those directly by the supplier), to determine what would be the most efficient supply chain arrangement. When the retailer has more predictive information than it is not sensible to engage in a VMI arrangement
Minler and Kouvelis (2002), MSOM	To study the relative value of demand information updating and production and supplier flexibility for an innovative product in a single season with two ordering points	2-stage 1 M : 1 R	CP	(Two-period newsboy-type inventory model) • Consumer demand variance i.i.d. • Supply chain costs: production cost, holding costs, shortage costs • Constraint: lead time L	Consumer demand in combination with production and supplier flexibility	<ul style="list-style-type: none"> The value of (updated demand) information relative to other measures of channel alignment (production and supplier flexibility) is negatively affected by consumer demand variance within an ordering period. The value of information is relatively higher for situations with high variance between the two ordering periods. The relative value of information increases when lead times become longer.

Study, Authors (year), Journal	Objective	Supply Chain Structure ¹	Perspective ²	Model, nature consumer demand, supply chain costs, constraints/assumptions	Nature information shared	Findings
Sieckel, Gupta, and Banerji (2004), MngSci	To empirically compare the impact of sharing POS information with of lead time reduction on supply chain efficiency	3-stage I M : I D : I R	n.a.	n.a. (note: a simulated supply chain experiment in which lead times and the availability of point-of-sales information are manipulated)	POS information	<ul style="list-style-type: none">• In contrast to delivery lead time reduction, sharing customer information is not beneficial in all demand circumstances.• If demand increases abruptly (‘‘siep-up’’), POS information proofs to help the supply chain efficiency. More consistent patterns of demand changes appear to be more difficult to absorb. An explanation might be that the salience of POS information induces a distraction and subjects therefore gave more weight to it than perhaps they should have.
Watson and Zheng (2005), M&SO	To show how better use of real-time sales data along with a change in incentive scheme can mitigate the costs of order delays	N-stage 1 : 1 : 1 : ...	Individual echelon managers	(Periodic review inventory control model) <ul style="list-style-type: none">• Stationary random consumer demand (i.i.d.)• Unsatisfied demand is fully backlogged• Supply chain costs: inventory holding cost, backorder cost• Lead times: production/transportation, and order delay (both constants), assumed to be equal for each stage• Constraint: batch size for replenishment inventory	Consumer demand	<ul style="list-style-type: none">• The benefits of sharing consumer demand information in terms of lower inventory costs and backorder costs for the entire chain is really materialized, when the appropriate (team) incentive scheme is being used. The decision makers should be made accountable for the whole performance of the channel; not only their own stage/link.

^{1,2} S = supplier ; M = manufacturer ; D = distributor; R = retailer; CP = Central Planner

³ No market information shared; the retailer/ downstream channel member only passes on order information

APPENDIX II.2

SUMMARY OF THE STUDIES OF THE GAME-THEORETICAL APPROACH

Study, Authors (year), Journal	Objective	Set of players	Stages, Type* Game sequence	Players Profit function revenues (+), costs (-)			Uncertainties	Nature of information shared	Key findings
				Manufacturer	Retailer				
Gal-Or (1991), JIE	To investigate if offering certain contracts to retailer can imitate performance of an integrated channel	1M : 1R	3, P, Q (1) M offers a Franchise Fee contract or a Retail Price Maintenance contract; (2) retailer gives demand and cost information (possibly with or without noise or bias); (3) R accepts or rejects offer	M: wholesale price, franchise fee (+)	R: retail price, unit sales (+), wholesale price, franchise fee (-)		Consumer demand uncertainty (linear function with random term)	Consumer demand and cost (with or without noise)	<ul style="list-style-type: none"> When vertical integration is taken as a benchmark, information sharing by the retailer does not outperform vertical integration. The performance of the more stricter retail price maintenance contract is better than the franchise fee contract (= a form of a quantity forcing contract).
Chu and Messinger (1997), IJRM	To examine the impact of market information acquisition on individual and total channel profits.	1M : 1R	2, P (1) M and R can choose to acquire information about the demand parameter at (different) costs; (2) M and R choose the wholesale price and retail margin. Note: players are allowed to purchase demand information as a strategic option prior to playing the (non-cooperative) pricing game. Note: players have a symmetric profit function, except for the fixed amount for demand information acquisition costs	M: wholesale price (+), unit sales (+), demand information costs (-)	R: retail price, unit sales (+), wholesale price, demand information acquisition costs (-)		Consumer demand function (a linear function with uncertainty about consumers' price elasticity (slope)).	None	<ul style="list-style-type: none"> Acquisition of demand information by each channel members leads to greater absolute profits as well as greater proportion of channel profits for that channel member. Total channel profits are higher when only one member has demand information Demand information leads to a smoothing of realized demand The costs of acquiring information influences the decisions to acquire information When the equilibrium is that both channel members acquire information, such equilibrium is not a prisoner's dilemma.
Siedmann and Sundarajan (1997), WP	To model the competitive impact of information sharing by a retailer.	2M : 1R	2, n.a. (1) R offers one of the Ms a category management contract, (2) M accepts or rejects offer.	M: strategic sales and marketing revenue, competitive revenue, extra bargaining power (+), loss of con-fractual payment (-)	R: contractual payment (+), operational savings (+), loss of bargaining power (-)		none included	Category management (exclusively to 1 M)	<ul style="list-style-type: none"> Retailer is able to extract all the extra outcomes from information sharing.
		2M : 1R	2, n.a. (1) R offers both Ms individual VMI contracts, (2) Ms either accept or reject offer.	Idem.	Idem.		none included	Inventory management (not exclusively to 1 M)	<ul style="list-style-type: none"> Retailer is able to extract all the extra outcomes from information sharing.

Study, Authors (year), Journal	Objective	Set of players	Stages, Type* Game sequence	Players Profit function revenues (+), costs (-)			Key findings
				Manufacturer	Retailer	Uncertainties	
Desiraju and Moorthy (1997) MngSci	To study how performance requirement contracts improve the channel performance.	IM : IR	4, P, Q	M: wholesale price, unit sales, franchise fee (+), unit costs (-)	R: retail price, unit sales, (+), wholesale price, service costs, franchise fee (-)	consumer demand depends on retail price and service level. Constant term is uncertain, it may be low or high.	<ul style="list-style-type: none"> • In all marketing arrangements offered, a joint information sharing system needs to be in place. • If manufacturer is confronted with consumer demand uncertainty (retailer has information on actual demand), then both price and service requirements would be offered, to increase total channel profit and to reach a Pareto solution. • Requirements only set for one of the two (price or service) lead to less than optimal outcomes for manufacturer.
Roy (2000), IJRM	To develop analytical model to compare the effect of demand information (2 channel profitability in different channel structures	IM : IR and IM : IR (2 exclusive channels) vs. 1 M-R and 1 M-R (2 vertically integr.)	2, P	M: wholesale price, unit sales (+), unit costs (-)	R: retail sales (+), wholesale price, retail price, competitor (-)	consumer demand (base level is a random variable)	<ul style="list-style-type: none"> • The relationship between market share and the effect of information accuracy on channel profit depends on the channel type; in vertically integrated channels, the rate of increase in channel profits with information accuracy increases with market share; in Stackelberg channels, the information effect on channel profit decreases with market share • The effect of information accuracy on channel profit increases with cross-price effects (competition between suppliers). • When competition between channels is low, the effect of information accuracy is bigger in vertical channels • Given the competing channel is Stackelberg, and when competition is high, the effect of information accuracy in a Stackelberg channel is bigger than in a vertical integrated channel • Given the competing channel is vertically integrated, a vertically integrated channel benefits more from information precision than Stackelberg channels
Donohue (2000), MngSci	To develop supply contracts encouraging coordination by sharing demand forecast information	1 M : 1 R and 1M-R	2, Q	M: unit production costs (includes holding and delivery costs per unit) depends on production mode (slow and cheap /fast and expensive), return price for unsold goods (-), wholesale prices (+)	R: price, salvage value (+), shortage penalty (-)	Constraint: both channel members know the total demand forecast	<ul style="list-style-type: none"> • If manufacturers offers supply contract in exchange for demand update for second period, then manufacturer produces more. • If wholesale margins for manufacturer are kept equal, then the channel is not coordinated • The predictability serves the making of efficient pricing contracts and mainly helps the manufacturer to increase its share of the total channel profits.

Study, Authors (year), Journal	Objective	Set of players	Stages, Type* Game sequence	Players Profit function revenues (+), costs (-)			Key findings
				Manufacturer	Retailer	Uncertainties	
Li (2002), MngSci	To examine the incentives for firms to share information vertically.	1 M : n R	3, Q	M: wholesale price, unit sales (+)	R: retail sales (+), wholesale price (-)	Consumer demand uncertainty (random term)	<ul style="list-style-type: none"> • The manufacturer is better off with acquiring information from more retailers in all circumstances; each retailer is worse off by disclosing his information to the manufacturer in all circumstances (due leakage of information to other (competing) non-sharing retailers); This discourages retailers from passing back demand information on a voluntary basis. • If the manufacturer compensates information-sharing retailers for their losses in profitability by offering wholesale price incentives to them, only under
Niraj and Narasimhan (2005), WP	To examine the conditions under which information sharing coordinates the channel.	1 M : 1 R	4, P	M: wholesale price, unit sales (+), probability consumer demand state	R: retail price, unit sales (+), wholesale price (-), probability consumer demand state	Consumer demand uncertainty (a two point Bernoulli distribution to model alternative futures).	<ul style="list-style-type: none"> • Information sharing always results in a more coordinated channel outcome by way of increased total channel profits. • A retailer with poor quality of information is unlikely to form an information sharing alliance.
		2M : 1 R	4, P			Idem.	<ul style="list-style-type: none"> • Competition between manufacturers and sufficiently high reliable information leads to asymmetric information sharing, with higher wholesale prices, and a lower variance in the quantity sold.

Study, Authors (year), Journal	Objective	Set of players	Stages, Type* Game sequence	Players Profit function revenues (+), costs (-)			Key findings
				Manufacturer	Retailer	Nature of information shared	
Gu and Chen (2004), WP	To model bilateral bargaining in the channel relationship in combination with the strategic decision to share information.	1 M : 1 R	4, Q Quantity-setting game (a bargaining game) Game Sequence: (1) channel decides to share information, (2) manufacturer and retailer negotiate the wholesale price, (3) retailer decides on order quantity and retail price, (4) market demand is realized.	M: Wholesale price, unit sales (+) R: retail price, unit sales (+), wholesale price (-)	Bargaining power retailer, Consumer demand (a two point Bernoulli distribution to 100% model alternative futures).	None; Predictive power of the market information (100% accurate consumer demand information)	<ul style="list-style-type: none"> Information sharing takes place if retailer's bargaining power is sufficiently low or sufficiently high; the channel avoids information sharing if the retailer's bargaining power is in the intermediate range. As consumer demand increases, information sharing occurs if the retailer has high bargaining power; no information sharing occurs if the retailer has low bargaining power.
Kurtulus (2004), WP	To investigate the antitrust issues that may arise as a result of the category adviser arrangements.	2 M : 1 R	4, P Price-setting game ($M_{1,2}$ are Stackelberg leaders). Sequences of 4 moves: (1) M_s decide to offer information sharing arrangement with retailer, (2) R decides to accept or reject offers by M_s , (3) M_s set wholesale prices simultaneously, (4) R sets retail prices for M_s products and orders quantities.	$M_{1,2}$: wholesale price (+), unit production cost, wholesale price competitor (-)	R: fixed fee Constraint: shelf space is limited.	None (base case)	<ul style="list-style-type: none"> The category advisor M1 takes advantage and reduces its retail price, whereas it increases its competitors M2's retail prices The total category profit in the category adviser scenario is lower due to the decrease in the average retail prices.
		2 M : 1 R	4, P Price-setting game (manufacturers are Stackelberg leaders). M_1 is category adviser. Sequences of 4 moves: (1) M_2 offers its wholesale price to the retailer, (2) R provides information (wholesale price M_2 minimum profit target, shelf space, (3) The category advisor M_1 decides what retail prices to recommend to the retailer, (4) R sets retail prices in line with category adviser's recommendations.	M_1 : wholesale price (+), unit production cost, wholesale price competitor, substitutability (-)	R: minimum profit target (+). Constraint: shelf space is limited; (competitor's wholesale price, total shelf space, category profit target)	Category management	
Corbett, Zhou and Tang (2004), MngtSci	To study the value to a supplier of obtaining better information about a buyer's cost structure	1 M : n R	2, Q (1) manufacturer does or does not receive (complete) cost structure information from buyer, (2) manufacturer offers a (menu of) contract(s) and retailer chooses an order quantity based on her internal cost.	M: wholesale price unit sales, (+), side payment (-)	R: retail price, unit sales (+), wholesale price, retailing cost (-)	Retailer's cost structure uncertain to supplier	<ul style="list-style-type: none"> The value of the retailer's cost information to the supplier is higher under two-part contracts The value of offering two-part contracts is higher under full information (viz., retailer fully discloses cost structure) The proportion of buyers the supplier will choose to exclude can be substantial.

* P and Q stand for the type of competition game played during one of the events in the game. P = price, Q = quantity

APPENDIX II.3 SUMMARY OF THE STUDIES OF EMPIRICAL BEHAVIORAL APPROACH

<i>Study, Authors (year), Journal</i>	<i>Research Objective</i>	<i>Empirical Basis (sample size, response rate)</i>	<i>Conceptualization Information Sharing in Channel Relationship</i>	<i>Antecedents and Consequences (found relationships are between brackets)</i>	<i>Key findings</i>
<i>Exercise of Information power</i>					
Hunt and Nevin (1974), JMR	To assess the relationship between power in a channel and the sources of power.	Survey among US fast food franchisees (815, 22.3%)	Expert power of the franchisor is a non-coercive power source based on the extent of knowledge which the franchisee attributes to the franchisor within a given area. The measurement items approaching the idea of information sharing are: site location assistance, deletions and additions to product line, day-to-day-business advice, and pricing assistance	* No antecedents; * Consequences: perceived power position of influencer (+), satisfaction of influence (+).	* Non-coercive power sources contribute less to the perceived power position of the franchisor than coercive power sources; * Franchisors can increase franchisees' satisfaction by relying more on non-coercive sources of power and less on coercive sources of power.
Eigar (1978), JR	To determine if channel leaders use different means to achieve power in different channel surroundings	Survey among retail dealers reporting on their supplier of a major group of products they sell (40 with long-term contract, 49 without contract)	Provision of market information is one of the 13 means of power measured; it loads on the factor "promotional support".	* Antecedents: channel contracts (+); * No consequences tested	* Manufacturers controlling their channel relationships with contracts rely on "non-traditional" means of power and provide promotional support to gain control over their distribution.
Brown, Lusch, and Muehling (1983), JR	To describe and test relationships among bases of power, dependency, perceptions of power, and perceptions of conflict	Survey among US managers and assistant managers of retail stores (139, n.a.)	Information power is a non-economic power base and refers to the (supplier's) ability to (1) provide information not previously made available to the retailer, and (2) interpret existing information in ways that are meaningful but not yet known by the retailer	* No antecedents tested; * Consequences: power perceptions of influencer (0), dependence (+), conflict (-)	* In contrast to economic power bases (reward and coercion), non-economic power bases like information power are not directly related to perceptions of power; * Non-economic power bases do enforce dependence of the influenced firm, but reduce the level of perceived conflict in the relationship.
Frazier and Summers (1984), JM	To study the influence strategies used by manufacturers and its effect on interfirm agreement	Survey among US new car dealers reporting on their relationship with manufacturer (184, 46%)	Information exchange is defined as an influence strategy whereby the influencing manufacturer uses discussions on general business issues and operating procedures to try to alter the dealer's general perceptions of how to be most profitable.	* No antecedents tested; * Consequences: interfirm agreement (+)	* Information exchange is the dominant influence strategy in channel relationships with high interdependency; * Information exchange is frequently used with requests as an influence strategy; * Information exchange by the manufacturer promotes the dealer's agreement on different decision issues.
Gaski and Nevin (1985), JMR	To study the differential effect of exercised and unexercised power sources in channel relationships	Survey among US dealers from one industrial machinery manufacturer (238, 37.5%)	Information sharing is a form of an exercised non-coercive power source ("giving business advice" is the item coming closest to the concept of information sharing)	* Antecedents: non-coercive power source (+); * Consequences: conflict (-), satisfaction (+), power (+), performance (+)	* The exercise of non-coercive power has a stronger positive effect on power, dealer satisfaction and performance than the presence of non-coercive sources of power; * The exercise of non-coercive power reduces channel conflict more than the mere presence of non-coercive power sources; * As more of a power source is held by a franchisor, as less proportionately of it will actually be used.

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Kale (1986), JMR	To study the relationship between a manufacturer's power and its choice of influence strategies	Survey among Indian dealers in the tungsten carbide tool industry reporting on their relationship with manufacturer (51, 50%)	The frequency of use of information exchange as an influence strategy (cf. Frazier and Summer, 1984)	* Antecedents: perceived manufacturer power (-), usage frequency of other influence strategies	* The greater the power of a manufacturer, the more frequently high pressure means of influence (i.e., threats, promises, and legalistic pleas) are used to alter the dealer's decision making; * Relatively low pressure influence strategies have negative correlations with information exchange
Hunt, Mentzer and Danes (1987), JBR	To investigate the factors leading to compliance of a less powerful channel member to the wishes of the more powerful channel member	Survey among plumbing materials manufacturers reporting on relationships with building contractors (477, 37%)	Information sharing is conceptualized as the quality in exercising expert power (e.g., the quality of day-to-day business advice)	* No antecedents tested; * Consequences: probability of compliance (+)	* Most tested non-coercive sources of power lead to a higher likelihood of compliance, including expert power.
Keith, Jackson and Crosby (1990), JM	To examine the effects of influence processes on channel relationships under two different dependence structures.	Laboratory field experiment among brokers in the food industry (232, 23.2%) asking their judgments on different scenarios	Information sharing is an exercise of information power	* Antecedents: dependency of (targeted) channel member (moderator); * Consequences: (target's) satisfaction (+), (target's) perceived control (-), compliance (0)	* The effect of information sharing as power use on the readiness to comply is slightly lower than other uses of power; * Similar to other power uses, the effectiveness of information sharing is greater in higher dependent relationships; * Information sharing as a power base is perceived as weaker than another power base; * Information sharing is received with more satisfaction by the other channel member than reward or coercion is.
Frazier and Rody (1991), JM	To examine the reciprocal use of non-coercive and coercive influence strategies by the supplier and the relationships with channel power and conflict	Survey, Industrial distributors (300, 33%) reporting on a supplier relationship	Information exchange is considered to be an element of a non-coercive influence strategy	* Antecedents: magnitude of power (+); latent conflict (s-, d0), manifest conflict (+); * Consequences: attitude towards conflict resolution (+) (note: just relationships were tested; no distinction was made between antecedents and consequences)	* Similar to coercive influence strategies, non-coercive influence strategies are reciprocated by channel members; * Firms with high power are more likely to make use of non-coercive influence strategies; * Latent conflict lessens the supplier's use of non-coercive influence strategies, but it does not affect the distributor's use of non-coercive influence strategies; * Manifest conflict interestingly promotes the use of non-coercive influence strategies by both channel members; * More frequent use of non-coercive influence strategies by either channel member creates a positive attitude for conflict resolution
Boyle, Dwyer, Robicheaux, and Simpson (1992), JMR	To develop measurements of influence strategies and two empirical tests in different relational structures in order to examine the communication frequency and "content" in different channel structures.	Two survey studies: 168 automobile dealers (49%) and 651 automobile tire dealers (35.6%)	Information sharing is regarded as an influence strategy. Other influence strategies are recommendation, promise, request, legalistic, and threat.	* Antecedents: relationalism (solidarity, mutuality, flexibility) (+), Ownership (+), Franchise (+), Alignment (+), Supplier type (+); * No consequences tested	* Information sharing is enhanced by more relationalism in the dealer-supplier relationship; * Formal structures (such as ownership and franchise contract) enforce information sharing even more than relationalism

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Scheer and Sten (1992), JMR	To understand the effects of a successful explicit influence exercise by examining both the type of influence exercised and the performance outcomes generated by the behavior adopted in compliance with that influence	Laboratory experiment; 233 MBA students in the role of marketing manager facing a strategic decision to carry a new product from a supplier	Information exchange by the other channel member is seen as a non-contingent positive influence attempt	* No antecedents tested (uncertainty of performance outcomes, contingency of influence attempts); * Consequences: satisfaction (+), trust (+), commitment (+), attitude about new product (+), partner outcome attributions (+), autonomy (+)	* When performance outcomes are unknown, a positive influence attempt by one channel member (i.e. information sharing) results in more trust and satisfaction by the other channel partner, and more autonomy
Brill (1994), JBR	To develop and test an alternative model explaining the relationship between supplier power and opportunism	Survey among top managers of gasoline service station franchises (151, 15%)	Information sharing is regarded as perceived (attributed) influence from the manufacturer as a result of using his expertise	* Antecedents: relational restrictiveness (+), managerial/dealer's morale (+), managerial/dealer's compliance (+); No consequences tested	* Expert power is an important indicator of (attributed) social power. * As expected, the attribution of the manufacturer's social power by the dealer/retail franchisee is increased by the restrictiveness and morale, yet undermined by the dealer's compliance (cooperation and opportunism).
Gundlach and Cadotte (1994), JMR	To explore the consequences of interdependence magnitude (cohesion) and relative asymmetry (power advantage)	Laboratory study in a simulated marketing channel; 179 observations from participants	Information persuasion is a form of non-coercive interfirm influence (measurement by 4 items)	* Antecedents: magnitude of interdependence (m+; d+); asymmetry of interdependence (m.us; d+)	* As the channel member's joint dependence increases, the use of information persuasion increases. * The manufacturer's use of information persuasion is not affected by the relative power in the channel relationship. * The distributor's use of information persuasion is positively related to the relative asymmetry of their interdependence
Brown, Lusch, and Nicholson (1995), JR	To examine the effects of power usage on commitment and how these effects are moderated by the power asymmetry in the channel relationship	Survey among US farm equipment dealers reporting on its dealings with their major supplier (203, 19.3%)	Two perceived uses of manufacturer non-mediated power related to information sharing are (1) the use of information power (4 items on "knowing more", "better informed") and (2) the use of expert power (4 items on getting good advice, on business expertise).	* No antecedents tested. * Consequences: retailer's instrumental commitment (+), retailer's normative commitment (+), attributions of supplier's performance (+), retailer's performance (+)	* The use of non-mediated power by the manufacturer results in more normative retailer commitment to the channel relationship. * In relationships with a more powerful retailer, the use of non-mediated power reduces the level of instrumental commitment. * Non-mediated power use directly and indirectly contributes to a better manufacturer performance.
Brown, Johnson, and Koenig (1995), JIRM	To compare the psychometric properties of both the direct and indirect approaches to measuring the sources of power in marketing channels	Survey among retail store employees reporting on their major supplier (78, 16.7%)	Information given by the supplier is a direct measurement of a supplier power source. An indirect measurement of sources of power is the quality of supplier marketing activities, quality of trade promotion support.	* Antecedents: power attributions (+), conflict (-), satisfaction (+). * Consequences: power attributions (+), conflict (-), satisfaction (+) (note: the study presents a nomological net of constructs and does not make a distinction between antecedents and consequences).	* The construct validity of indirect (e.g. Hunt and Nevin, 1974) and direct (e.g. Frazier and Summers, 1984) measurements are equally good. * Direct measures of sources of power measure power in the channel relationships better. * In the test for nomological validity, non-mediated and non-coercive power relate negatively to conflict and positively to satisfaction. * A positive relationship between power attributions and non-mediated or noncoercive power is found.

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Boyle and Dwyer (1995), JBR	To understand the interplay of power, bureaucracy, influence strategies, and performance	Survey among US industrial product distributors reporting on one of their suppliers (314, 44.3%)	Information exchange is regarded as a non-coercive type of influence strategy by the supplier (cf. Frazier and Summer, 1984)	* Antecedents: supplier power (+), formalization (+), centralization (ns); * Consequences: performance (+)	* Information exchange is more used in relationships with a powerful supplier and where formalization is applied; * Information exchange is the only influence strategy that increases the performance. Recommendation does not contribute significantly, and the coercive influence strategies are detrimental to the performance.
Simpson and Mayo (1997), JBR	To examine the direct effects of the use of coercive and non-coercive influence strategies on satisfaction, commitment and trust in different channel relationship structures	Survey among US beer distributors reporting on a major supplier (331, 26.4%)	Information sharing is part of the non-coercive influence strategy (5 items)	* No antecedents; * Consequences: Satisfaction (+), Trust (+), Commitment (+)	* Non-coercive influence strategies result in higher levels of satisfaction, trust and commitment; * In relationships featured with relationalism, the constructive impact of non-coercive influence is significantly reduced
Rawwas, Vitell, and Barnes (1997), JBR	To investigate the processes of managing conflict by utilizing individual power sources in a marketing channel	Survey among independent US retailers reporting about their relationships with their primary pharmaceutical wholesaler (551, 27.5%)	The use of expert power is the conceptualization of information sharing in the channel relationship	* Antecedents: use of opportunistic power (ns), reward power use (+), coercive power use (-); * Consequences: the use of power (-), constructive conflict (+), satisfaction (ns)	* Reward use of power go hand-in-hand with the expert use of power; * the use of expert power leads to a less direct influence (power use), but it stimulates constructive conflict
Kim (2000), JAMS	To address two questions: does channel climate moderate the effect of interfirm power process; and what are the effects of influence strategies on relational exchange (solidarity)	Survey among industrial distributors for machinery industrial supplies and hardware (276, 32.3%) and their suppliers (67, 50.7%)	Information sharing is a form of non-coercive influence strategy (correlated with requests)	* Antecedents: interfirm power asymmetry (ns), magnitude of power (+); * Consequences: supplier's use of non-coercive influence strategies (+)	* Use of non-coercive influence strategies leads to more solidarity in the distributor-supplier relationship; * The use of non-coercive strategies by one channel member is reciprocated by the other; * Non-coercive influence strategies are applied in relationships with a higher level of magnitude of power.
Lee (2001), JBR	To explore the perceptions of Chinese distributors regarding the classification of power sources.	Survey among Chinese distributors from one International Joint-Venture brewery (95, 79.2%)	The supplier's use of information is labeled as a non-aggressive use of power source (measures are conform Brown et al., 1995a)	* No antecedents tested; * Consequences: conflict (-), satisfaction (+)	* The use of non aggressive power sources directly contributes to satisfaction of the channel, but also indirectly through the lowering of the level of conflict in the channel relationship.
Tikoo (2002), JR	To examine the effect of franchise experience as a developmental variable affecting franchisee dependence and franchisor use of different influence strategies	Survey among franchisees from one franchise system (396, 27.8%)	Information exchange is an influence strategy by the franchisor with no specific action requested or otherwise indicated (cf. Boyle, et al. 1992)	* Antecedents: franchisees experience (0), franchisee's dependence on franchisor (0)	* The use of information exchange as an influence strategy by the franchisor is not reduced when the franchisees become less dependent.

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Hu and Sheu (2005), IMM	To study the factors influencing channel solidarity	Survey among Taiwanese PDA-franchisees reporting on their main supplier (126, n.a.)	Information exchange is regarded as a non-coercive influence strategy.	* Antecedents: channel asymmetry (+); * Consequences: channel climate harmony (+), channel solidarity (+)	* Channel asymmetry in favor of the supplier leads to more use of non-coercive (information exchange) by the manufacturer; * The use of a non-coercive influence strategy contributes to the channel harmony and solidarity
Payan and McFarland (2005), JM	To develop a comprehensive theory predicting the effectiveness of influence strategies in gaining channel member compliance	Survey among US owners and managers of distribution of specialty tools and fasteners	Information exchange is regarded as a non-coercive strategy emphasizing the provision of data without any explicit request and concluding claim or warranty.	* No antecedents tested; * Consequences: compliance (+)	* In formation exchange is not an effective non-coercive influence strategy in demanding channel member's compliance; * Rationality (the source presents reasons accompanied with supportive information for a target to comply with a request) with a full argument structure is proven to be much more effective to gain channel member compliance.
Communicative Channel Behavior					
Brown (1981), JR	To examine the channel relationships across different types of marketing channels (conventional, administered, contractual, corporate)	Survey among US retail managers of retail outlets from six different product classes reporting on relationship with leading brand (84, no report on response rate)	Channel relationships are compared on the following aspects: (1) degree of intensity, (2) frequency of interaction, (3) degree of formalization, (4) reciprocity, and (5) cooperation.	* Antecedents: type of marketing channel; * No consequences tested	* The degree of intensity (with the amount of resource commitment and interaction frequency) is higher in contractual channels than in conventional channel relations; * When channel relationships are governed by corporate structures, the relationships tend to be more formalized, more reciprocated, more cooperative.
Anderson, Lodish and Weitz (1987), JMR	To describe the impact of financial incentives and aspects of the channel relationship on the allocation by channel members across various suppliers.	Survey among US agencies reporting on their relationships with 492 principals (71, 23.7%)	Information sharing is represented as communications as a relationship feature. Items are the quality of keeping informed, giving advice on marketing, frequency, and clarifying expectations	* No antecedents tested; * Consequences: agency time spent per principal (+)	* Agencies (f.i. retailers) appear to spend more time than economically "optimal" (in the short run) on principals (f.i. manufacturers) with whom they have good communications.
Anderson and Weitz (1989), MktSci	To describe the channel member's perception of relationship continuity with manufacturers as a function of the characteristics of the manufacturer, the manufacturer's policy decisions and procedures, and the nature of the producer-channel member relationship	Survey among US agencies reporting on their manufacturer relationships (95, 32%)	Information sharing is communications; the intensive two-way communication concerning plans, programs, expectations, goal setting, and performance evaluation.	* Antecedents: Cultural similarity (ns), Perceived Competence (+), Trust (+), Age of the relationship (-), Stakes (+); * Consequences: Perceived Continuity of relationship (ns), Trust (+)	* The extent of two-way communications is greater in relationships higher trust levels; * Older relationships involve less communication rather than more; * Communication levels do not appear to be lower with foreign manufacturers despite possible barriers; * More communication occurs in relationships which involve higher stakes to one or both parties, and in which the manufacturer is perceived to be competent; * Trust in the manufacturer is enhanced by the degree of two-way communications; * Communications does not have a significant impact on the perceived probability that the relationship will continue.

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Anderson and Narus (1990), JM	To study distributor and manufacturer working partnerships	Survey among US manufacturer and distributor firms from the National Association of Wholesalers- Distributors, an association representing more than 110 industries (488, 9.8%)	As one of the constructs underlying the process of working together in a partnership, communication is defined as "exchange of meaningful and timely information between [channel members]"	* Antecedents: Relative dependence (d _{ins} , s ₊), Outcomes Given Comparison Level (+); Consequences: cooperation (+), trust (+), functionality of conflict (d ₊ ; s _{ns}), conflict (s ₋), satisfaction (s ₊)	Together with "Outcomes given comparison level" and "relative dependence", communication appear to be critical exogenous constructs in explaining working relationships. Communication results in more cooperation; and indirectly in trust.
Anderson and Weitz (1992), JMR	To examine the antecedents of commitment by both manufacturers and distributors in channel relationships	Survey among local sales representatives or district managers from one of 11 divisions of five large US manufacturers and their distributors (378 dyads; 64.8%)	Information sharing is conceptualized as perceptions of two-way communication between supplier and distributor. Measured by 6 items.	* No antecedents tested; * Consequences: Commitment to the relationship with other channel member (+), Perceptions of commitment to the relationship by other channel member (+)	* Two-way communication raises commitment levels of both supplier and distributor; * More intensive bi-directional communication helps to maintain the reinforcing cycle of commitments.
Morgan and Hunt (1994), JM	To model the antecedents and consequences of trust and commitment in dealer-supplier relationships	Survey among US national tire dealers and retraders report on their relationship with manufacturers (204, 14.6%)	Information sharing is conceptualized as the extent of communication in the relationship (i.e., keeping informed of new developments; communicating expectations of performances)	* No antecedents tested; * Consequences: trust (+), relationship commitment (indirect +), acquiescence (indirect +), propensity to leave (indirect -), cooperation (indirect +), functional conflict (indirect +), decision-making uncertainty (indirect -)	* Communication is one of the three factors directly influencing trust; * Opportunistic behavior harms trust three times as much as communication and shared values can repair it; * The second largest (indirect) positive influence of communication is on cooperation; * through the influence on trust and commitment, communication also contributes to the reduction of the propensity to leave, and decision-making uncertainty
Mohr and Sohi (1995), JR	To investigate the effects of norms of information sharing influence on the frequency, bi-directionality, and formality of communication flows between channel parties	Survey among computer dealers reporting on one of their supplier relationships (125; 22.4%)	Different aspects of communication flows (frequency, formality and bidirectionality) are examined in relation with norms of information that are assumed to guide behavior.	* No antecedents tested; * Consequences: Frequency (+), Bidirectionality (+), Formality (+), Communication Quality (+), Satisfaction with Communication (indirect: +), distortion and withholding information (indirect: -)	* Norms of information sharing encourages frequency, bi-directionality, and formality; * Communication bi-directionality and formality do not affect the quality perceptions of communication. * Communication frequency contributes to quality perceptions (timely, adequate, complete). * Formality seems to have an inhibiting effect on distortion and withholding of information. * The perceived quality of communication is positively associated with a dealer's satisfaction with communication.

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Mohr, Fisher and Nevin (1996), JR	To investigate the impact of collaborative communication in different types of channel relationships (varying in level of integration and degree of manufacturer control)	Survey among owners and managers of hardware dealers in the computer industry (125, 22.4%)	Communication between manufacturer and dealer is collaborative when the frequency is high, more formalized, two-ways, and has non-coercive content	* Antecedents: Manufacturer control (achieved influence over dealer decisions, 4 items), integration (independent, franchise, company- owned); both variables are significantly correlated with the level of collaborative communication. relationship length (+), dealer size (ns), conflict (ns): * Consequences: dealer's commitment, satisfaction, coordination	* Collaborative communication leads to higher dealer's commitment, satisfaction, and coordination. * In more integrated manufacturer- retailer relationships, the effect of collaborative communication on satisfaction and coordination is less. * Collaborative communication has a stronger positive effect on outcomes under low-control situations.
Gassenheimer, Baucus, and Baucus (1996), JBR	To see if participative (channel) communication mitigates the negative effects of opportunism on outcomes	Survey among franchisees from 19 franchise organizations (162, 7.2%)	Participative communication is defined as sharing meaningful and timely information. Although the measurement primarily focuses on vertical communication, it also includes some items on horizontal communication between franchisees.	* No antecedents tested; * Consequences: franchise system performance (+), satisfaction (+)	* Participative communication directly impacts franchise system performance, offsetting the influence of opportunism, but does not moderate the direct impact of opportunism on performance; * Participative communication not only partially offsets the negative effect of opportunism on satisfaction, but also reduces the direct effect of opportunism on franchisee satisfaction.
Celly and Frazier (1996), JMR	To enhance understanding of outcome- and behavior- based coordination efforts	Survey among US distributors in an industrial product channel reporting on a supplier relationship (254, 26.7%)	In their communication with distributors, suppliers may differentiate their emphasis on either outcomes or behavior.	* Antecedents: environmental uncertainty (+), supplier familiarity, supplier resource constraints (-), supplier replaceability, distributor experience, distributor value-added ; * No consequences tested.	* Environmental uncertainty promotes the emphasis on both outcome and behavior; * The supplier's familiarity with the product-market puts more emphasis on behavior-based communications with the distributor. Supplier's resource constraints limit the emphasis on both aspects; * The distributor's own experience puts more emphasis on the outcome.
Kim and Frazier (1997), P&M	To investigate the main driving forces of distinctive components of distributor's commitment	Survey among Distributors in three US industries: industrial machinery and equipment, industrial supplies and hardware (276; 32.3%)	Information sharing is conceptualized as the frequency of interaction with the supplier. Three items measuring communication indicate the frequency in which information on market conditions and strategies are exchanged, a review and feedback on each other's performance is given and gathering information on customer needs.	* No Antecedents tested; * Consequences: supplier trustworthiness (+), manifest conflict (-), behavioral commitment, affective commitment, continuance commitment	* Communication between distributor and supplier increases the supplier's trustworthiness and decreases manifest conflict; * In turn, a decrease in manifest conflict makes continuance and affective commitments grow.
Ross, Anderson and Weitz (1997), MngtSci	To examine the antecedents of perceived asymmetry of commitment in the channel relationship	Survey among insurance agents from two major firms and their counterpart reporting on their relationship (452 dyads, agents: 54%, company personnel: 71%)	Information sharing is conceptualized as <i>the level of communication</i> between the agent and the firm. It is measured by 4 items: keeping each other well- informed, no hesitation to give each other too much information, seeking advice and counsel concerning marketing efforts, the relationship is like an open book.	* No Antecedents tested; * Consequences: perceived asymmetry of commitment (-)	* Higher levels of communication reduces the perception of commitment asymmetry; * Communication is also found to be highly correlated with commitment to the relationship, to dependency upon counterpart, congruency of goals with those of counterpart, and current and expected profit from relationship

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Li and Dart (1997), JAMS	To explore the effects of Exclusivity on communication in channels	Survey among dealers in the office photocopier industry reporting on a supplier relationship (573, 22.4%)	The extent to which trade parties actively exchange information with one another. Communication measurement emphasizes two-way communication (note: one item of the four measures expectations)	* Antecedents: relationalism (mutuality, solidarity, role integrity) (+); * Consequences: exclusivity (+), performance (indirect: +)	* Exclusive dealer arrangements have closer relationships with their suppliers and they communicate more frequently with each other than non-exclusive dealer-supplier arrangements; * These results seem to contrast the traditional opportunistic perspective on supplier's use of power in dependent relationships.
Leuthesser (1997), IMM	To assess the effects of relational behaviors on relationship quality and share of business	Survey among US purchasing managers from the NAPM reporting on the most recent product purchase meeting with a supplier (454, 59.3%)	Information sharing is seen as relational behavior and divided into three main forms: initiating, signaling, and disclosing behaviors	* No antecedents tested; * Consequences: relationship quality (+), share of business (indirect: +)	* Initiating, signaling, and disclosing behavior by the supplier elevates the levels of the relationship quality as assessed by the buyer; * richness of the interactions between supplier and buyer does not affect the relationship quality; * Greater relationship quality leads to a higher share of business; * The positive effect of relationship quality on business share only takes place on relatively low important purchase situations
Canon and Homberg (2001), JM	To examine how supplier behaviors affect the customer firm's costs	Survey among German and US purchasing managers (478, 33.0%)	Communication with supplier is analyzed in four aspects: frequency, modality and amount of shared information. The amount of shared information is measured by 2 items	* No antecedents tested; * Consequences: customer costs (-), customer intentions to expand purchases from supplier (+)	* The amount of information sharing does not influence the customer firm's costs; * Frequency and richness of communication does help to lower customer firm's costs.
Goodman and Dion (2001), IMM	To study the importance of the manufacturer's product saliability as a determinant of distributor's commitment	Survey among US distributors reporting on their relationship with high-tech manufacturers (213, 31.9%)	Information sharing is conceptualized as perceptions of two-way communication between supplier and distributor. Measured by 4 items.	* No antecedents tested; * Consequences: commitment (ns)	* The influence of communications is found to be non-significant; the authors explain that it is not the quantity of communications, but the quality of communications that would further commits the distributor to the manufacturing partner.
Schultz and Evans (2002), JPSSM	To explore the determinants and outcomes of collaborative communication in channel relationships	Survey among account managers from one CPG manufacturer reporting on customer relationships (122, 48%)	Information sharing is seen as collaborative communication (cf. Mohr, et al., 1996): frequency, direction, modality) and strategic content. Strategic content of the communication includes significant organizational opportunities, opportunities for improvement, and barriers to change.	* No antecedents tested; * Consequences: key account representative role performance (+), trust in key account representative (+), synergic solutions (+)	* All four aspects of collaborative communication contribute to better outcomes (role performance, trust, finding synergistic solutions); * Contact frequency between account manager and customer is the most important for relational development; * Strategic content is second important contributor.
Reid, Bolman Pullins and Plank (2002), IMM	To address the impact of purchase situation on sales communication behaviors used by sales personnel	Survey among US NAPM purchasing agents (518, 22.4%)	The perspective on information sharing is the look at customer interaction sales behaviors from a communication perspective: getting, giving, and using information by the seller	* Antecedents: purchase complexity	* Giving information occurs most for moderate complex purchasing situations; * Getting information (by the seller) takes place in more complex buying situations
Eggert and Helm (2003), IMM	To investigate the effects of relationship transparency (how transparency contributes to satisfaction, value, repurchase intention)	Survey among German purchasing managers from different industries (301, 31.4%)	Relationship transparency is the individual's subjective perception of being informed about relevant actions and properties of the other party in the interaction	* No antecedents tested; * Consequences: customer value (+), customer satisfaction (+), repurchase intention (indirect: +), search for alternatives (indirect: -), word-of-mouth (indirect: +)	* Transparency given by the vendor (upstream channel member) leads to higher customer value and satisfaction; * Subsequently, repurchase intention and word-of-mouth is generated, and the search for alternatives is discouraged.
Walter, Muller, Helfert, and Ritter (2003), IMM	To determine which direct and indirect functions in a supplier relationship contribute to the relationship quality	Survey among German purchasing professionals from both consumer and industrial goods industries (230, 41.1%)	Information sharing by the supplier is conceptualized as an indirect function of the relationship. The scout function concerns the passing on of technical, exchange or market-related information	* No antecedents tested (negative correlation between the availability of alternatives and quality of indirect function); * Consequences: relationship quality (satisfaction, trust and commitment) (+)	* In formation sharing by the supplier (scout function) and other indirect functions (market, innovation development and social support) contribute positively to the relationship quality; * When alternative supply sources become scarce, the contribution of information sharing goes up.

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Bonner and Calantone (2005), IMM	To study the mediating role of buyer's attention (preference) toward a specific supplier on the relationship between relationalism and purchase behavior	Survey among US purchasing managers from industrial machine manufacturing, electronic equipment, transportation equipment, and hospital industries (119, n.a.)	Information sharing is regarded as an indicator for the degree of relationalism in the buyer-supplier relationship.	* No antecedents; * Consequences: buyer attention (+), favorable customer purchase behavior	* Relationalism (that includes information sharing with supplier) leads to a higher buyer attention towards the supplier, which in turn leads to favorable purchase behavior (steady stream of income, and low cost)
Kim and Hsieh (2003), JMR	To find a best way to capture the interdependence structure in a channel relationship	Survey among 253 US managers from industrial distributors in industrial machinery/equipment and supplies	Information sharing is conceptualized as perceptions of two-way open communication between distributor and supplier (cf. Anderson and Weitz, 1992).	* Antecedents: interdependence structure (unilateral and bilateral), channel management structure (ns.), age (ns.), intensity of distribution (ns.), environmental munificence (+), environmental volatility (ns.), supplier size (ns), supplier intensity (ns).	* Bilateral communication is here combined in one measure with commitment. * The effects of own and perceptions of other's dependency are different. Own dependence leads to more information sharing, while the dependence of the other channel party has an initial positive effect, but later a certain point, communication from the other channel member declines.
Relational norm					
Heide and John (1992), JM	To study the nature of social norms and their effects on interfirm relationships	OEM manufacturers and their component suppliers (155 buyer sample, 26.8%, 60 supplier sample)	Information sharing is one of the overlapping norms types prescribing behavior directed toward maintaining the relationship	* No antecedents tested; Consequences: buyer control (+)	* As the buyer makes more specific investments in the supplier relationship, the buyer's perceptions of control are lowered; * the presence of more relational norms in the buyer-supplier relationship helps to restore the level of control by the buyer.
Heide, and Miner (1992), AMJ	To explore the effect of interaction patterns on cooperation in a channel relationship	Survey, Purchasing agents from manufacturing firms in the general machinery, electronic and electric machinery, and transportation equipment (155, 26.8% and suppliers (60, 62.5%)	Information sharing is one of the four domains of cooperation. Other domains are: flexibility, shared problem solving, and restraint in the use of power. It is measured on a 4 item scale measuring the respondent's assessments of the degree to which each party is <i>expected</i> to discloses information that may facilitate the other party's activities, as opposed to keeping all information proprietary.	* Antecedents: Extendedness (+), frequency of delivery (ns), performance ambiguity (ns), customization (+), months to replace supplier (ns), months to replace buyer (ns), length of prior relationship (ns); * No consequences tested	* The expectations of information sharing are fostered by a longer extendedness of the buyer-seller relationship
Pilling, Crosby, and Jackson (1994), JBR	To examine the impact of transaction dimensions on exchange arrangements	Laboratory Experiment among midlevel purchasing personnel in the aerospace, electronics, and defense industry (229, unknown percentage)	The exchange of information is a dimension of relationalism. The norms concern the exchange of different types of information (including proprietary, long-term forecasting, and product design)	* Antecedents: asset specificity (+), external uncertainty (-), frequency of transactions (+); No consequences tested	* If the costs to develop an exchange relationship increase, information exchange will increase; * No support was found for the hypotheses that the costs of monitoring and the costs of guarding against opportunism increase the exchange of information in relationships.

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Mohr and Sohi (1995), JIR	To investigate the effects of norms of information sharing influence on the frequency, bi-directionality, and formality of communication flows between channel parties	Survey among computer dealers reporting on one of their supplier relationships (125; 22.4%)	Different aspects of communication flows (frequency, formality and bidirectionality) are examined in relation with norms of information that are assumed to guide behavior.	* No antecedents tested; * Consequences: Frequency (+), Bidirectionality (+), Formality (+), Communication Quality (+), Satisfaction with Communication (indirect: +), distortion and withholding information (indirect: -)	* Norms of information sharing encourages frequency, bi-directionality, and formality; * Communication bi-directionality and formality do not affect the quality perceptions of communication; * Communication frequency contributes to quality perceptions (timely, adequate, complete); * Formality seems to have an inhibiting effect on distortion and withholding of information; * The perceived quality of communication is positively associated with dealer's satisfaction with communication.
Josh and Arnold (1998), JBR	To examine whether the positive relationship between dependence and compliance holds under various conditions of relational norms	Role-playing experiment among purchasing agents from various industries evaluating a purchasing scenario (147, n.a.)	Information exchange is conceptualized as one set of shared values in the relationship, and refers to exchange parties to communicate frequently, informally, and with full-disclosure.	* No antecedents tested; * Consequences: Compliance	* Dependence generates compliance only under conditions of high relational norms; * Under low relational norms, dependence does not lead to compliance
Cannon and Parreault Jr (1999), JMR	To develop an empirically grounded taxonomy of business relationships	Survey among NAPM purchasing managers reporting on one supplier relationship (428, 22.0%)	The information exchange is one of the six relationship connectors; it is operationalized as the set of expectations concerning the sharing of proprietary information, sharing of cost information, inclusion of product development meetings, and sharing supply and demand forecasts	* Antecedents: availability of alternatives; supply market dynamism, importance of supply, complexity of supply; * Consequences: Satisfaction with supplier, Supplier performance	* The information exchange is the most prominent feature in two relationship types: (1) the collaborative relationship, and (2) the "customer is king"; * In relationship types "bare bones" information exchange is the least developed; * Relationship types featuring intense information exchange outperform the other relationship types.
Jap and Ganesan (2000), JMR	To evaluate the effect of three control mechanism for safeguarding transaction-specific investments	Survey among downstream channel members of one chemical products manufacturer (1457, 40%)	Information exchange is measured as relational norm; whether it is expected from both channel members to share any information (cf. Dwyer and Oh, 1988; Heide and John, 1992)	* No antecedents tested; * Consequences: perception of commitment to channel relationship (+), supplier performance (indirect: +), conflict (indirect: -), relationship satisfaction (indirect: -)	* Relational norms have a positive effect on perceptions of supplier's commitment; * High levels of relation norms do not mitigate the negative impact of the retailer's TSI on supplier's commitment in all phases of the relationship; * Relational norms play a mitigating role in the buildup phase.
Johnson and Sohi (2001), JIRM	To study the influence of a firm's predispositions on its behavior to relate to other firms	Survey among US managers report on interfirm relationships (176, 23%), 2*2 design to select interfirm relationships	The quality of the information exchanged is included in this study. It is about the extent to which the flow of information is sufficiently accurate, amount, useful, reliable, consistent, on time, important, relevant.	* Antecedents: strategic intent (indirect +), relational proclivity (indirect +) connectedness (+); No consequences tested	* The flow of information between firms augments (in quality and quantity) when the firms are more connected; * Firms with a stronger strategic intent and more relationally proclive, have more connected ties with their allies and ultimately will be exchanging more information.
Antia and Frazier (2001), JM	To examine the severity of contract enforcement by franchisors in response to violations by franchisees	Survey among Franchisors from six different industries reporting on relationships with a franchisee	Information sharing is measured as a relational norm (cf. Heide and John, 1992)	* No antecedents tested; * Consequences: Severity of Contract Enforcement (-)	* When the relationship between a franchisor and franchisee is typified by relationship (with information exchange as a normal practice), the severity of contract enforcement will be less; * The relationship between relationship and severity of contract enforcement is weakened when the franchisor has made more specific investments into the channel system (when the stakes are larger)

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Bello, Chelariu, and Zhang (2003), JBR	To examine the factors that enhance or inhibit the development of relationalism between a manufacturer and its foreign distributor in an export channel	Survey among US export executives of manufacturers reporting on a single export distributor (290, 72%)	Information sharing is measured as a relational norm (cf. Heide and John, 1992) (in addition to solidarity and flexibility)	* Antecedents: resource inadequacy to manage channel (-), manufacturer's dependence (+), market volatility (-), Psychic distance (ns), product complexity (+), human content (+); * Consequences: performance (+)	* Resource inadequacy and market volatility impede the development of relationalism in the channel relationship; * Manufacturer's dependence, and human content promote relationalism; * Relationalism is positively related to a better (distributor's) performance
Demonstration of Relationship Bonding					
Noordewier, John and Nevin (1990), JM	To examine the relationship between the organization of the buyer-supplier interface and performance in repetitively-used-items procurement	Survey among OEM purchasers of a commodity (i.e. ball and roller bearings) (140, 28.9%)	Information sharing is one of the five elements of the relational governance structure between supplier and purchasing organization. They measure it as the degree of information provided to the supplier: (1) We give to [partner] usage information to help him plan for our needs; (2) We keep our supplier informed of production plans; (3) We regularly provide supplier with long-range forecasts of supply requirements; (4) We inform supplier in advance of impending design changes.	* Antecedents: Environmental uncertainty (no report), dependence of buyer (no report), dependence of supplier (no report), control variables (relative price, distance, amount); * Consequences: Turnover (ns), Percentage on-time delivery (+) in interaction with uncertainty), Percentage Acceptable (+ in interaction with uncertainty)	* Beneficial effects of increased relationalism (i.e. increased information provided to supplier) on transaction performance occur only when the levels of uncertainty are relatively high.
Heide and John (1990), JMR	To identify the determinants of joint action in buyer-seller relationships	Survey among OEM manufacturers and their component suppliers (115 buyer sample, 60 supplier sample)	Information sharing as a form of joint action, joint action is the degree of interpenetration of organizational boundaries. Both organizations involve each other in activities. One set of activities is long-term planning (cf. Spekman, 1988)	* Antecedents: relationship specific investments by buyer (+), relationship specific investments by supplier (+), expected continuity of relationship (+), verification efforts by the buyer (+), No Consequences tested	* Close buyer-seller relationships emerge from the need to safeguard transaction-specific investments; * The need to verify the suppliers efforts increases when the buyer has made more specific investments in the supplier relationships and the performance has a higher degree of ambiguity.
Gundlach, Achrol, and Mentzer (1995), JM	To study the structure of commitments in the exchange relationship in terms of credibility and proportionality (mutuality)	Laboratory study: 130 observations from participants over two periods (65 each period)	Information sharing is conceptualized as a commitment input. The disclosure of confidential information, sharing of proprietary information about firm decisions and strategies, dedicated operational decisions, and exclusive representation are the four measurements of commitment input.	* No antecedents tested; * Consequences: relational social norms (+), opportunism by other channel member (-), long-term commitment intentions (+)	* Credibility of commitment inputs leads to the development of relational social norms and long-term commitment intentions; * Perceptions of opportunistic behavior by other channel member are reduced by the development of relational social norms.
Campbell (1995), MSI	To empirically test whether a firm's search for competitive advantage affects its supply governance choices	Survey among European purchasing managers and marketing managers reporting on their relationship with packaging suppliers (114, 87.7%)	Information sharing is conceptualized as an indication of buyer commitment (down stream information sharing)	* Antecedents: the firm's strategy of fast delivery (ns), firm's strategy of fast innovation (+), the perception of mutual trust (+); * Consequences: joint problem solving (+), barriers to imitate strategy by competitors (indirectly +)	* Information sharing by the buyer leads to increased problem solving in the channel relationship; * Joint problem solving makes it more difficult for competitors to imitate the strategy; * When the buyer firm pursues a fast innovation strategy, the information sharing with the supplier is intensified; * Perceived mutual trust intensifies the information sharing even more.
Bensaou and Venkatraman (1995), MngtSci	To uncover taxonomies of interorganizational relationships and to research the performance effects of these relationship configurations	Survey among purchasers or engineers from 3 US and 11 Japanese car companies reporting on a specific supplier relationship (447, 43%)	Information sharing is a constitute of the interorganizational coordination mechanisms. Next to multiplicity (number of communication channels), frequency (of mutual visits), and formalization (control/coordination), joint action and the scope of use of IT relate to the sharing of information (content)	* Antecedents: environmental uncertainty (no report), partnership uncertainty (no report), task uncertainty (no report), task consequences: supplier ratings, satisfaction, four buffer levels	* The taxonomy discovered consists of 5 types of interorganizational ties: (1) remote relationship, (2) electronic control, (3) electronic interdependence, (4) structural relationships, (5) mutual adjustment; * The information exchange is rich and intense in the electronic interdependent relationships; * The remote relationship has a limited exchange of information.

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Lusch and Brown (1996), JM	To investigate how unilateral versus bilateral dependency influences the selection of contract forms and how this influences relational behavior and performance.	Survey among small US merchant wholesalers and agents in durable goods or non-durable goods reporting on their major supplier (454, 28.8%)	Information exchange is conceptualized as one of the six dimensions of relational behavior. The extent of information exchange by both wholesaler and supplier are measured separately. Both are strongly correlated with each other.	* Antecedents: bilateral dependence (+), dependence asymmetry (ns), channel contracting (explicit +) versus normative: (ns), relationship age (ns), long-term orientation (+); * Consequences: Wholesale- Distributor Performance (ns)	* Normative contracting stimulates the relational behavior, rather than explicit contracting. * Bilateral dependence in the channel relationship increases the relational behavior. * Contrary to the length of te relationship, the long-term orientation does influence relational behavior positively. * No support is found for a positive contribution of relational behavior on the wholesaler-distributor performance (!)
Doney and Cannon (1997), JM	To identify the antecedents of trust in buyer-seller relationships and to examine the impact of supplier trust and sales person trust on a buying firm's current supplier choice and future purchase intentions.	Survey among members of the NAPM, US purchasing managers of industrial manufacturing firms (210, 31%)	Information sharing is conceptualized as the supplier's willingness to share confidential information with their customers.	* No antecedents tested; Consequences: Trust in supplier firm (ns)	* The supplier's (perceived) willingness to share confidential information with the buyer does not affect the buyer's trust in the supplier firm.
Achrol and Gandlach (1999), JR	To examine the effects of contracts and relational norms to safeguard against opportunism and the effects in the context of asymmetric commitments by exchanging parties.	Experiment with a simulation involving organizational role playing. 101 usable observations	Information sharing is regarded as an indication for commitment (disclosing confidential information about industry/market conditions, competitors, and channel partners; providing proprietary information about firm decisions and strategies).	* No antecedents tested. * Consequences: Perceived opportunistic behavior (-)	* More (asymmetric) commitments to a relationship promotes opportunism by the other party. * Relational norms reduce the danger for opportunism. * Even when the asymmetry in commitments increase, the effect of relational norms will restrict opportunism even more.
Kim (1999), IJRM	To examine a behavioral element of relational exchange: joint action.	Survey among Distributors in three US industries: industrial machinery and equipment, industrial supplies and hardware (276, 32.3%)	Inter-firm action is theorized as a multidimensional construct and operationalized as a formative scale (cf. Heide and John, 1990): The respondents indicate to what degree they undertake the following activities jointly with their supplier: (1) Gathering market information; (2) Customer needs analysis; (3) Application support; (4) Performance review; (5) Setting sales targets or goals; (6) Sales calls; (7) Sales promotion programs	* Antecedents: distribution dependence (+), service differentiation (+), competitive intensity (ns), distributor specialized investment (+), customer volatility (ns), distributor motivational investment (indirect +), customer heterogeneity (ns), customer munificence (-), technical sophistication (+), supplier commitment (+)	* Inter-firm joint action is motivated by economizing (transaction cost economies) and strategizing motives. * Both the distributor's dependence and need for service differentiation promote the distributor's joint action with a supplier.
Joshi and Stump (1999), JAMS	To enrich understanding of the antecedents of joint action in buyer-seller relationships	Survey among Canadian OEM manufacturers reporting on a supplier (184, 30.1%)	Joint action is the non-equity mode of governance in which both buyer and seller cooperative on certain activities that are important for both parties; one of such actions is the sharing of long-term intentions and making plans.	* Antecedents: buyer's transaction- specific investments (+), supplier's transaction-specific investments (+), decision-making uncertainty (-), trust (-)	* Joint action is enhanced by transaction-specific investments from both parties (buyer and seller); * decision-making uncertainty and lower trust decrease the degree of joint action in the relationship. * The effect of the buyer's transaction-specific investment is enhanced by decision-making uncertainty and trust.
Bavik and John (2000), JM	To examine the contingency effects of vertical coordination on the transaction costs in a purchasing relationship	Survey among US purchasers reporting on a supplier relationship (161, 28.2%)	Information sharing is seen as part of vertical coordination between channel parties. Vertical coordination is defined as "effort to reduce the problems of making product changes, production planning, and the like."	* No antecedents tested. * Consequences: Transaction costs	* Although vertical coordination adds to the transaction costs, the benefits of it in terms of transaction cost reduction are greater when (environmental) uncertainty increases.

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Gruen and Shah (2000), JR	To test a theoretical model designed to explain category management performance	Survey among US managers responsible for category management at packaged good companies (128, around 26-30%)	Pre-planning agreement between the retailer and supplier involves establishing common objectives, agreeing on the approach, and gaining buy-in from all parties involved in the category management process. Pre-planning covers agreement on category definition, category role, data to be used in the process, measurement criteria, and heuristics used for decisions.	* No antecedents tested; * Consequences: opportunistic behavior (-), category plan objectivity (+), Retailer "system trust" (+), Category Plan Implementation (+), Category Performance (indirect: +)	* Information sharing as outlined by the preplanning agreement does not only discourage retailer's opportunistic behavior, but also creates a more objective category plan. * A preplanning agreement and a more objective plan helps to establish more retailer's trust in the system of category management and subsequently encourages its implementation; * Both implementation and plan objectivity improves category management performance
Myers, Daugherty and Aury (2000), JR	To study the antecedents influencing the effectiveness of automatic replenishment programs.	Survey among members of the Council of Logistics Management (CLM) with ARP system (98, 19.0%)	As a proxy of information in channel relationships, this study measures the level of commitment to automatic replenishment programs: (1) management commitment, (2) resource commitment, and (3) thorough advance planning.	* No antecedents tested, only moderators for effectiveness are included; * Consequences: ARP cost effectiveness (+), ARP service cost effectiveness (+), economic performance (ns), strategic performance (indirect +)	* Managerial commitment to ARP is positively related to ARP effectiveness; in cost effectiveness, shorter production runs, smaller shipments, reduced reliance on forecasts, delay final production. * In terms of service effectiveness, more frequent deliveries, new communications, more receiver friendly loads, and more predictable order cycle; * competition intensity leads to lower ARP effectiveness.
Handfield and Bechtel (2002), IMM	To develop and test a model explaining the supply chain responsiveness	Survey among NAPM purchasing managers reporting on a key-input supplier (97, 19.4%).	Information sharing is treated as an indicator for the amount of human-specific investments made by the buyer into the supplier relationship.	* Antecedents: Site-specific investments by the supplier (+); * Consequences: trust (n.s.), responsiveness (+)	* Mainly the site-specific investments by the supplier motivate the retailer to dedicate more human-specific assets (and sharing information) to the relationship; * The amount of human-specific assets invested in the relationship does not affect the supplier's responsiveness, which is driven by trust and supplier dependence.
Mavondo and Rodrigo (2001), JBR	To study the effect of relationship dimensions on the interpersonal and inter-organizational commitment	Survey among Australian (216, 33.7%) and Chinese (96, 28.7%) businesses reporting on a relationship with a Chinese company	Information sharing is regarded as a facet of interpersonal commitment (e.g., providing valuable market information)	* Antecedents: social bonding (+), cooperation (+), trust (+), face (n.s.; indirect +), time-orientation (+), reciprocity (n.s.); * Consequences: interorganizational commitment (+)	* Being a facet of interpersonal commitment, information-sharing is found to be an important antecedent to interorganizational commitment; * Four favorable (soft) relationship dimensions are found to be important enhancement-factors to inter-personal commitment.
Hornburg, Workman, and Jensen (2002), JM	To derive the core design dimensions of Key Account Management and develop instruments to measure these dimensions. To identify an taxonomy of KAM practices and explore the outcomes	US and German managers responsible for sales in five business-to-business sectors reporting on their most important set of business customers (385, 23.3%)	Information sharing is identified as a core design dimension of key account management; and mainly measured as an activity intensity	* No antecedents tested; * Consequences: key account management effectiveness (+), overall organizational effectiveness	* Eight types of Key-Account-Management have been distinguished; * The intensity of activities (and information sharing) is highest in the cross-functional dominant KAM-type; * There is little evidence of extra effectiveness or profitability of this type of KAM
Ciano, Hagelaar, and Omta (2003), IMM	To assess the influence of determinants of the transaction, dyadic, and business environment on relational governance and ultimately performance	Dutch plant growers reporting on buyer relationships (124, 20.7%)	Information sharing is part of the joint planning in the governance of the buyer-relationship and concerns the extent to which future contingencies and consequential duties and responsibility are made explicit ex-ante	* Antecedents: exchange mode/fixed lines (+), human TSI (ns), physical TSI (+), length business interaction (ns), inter-pers. trust (ns), inter-org. trust (+), network intensity (+), environment instability (ns); * Consequences: sales growth rate (+), satisfaction (ns)	* The exchange mode, the level of physical transaction-specific investments, inter-organizational trust, and network intensity have a positive influence on joint planning; * Joint planning in a buyer-relationship stimulates the sales growth, but does not have a positive effect on satisfaction.

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Workman, Homburg, and Jensen (2003), JAMS	To explore the determinants of Key Account Management effectiveness and examine the impact of KEM effectiveness on performance and profitability	US and German managers responsible for sales in five business-to-business sectors reporting on their most important set of business customers (385, 23.3%)	Information sharing is identified as a core design dimension of key account management; and mainly measured as an activity intensity (cf. Homburg, Workman and Jensen, 2002)	* No antecedents tested; * Consequences: KAM effectiveness (+), performance in the market (indirect: +), Profitability (indirect: +)	* The intensity of Key Account Management activities (of which information sharing is one) contributes positively to the KAM effectiveness; * Interesting is that formalization contributes negatively to the KAM effectiveness; top management involvement is a much better contributor.
Schries and Sallis (2003), JM	To investigate the factors affecting relationship learning; and specifically looking at the role of trust in the relationship-learning process	Survey among key buyer relationships with Scandinavian seller organization (315, 40%)	Relationship learning is defined as a joint activity between a supplier and a customer in which the two parties share information, which is then jointly interpreted and integrated into a shared relationship-domain-specific memory that changes the range or likelihood of potential relationship-domain-specific behavior.	* Antecedents: Collaborative commitment (+), internal complexity (ns), environmental uncertainty (+), transaction-specific asset (+), relational trust (+); * Consequences: relationship performance (+)	* Relationship learning (and thereby information sharing) is stimulated by a collaborative commitment, transaction-specific investments, and trust. * The performance of the relationship is enhanced by increased relationship learning. * Yet, higher levels of trust reduce this positive effect; this is called the "hidden costs of trust" because trust may evoke a systematic avoidance of negative information, lower the incentive to be critical, a loss of creativity (groupthink).
Subramani and Venkaranan (2003), AMJ	To study how joint decision-making and "quasi-integration" help to safeguard investments in asymmetric interorganizational relationships	Survey among suppliers of one Canadian retail company (211, 33.0%)	Information sharing about competitive analysis, strategy formulation, plans for sales promotion, analysis of market trends, (etc.) is regarded as an integral part of joint-decision-making.	* Antecedents: process specificity (+), domain knowledge specificity (+), physical-asset specificity (+), site-specificity (n.s.), relational flexibility (+); No consequences tested.	* Joint action is different from "quasi integration" and has different antecedents. * Supplier's domain knowledge specificity (as a refinement of human- capital asset specificity) and business process specificity lead to more joint decision-making.
Kulp, Lee, and Olek (2004), MngtSci	To test the relationship between the different information-integration mechanisms and manufacturer's profitability	Survey among senior executives of US Food and Consumer- Packaged goods companies responsible for overseeing information exchange with retail partners (54, unknown response rate)	Information sharing is called "information integration" and defined as the extensiveness to which the manufacturer's dealings with its retail partners is large. Here, information sharing is measured on three content domains: (1) store inventory levels (2) warehouse inventory levels, and (3) consumer needs	* No antecedents tested; * Consequences: frequency of retailer stockouts (-), frequency of manufacturer stockouts (+), relative manufacturer wholesale price (+), profit margins (+)	* In formation sharing on store inventory is positively associated with profit margins; * Sharing information on retailer warehouse inventory levels or consumer needs is not significantly associated with any of the performance measures. * The results indicate that the majority of benefits derived relate to collaborative practices rather than to information sharing.
Lages, Lages, and Lages (2005), JBR	To empirically assess the quality of the relationship in an export context	Survey among UK firms reporting on one of their export ventures with a importer (111, 32%)	Information sharing is one of the dimensions of relationship quality; the other dimensions are communication quality, long-term relationship orientation, and satisfaction	* No antecedents tested; * No consequences tested;	* Because the purpose was to develop a measurement for relationship quality of export ventures, neither antecedents nor consequences were tested; * the "amount of information sharing" is found to be positively correlated with the three other dimensions of relationship quality.
Yilmaz, Sezen, and Ozdemir (2005), IMM	To study the effect of trust on relational behaviors in channel relationships	Survey among independent Turkish new-car dealers reporting on a supplier (192, 21%)	Information sharing is thought of as one of the norms of relational behavior. The measurement of "information exchange" does not gauge the existing norm or expected behavior in the relationship, rather the behavior itself	* Antecedents: trust (+), dealer dependence (+), supplier dependence (ns), dealer's relationship-specific investments (+), supplier's relationship-specific investments (ns); No consequences tested	* Trust facilitates relational behaviors in symmetric dealer-supplier relationships characterized by low interdependence, whereas in highly interdependent dyads trust seems to be unrelated to relational behaviors. * The relational behavior-enhancing role of trust becomes more important in more asymmetric channel relationships

<i>Study, Authors (year), Journal</i>	<i>Research Objective</i>	<i>Empirical Basis (sample size, response rate)</i>	<i>Conceptualization Information Sharing in Channel Relationship</i>	<i>Antecedents and Consequences (found relationships are between brackets)</i>	<i>Key findings</i>
Corsten, and Kumar (2005), JM	To empirically assess if and under which conditions, suppliers benefit from collaborative ECR relationships with major retailers.	Survey among suppliers of one UK retailer reporting on their relationship with the retailer (266, 34.5%)	Sharing of various information is included as part of the joint implementation of demand-side and supply-side of collaboration in ECR-relationships.	* Antecedents: transaction-specific investments by supplier (+), cross- functional teams (+), incentive systems (+); * Consequences: economic performance (...), perceived equity (...), capability development (...)	* The supplier's alignment with the retailer in terms of transaction-specific investments, cross- functional teams, and incentive systems explain the adoption of ECR-practices; * ECR adoption by supplier leads to higher sales performances, yet the supplier evaluates the reward from its efforts relatively lower than the rewards the retailer retieves from the relationship.

APPENDIX IV QUESTIONNAIRE: SURVEY

DOELSTELLING ONDERZOEK

In gesprekken met inkooprelaties komen naast de gebruikelijke aspecten van inkoophoeveelheid, prijsonderhandelingen en leveringsvoorwaarden ook meestal de marktontwikkelingen aan de orde. Bekend is dat de openheid in het doorgeven van vertrouwelijke informatie over de markt niet bij alle inkooprelaties even groot is. Met dit onderzoek willen we te weten komen waaraan dit verschil in openheid ten grondslag ligt. Mede omdat de samenwerking in de keten sterk afhangt van de transparantie die er met elkaar gecreëerd wordt.

Met marktinformatie bedoelen wij:

1. de waargenomen consumentenvraag;
2. de verklaringen voor schommelingen in de consumentenvraag;
3. de voorgenomen marketinginspanningen; en
4. de algemene strategie en marktverwachtingen.

Richtlijnen om deze vragenlijst in te vullen

We zouden graag willen dat u eerst de volgende instructies leest:

1. Beantwoord alstublieft alle vragen.
2. U wordt verzocht bij het beantwoorden van de vragen uitsluitend gebruik te maken van de gespecificeerde antwoordmogelijkheden (meerderekeuzevragen).
3. Beantwoord de vragen op basis van uw eigen beoordeling. U dient uw antwoorden te baseren op de **werkelijke** situatie. Dus **niet** op de situatie die u wenselijk acht.
4. Bij veel van de vragen wordt van u verlangd dat u uw mening op een 7-punt schaal weergeeft.
1 = sterk mee oneens
2 = mee oneens
3 = een beetje mee oneens
4 = niet mee eens / niet mee oneens
5 = een beetje mee eens
6 = mee eens
7 = sterk mee eens
5. We zullen soms iets over **uw bedrijf** of organisatie vragen. Als u in een bedrijf werkt met meerdere divisies of **business units**, beantwoord de vragen voor de specifieke **unit** waarvoor u werkt. Daarom vanaf nu, zullen we in deze enquête met "**uw bedrijf**" de divisie of unit waarvoor u werkt bedoelen.
6. Alle vragen hebben betrekking op een specifieke situatie bij één van uw **inkooprelaties**. Onder een **inkooprelatie** wordt verstaan: **een leverancier waarvan u producten afneemt, die voor de doorverkoop bestemd zijn.**
7. Onder een **productcategorie** wordt verstaan: **een groep van producten uit het assortiment van uw winkel(formule), die in de ogen van de consument een logische eenheid vormt.** Zoals de "televisies" in de electronicazaak of "dames-vrijetijdskleding" in de kledingzaak, of "frisdranken" in de supermarkt.
8. De aanduiding **retailer** wordt hier in deze vragenlijst gebruikt in de ruime zin van het woord. Dat wil zeggen dat we hiermee alle soorten winkelbedrijven (winkelketens, vrijwilligfiliaalbedrijf, franchisegever, retail service organisatie, etc.) bedoelen. De "retailer" als tegenhanger en/of partner van de fabrikant.
9. **Vertrouwelijkheid gegarandeerd:** Bij het uitvoeren van dit onderzoek houden wij ons aan de universitaire gedragscodes voor marktonderzoek. Dit betekent dat de resultaten **vertrouwelijk** worden behandeld en de **anonimiteit** van de respondenten blijft gewaarborgd.
10. De vragenlijst bestaat uit **7 onderdelen**:
 - A. de uitwisseling van marktinformatie met de leverancier
 - B. de verwachtingen omtrent meer openheid in het delen van marktinformatie
 - C. hoe er met de leverancier samengewerkt wordt
 - D. de leveranciersrelatie
 - E. de prestaties van de leveranciersrelatie
 - F. de consumenten- en inkoopmarktsituatie
 - G. uw bedrijf

11. De totale enquête duurt ongeveer 50 minuten. Per vraag is slechts één antwoord mogelijk. Heeft u uw keuze gemaakt, dan vragen wij u het desbetreffende vakje duidelijk aan te kruisen.
12. Zou u graag een kopie van de onderzoeksresultaten van ons ontvangen?

- ☐ Ja
☐ Nee

Indien ja, stuur u dan uw visitekaartje mee of schrijf uw adres hieronder:

Naam:
Bedrijf:
Adres:
Postcode: Plaats:
E-mail:

Retourneert u dit boekje met behulp van de ingesloten enveloppe (frankering onnodig) naar:

drs. Willem Smit
Erasmus Universiteit Rotterdam
Vakgroep Marketing Management
Kamer: FB-54
Antwoordnummer 5240
3000 VB ROTTERDAM

T.: 010 – 408.19.18
E.: wsmit@fbk.eur.nl

BELANGRIJK: DE KEUZE VAN DE LEVERANCIER

De volgende vragen zullen betrekking hebben op één van uw inkooprelaties in één bepaalde productcategorie. Om een willekeurige keuze uit al uw inkooprelaties mogelijk te maken, vragen wij u om de volgende drie stappen te zetten.

STAP 1 Noem vijf inkooprelaties, waarmee u het laatst contact heeft gehad?

We hoeven niet persé de naam van de leverancier te weten. U kunt bijvoorbeeld ook volstaan met het invullen van de initialen van de leveranciers. N.B.: deze vraag betreft bestaande inkooprelaties.

1.	
2.	
3.	
4.	
5.	

STAP 2 Uit deze vijf inkooprelaties zal het nummer uit de envelop één leverancier selecteren.

Open de hieronder aangeplakte envelop. Hierin vindt u een nummer. Dit nummer bepaalt de keuze van de leverancier.

De nu volgende vragen in deze enquête zullen op de relatie van uw bedrijf met deze leverancier betrekking hebben.

HIER ZAT EEN ENVELOP GEPLAKT.

INDIEN DAT NIET HET GEVAL IS,
NEEM CONTACT OP MET:

WILLEM SMIT
Telefoonnummer: 010 – 408.19.18
E-mail: wsmit@fbk.eur.nl

STAP 3

Inleidende algemene vragen over deze leverancier en de productcategorie

De naam (of initialen) van de geselecteerde leverancier is:

- A. Voor welke productcategorie/artikelgroep levert deze leverancier hoofdzakelijk producten (noem er 1 specifiek):

- B. Wat is het belang van deze productcategorie (A) voor de winkelformule van uw bedrijf?

<i>Deze productcategorie (A)...</i>	sterk mee oneens				sterk mee eens		
	1	2	3	4	5	6	7
... is in vergelijking tot andere productcategorie belangrijk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... is in vergelijking tot andere productcategorie essentieel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... heeft in vergelijking tot andere productcategorie een hoge prioriteit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... is relatief tot andere productcategorie veel betekenend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- C. Hoeveel leveranciers binnen **deze productcategorie (A)** leveren producten aan u?

- D. We zijn geïnteresseerd in de **concentratiegraad van de leveranciers in deze productcategorie**. Wat is de het percentage van uw inkoopbudget binnen deze productcategorie dat bij de grootste vier leveranciers wordt besteed?

- ☐ <10% van het inkoopbudget van deze productcategorie (A) wordt ingekocht bij de 4 grootste
- ☐ 11% - 30% van het inkoopbudget van deze productcategorie (A) wordt ingekocht bij de 4 grootste
- ☐ 31% - 60% van het inkoopbudget van deze productcategorie (A) wordt ingekocht bij de 4 grootste
- ☐ 61% of meer van het inkoopbudget van deze productcategorie (A) wordt ingekocht bij de 4 grootste.

- E. Behoort de geselecteerde inkooprelatie tot de vier grootste leveranciers?
- ☐ Ja
- ☐ Nee

A De Uitwisseling van Marktinformatie tussen Uw Bedrijf en Deze Leverancier

A1 De informatie die uw bedrijf aan deze leverancier geeft Omcirkelt u alstublieft hoeveel inzicht uw bedrijf aan deze leverancier geeft.

Met betrekking tot de waargenomen consumentenvraag geven wij deze leverancier ... inzicht in ...

	Geen (0%)	Zeer weinig	Weinig	Ten dele	Veel	Zeer veel	Volledig (100%)
1. De verkoopcijfers van zijn eigen producten	1	2	3	4	5	6	7
2. De verkoopcijfers van zijn producten door de tijd heen	1	2	3	4	5	6	7
3. De gerealiseerde verkoopprijs voor zijn producten	1	2	3	4	5	6	7
4. De gerealiseerde verkoopprijs voor zijn producten door de tijd heen	1	2	3	4	5	6	7
5. Het voorraadniveau van zijn producten bij ons	1	2	3	4	5	6	7
6. Het voorraadniveau van zijn producten bij ons door de tijd heen	1	2	3	4	5	6	7

Met betrekking tot verklaringen voor de waargenomen consumentenvraag geven wij deze leverancier ... inzicht in ...

	Geen (0%)	Zeer weinig	Weinig	Ten dele	Veel	Zeer veel	Volledig (100%)
1. de totale verkoopcijfers in de productcategorie / artikelgroep	1	2	3	4	5	6	7
2. zijn verkoopprestatie ten opzichte van zijn concurrenten	1	2	3	4	5	6	7
3. de out-of-stock problematiek van zijn producten	1	2	3	4	5	6	7
4. de out-of-stock problematiek van de gehele productcategorie	1	2	3	4	5	6	7
5. de out-of-stock problematiek van zijn concurrenten	1	2	3	4	5	6	7
6. de effectiviteit van zijn promotionele acties in onze winkels	1	2	3	4	5	6	7
7. de effectiviteit van promotionele acties binnen de gehele productcategorie	1	2	3	4	5	6	7
8. de effectiviteit van promotionele acties van zijn concurrenten	1	2	3	4	5	6	7
9. de geografische spreiding van zijn productverkoop per winkel	1	2	3	4	5	6	7
10. de geografische spreiding van de verkoop per winkel voor de gehele productcategorie	1	2	3	4	5	6	7
11. de geografische spreiding van de verkoop van zijn concurrenten per winkel	1	2	3	4	5	6	7
12. de promotionele ondersteuning door concurrerende leveranciers (tegemoetkoming in de kosten, leveringscondities, etc.)	1	2	3	4	5	6	7
13. de klanten (groepen) die zijn producten kopen	1	2	3	4	5	6	7
14. de klanten (groepen) die de producten binnen de categorie kopen	1	2	3	4	5	6	7
15. de klanten (groepen) die de producten van de concurrent kopen	1	2	3	4	5	6	7
16. De rendementskengetallen voor de verkoop van zijn producten bij ons	1	2	3	4	5	6	7
17. De rendementskengetallen voor de gehele productcategorie	1	2	3	4	5	6	7
18. De rendementskengetallen voor de verkoop van concurrerende producten bij ons	1	2	3	4	5	6	7

Met betrekking tot voorgenomen marketinginspanningen voor de productcategorie geven wij deze leverancier ... inzicht in ...

	Geen (0%)	Zeër weinig	Weinig	Ten dele	Veel	Zeër veel	Volledig (100%)
1. De omzetdoelstellingen voor zijn producten	1	2	3	4	5	6	7
2. De omzetdoelstellingen voor de gehele productcategorie / artikelgroep	1	2	3	4	5	6	7
3. De omzetdoelstellingen voor zijn concurrenten	1	2	3	4	5	6	7
4. Ons voorraadbeleid	1	2	3	4	5	6	7
5. Onze logistieke kostendoelstellingen	1	2	3	4	5	6	7
6. De margemix van de productcategorie / artikelgroep	1	2	3	4	5	6	7
7. De voorgenomen wijzigingen in de merkenmix van ons assortiment	1	2	3	4	5	6	7
8. De promotiekalender voor de komende periode	1	2	3	4	5	6	7
9. De geplande promotionele acties van zijn concurrenten bij ons	1	2	3	4	5	6	7
10. De strategie voor de gehele productcategorie / artikelgroep binnen onze winkelformule	1	2	3	4	5	6	7
11. De algemene strategie van onze winkelformule	1	2	3	4	5	6	7
12. De verwachte marktontwikkelingen	1	2	3	4	5	6	7

A2 De informatie die deze leverancier aan uw bedrijf geeft

We zijn geïnteresseerd in uw inschatting naar de mate waarin deze leverancier marktinformatie met uw bedrijf deelt. Omcirkelt u alstublieft hoeveel inzicht u denkt dat deze leverancier aan uw bedrijf geeft.

Met betrekking tot de waargenomen consumentenvraag geeft deze leverancier ons ... inzicht in ...

	Geen (0%)	Zeër weinig	Weinig	Ten dele	Veel	Zeër veel	Volledig (100%)
1. De totale verkoopcijfers van zijn producten in de gehele markt	1	2	3	4	5	6	7
2. Zijn verkoopcijfers in de gehele markt door de tijd heen	1	2	3	4	5	6	7
3. De levertijden van zijn producten	1	2	3	4	5	6	7
4. De hoeveelheid te produceren producten die voor de gehele markt beschikbaar is	1	2	3	4	5	6	7
5. De verkooppunten waar hij zijn producten vermarkt	1	2	3	4	5	6	7

Met betrekking tot verklaringen voor de waargenomen consumentenvraag geeft deze leverancier ons ... inzicht in ...

	Geen (0%)	Zeër weinig	Weinig	ten dele	Veel	Zeër veel	Volledig (100%)
1. Onze verkoopprestaties ten opzichte van andere verkooppunten/retailers	1	2	3	4	5	6	7
2. De interpretaties waarom andere verkooppunten/retailers beter scoren.	1	2	3	4	5	6	7
3. De interpretaties waarom andere verkooppunten/retailers slechter scoren.	1	2	3	4	5	6	7
4. Zijn out-of-stock problematiek in het algemeen	1	2	3	4	5	6	7

Met betrekking tot verklaringen voor de waargenomen consumentenvraag geeft deze leverancier ons ... inzicht in ...

	Geen (0%)	Zeer weinig	Weinig	ten dele	Veel	Zeer veel	Volledig (100%)
5. Zijn out-of-stock problematiek bij onze concurrenten (bij andere retailers)	1	2	3	4	5	6	7
6. De effectiviteit van zijn promotionele acties in het algemeen	1	2	3	4	5	6	7
7. De effectiviteit van zijn promotionele acties bij onze concurrenten (bij andere retailers)	1	2	3	4	5	6	7
8. De geografische spreiding van zijn productverkoop	1	2	3	4	5	6	7
9. De verkoopprestatie van andere verkooppunten <u>in</u> ons verzorgingsgebied	1	2	3	4	5	6	7
10. De verkoopprestatie van andere verkooppunten <u>buiten</u> ons verzorgingsgebied	1	2	3	4	5	6	7
11. De kostenstructuur van zijn producten	1	2	3	4	5	6	7
12. De promotionele ondersteuning aan onze concurrenten (bij andere retailers)	1	2	3	4	5	6	7
13. De resultaten van zijn consumentenonderzoeken (product tests, consumer evaluations)	1	2	3	4	5	6	7
14. De consumentengroepen die zijn producten gebruiken	1	2	3	4	5	6	7
15. De rendementskengetallen van zijn producten	1	2	3	4	5	6	7
16. De rendementskengetallen van zijn producten bij onze concurrenten (bij andere retailers)	1	2	3	4	5	6	7

Met betrekking tot voorgenomen marketinginspanningen voor de productcategorie geeft deze leverancier ons ... inzicht in ...

	Geen (0%)	Zeer weinig	Weinig	ten dele	Veel	Zeer veel	Volledig (100%)
1. Zijn omzetdoelstellingen voor zijn producten voor de komende periode	1	2	3	4	5	6	7
2. Zijn omzetdoelstellingen voor zijn producten bij onze concurrenten	1	2	3	4	5	6	7
3. Zijn voorraadbeleid	1	2	3	4	5	6	7
4. Zijn logistieke kostendoelstellingen	1	2	3	4	5	6	7
5. De introducties van nieuwe producten (en/of modellen) voor de komende periode	1	2	3	4	5	6	7
6. De reclame strategie voor de komende periode	1	2	3	4	5	6	7
7. De consumentenpromoties voor de komende periode	1	2	3	4	5	6	7
8. De marketinginspanningen voor de verkoop binnen onze winkels	1	2	3	4	5	6	7
9. De marketinginspanningen voor de verkoop bij onze concurrenten	1	2	3	4	5	6	7
10. Zijn expansiestrategie (de klanten die hij de komende tijd gaat benaderen)	1	2	3	4	5	6	7
11. De algemene strategie voor zijn producten	1	2	3	4	5	6	7
12. De verwachte marktontwikkelingen	1	2	3	4	5	6	7

A3 Uw oordeel over de kwaliteit van de marktinformatie die deze leverancier aan uw bedrijf geeft.
Kunt u aangeven in welke mate u het eens bent met de volgende stellingen aangaande de kwaliteit van de marktinformatie die deze leverancier aan uw bedrijf geeft.

De marktinformatie die deze leverancier aan ons bedrijf geeft, is ...

		Sterk mee oneens					Sterk mee eens	
1.	voldoende belangrijk	1	2	3	4	5	6	7
2.	voldoende op tijd	1	2	3	4	5	6	7
3.	voldoende accuraat	1	2	3	4	5	6	7
4.	voldoende in omvang	1	2	3	4	5	6	7
5.	voldoende betrouwbaar	1	2	3	4	5	6	7
6.	voldoende nuttig	1	2	3	4	5	6	7
7.	voldoende relevant	1	2	3	4	5	6	7
8.	voldoende waardevol	1	2	3	4	5	6	7
9.	voldoende consistent	1	2	3	4	5	6	7
10.	Voldoende objectief	1	2	3	4	5	6	7
11.	voldoende verifieerbaar	1	2	3	4	5	6	7
12.	ook beschikbaar via andere bronnen	1	2	3	4	5	6	7
13.	voldoende uniek	1	2	3	4	5	6	7
14.	voldoende bruikbaar	1	2	3	4	5	6	7

A4 De mate waarin deze Leverancier bij de volgende beslissingen wordt betrokken
Kunt u aangeven in hoeverre deze leverancier een bijdrage levert aan de volgende activiteiten t.b.v. de productcategorie:

	Alleen door ons bedrijf (geen bijdrage=1)				Gezamenlijk met deze leverancier (zeer grote bijdrage=7)		
Het verzamelen van marktinformatie.	1	2	3	4	5	6	7
Het verrichten van klantbehoeftenanalyses.	1	2	3	4	5	6	7
Het evalueren van de kwaliteit van de leveringen.	1	2	3	4	5	6	7
Het evalueren van de gerealiseerde omzetten van de afgelopen periode.	1	2	3	4	5	6	7
Het evalueren van de prestaties van de afgelopen periode.	1	2	3	4	5	6	7
Het evalueren van de effectiviteit van de uitgevoerde promoties gedurende de afgelopen periode.	1	2	3	4	5	6	7
Het formuleren van ons voorraadbeleid voor de productcategorie voor de komende periode.	1	2	3	4	5	6	7
Het formuleren van onze omzetdoelen voor de productcategorie voor de komende periode.	1	2	3	4	5	6	7
Het formuleren van welke rol de productcategorie voor onze winkelformule gaat spelen.	1	2	3	4	5	6	7
Het ontwikkelen van een strategie voor de gehele productiecategorie.	1	2	3	4	5	6	7
Het vaststellen op welke doelgroep(en) we ons gaan richten.	1	2	3	4	5	6	7
Het bepalen van de merkenmix in ons assortiment voor de komende periode.	1	2	3	4	5	6	7
Het bepalen van het promotieplan voor de komende periode.	1	2	3	4	5	6	7
Het bepalen van de leveringsplanning voor de komende periode.	1	2	3	4	5	6	7

A5 De exclusiviteit van marktinformatiedelen met deze leverancier

Zou u kunnen aangeven in hoeverre de uitwisseling van marktinformatie met deze leverancier op exclusieve basis plaatsvindt? Wij vragen u aan te geven welke omschrijving het beste de werkelijke situatie weergeeft. U doet dit door aan te geven in welke mate u het eens bent met de onderstaande stellingen.

	sterk mee oneens					sterk mee eens	
	1	2	3	4	5	6	7
Deze leverancier geeft ons op exclusieve basis marktinformatie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze leverancier onthoudt zich ervan om dezelfde hoeveelheid marktinformatie aan onze concurrenten (andere retailers) te geven	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze leverancier geeft zelden één retailer dezelfde hoeveelheid marktinformatie op exclusieve basis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze leverancier heeft zo veel retailers/afnemers dat retailers niet exclusief dezelfde hoeveelheid marktinformatie ontvangen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Het aantal retailers dat van deze leverancier minstens evenveel marktinformatie krijgt, bedraagt:

- ☐ 0
- ☐ 3 a 5
- ☐ 21 a 50
- ☐ 1
- ☐ 6 a 10
- ☐ 51 a 100
- ☐ 2
- ☐ 11 a 20
- ☐ Meer dan 100

	sterk mee oneens					sterk mee eens	
	1	2	3	4	5	6	7
Ons bedrijf geeft alleen marktinformatie aan deze leverancier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ons bedrijf weerhoudt zich ervan om andere leveranciers binnen deze productcategorie ook dezelfde hoeveelheid marktinformatie te geven	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ons bedrijf geeft maar zelden aan slechts één leverancier dezelfde hoeveelheid marktinformatie.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ons bedrijf heeft zo veel leveranciers in deze product categorie dat wij deze leverancier niet exclusief dezelfde hoeveelheid marktinformatie geven.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Het aantal leveranciers van deze productcategorie, dat wij minstens evenveel marktinformatie verstrekken, bedraagt:

- ☐ 0
- ☐ 3 a 5
- ☐ 21 a 50
- ☐ 1
- ☐ 6 a 10
- ☐ 51 a 100
- ☐ 2
- ☐ 11 a 20
- ☐ Meer dan 100

B De Voor- en Nadelen van het delen van Marktinformatie met deze leverancier

We zijn geïnteresseerd in uw inschatting naar de voordelen en de nadelen van meer openheid in het delen van marktinformatie met deze leverancier. Geef u aan in welke mate u het met de volgende stellingen eens bent.

B1 VOORDELEN

	sterk mee oneens				sterk mee eens		
	1	2	3	4	5	6	7
<i>Als ons bedrijf heel open zijn marktinformatie met deze leverancier deelt, heeft dat tot gevolg dat ...</i>							
... onze activiteiten met deze leverancier beter afgestemd worden.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... ons bedrijf samen met deze leverancier sneller op veranderingen in de marktvraag kan inspelen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... ons bedrijf samen met deze leverancier doelbewust de marktvraag kan "sturen".	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... ons bedrijf een betere relatie met deze leverancier krijgt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... ons bedrijf meer invloed bij deze leverancier krijgt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... deze leverancier meer afhankelijk van ons bedrijf wordt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... de relaties met andere leveranciers verbeterd worden.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B2 NADELEN

	sterk mee oneens				sterk mee eens		
	1	2	3	4	5	6	7
<i>Als ons bedrijf heel open zijn marktinformatie met deze leverancier deelt, heeft dat tot gevolg dat ...</i>							
... deze leverancier onze marktinformatie gaat misbruiken.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... deze leverancier onze marktinformatie naar onze concurrenten gaat lekken.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... onze kennisvoorsprong ten opzichte van deze leverancier verloren gaat.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... het onze onderhandelingspositie ten opzichte van deze leverancier aantast.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... de relaties met andere leveranciers verslechteren.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... ons bedrijf meer afhankelijk van die leverancier wordt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... ons bedrijf meer tijd en energie in deze leveranciersrelatie moet gaan steken.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... ons bedrijf meer geld in deze leverancier moet gaan steken.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B3 EVALUATIE

	sterk mee oneens				sterk mee eens		
	1	2	3	4	5	6	7
Ons bedrijf heeft veel vertrouwen in de potentiële voordelen van marktinformatie delen met deze leverancier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ons bedrijf heeft vanwege de potentiële nadelen weinig vertrouwen in het delen van marktinformatie met deze leverancier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alle voordelen en nadelen afwegende staat ons bedrijf er heel positief tegenover om heel open zijn marktinformatie met deze leverancier te delen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

De volgende vragen gaan over de manieren waarop uw bedrijf en deze leverancier samenwerken. Is er sprake van een formele overeenkomst? Wie van uw bedrijf heeft contact met wie bij de leverancier? En andersom? En wat is hun contactfrequentie met uw bedrijf?

Wij vragen u aan te geven welke omschrijving het beste de werkelijke situatie weergeeft. U doet dit door aan te geven in welke mate u het eens bent met de onderstaande stellingen.

[illegible]

De volgende vragen zijn bedoeld om de frequentie van communicatie tussen uw bedrijf en deze leverancier te meten. Wij vragen u aan te geven welke frequentie het beste de werkelijke situatie weergeeft.

1 = Minder dan 1 keer per jaar tot nooit

[illegible]

		Minder dan jaarlijks tot nooit	Jaarlijks	Elk kwartaal	Maandelijks	Wekelijks	Dagelijks of vaker	
<i>Hoe vaak heeft deze leverancier contact met...</i>		n.v. t.	1	2	3	4	5	6
...	de inkoper van ons bedrijf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	de marketing manager van ons bedrijf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	de logistiek manager van ons bedrijf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	de service of ondersteuningspersoneel van ons bedrijf (en inkoop-binnendienst)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	de directie (het top-management) van ons bedrijf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	onze medewerkers van de financiële administratie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	andere medewerkers van ons bedrijf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
te weten:								

C3 Ondersteuning van top-management

De volgende vragen zijn bedoeld om te weten of samenwerking met deze leverancier vanuit het topmanagement ondersteund wordt. Wij vragen u aan te geven in welke mate u het eens bent met de volgende stellingen.

	sterk mee oneens						sterk mee eens	
	1	2	3	4	5	6	7	
<i>Ons topmanagement...</i>								
... voorziet ons van de noodzakelijke financiële middelen om de samenwerking met deze leverancier gestalte te geven.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... geeft ons voldoende tijd om de samenwerking met deze leverancier gestalte te geven.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... stelt ons een adequaat hoeveelheid personeel ter beschikking om de samenwerking met deze leverancier voldoende vorm te geven.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Het topmanagement van deze leverancier...</i>								
... voorziet onze contactpersoon van de noodzakelijke financiële middelen om de samenwerking met ons bedrijf gestalte te geven.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... geeft onze contactpersoon voldoende tijd om de samenwerking met ons bedrijf gestalte te geven.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... stelt onze contactpersoon een adequaat hoeveelheid personeel ter beschikking om de samenwerking met ons bedrijf voldoende vorm te geven.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C4 Beloningstructuur voor samenwerking

De volgende vragen zijn bedoeld om te weten of samenwerking met deze leverancier vanuit de organisaties zelf (uw bedrijf én deze leverancier) aangemoedigd wordt door middel van een passende beloningsstructuur. Wij vragen u naar beste kunnen aan te geven in welke mate u het eens bent met de volgende stellingen.

	sterk mee oneens				sterk mee eens		
	1	2	3	4	5	6	7
<i>Onze contactpersoon bij deze leverancier...</i>							
... ontvangt waardering van zijn eigen organisatie voor de manier waarop hij/zij met ons bedrijf als team samenwerkt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... wordt door zijn eigen organisatie beoordeeld hoe hij de relatie met ons bedrijf beheert.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... wordt door zijn eigen organisatie hoofdzakelijk afgerekend op zijn individuele omzetten.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Ons bedrijf ...</i>							
... geeft waardering voor de manier waarop wij met deze leverancier als team samenwerken.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... beoordeelt ons op de manier wij de relatie met deze leverancier beheren.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... rekent ons in hoofdzaak af op onze individuele omzetten.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D Kenmerken van deze Leverancier

D1 Type Leverancier

Geeft u aan wat van toepassing is.

1A. Deze leverancier is ...

- ☐ een A-merkleverancier
- ☐ een A-merkleverancier, maar hij produceert tevens ons private label
- ☐ een B- /C-merkleverancier en levert zijn eigen merken aan ons
- ☐ een B- /C-merkleverancier, maar hij produceert tevens ons private label
- ☐ een private-label producent

1B. Deze leverancier heeft ...

- ☐ geen eigen winkels
- ☐ eigen winkels, maar niet in ons verzorgingsgebied
- ☐ eigen winkels in ons verzorgingsgebied

1C. De contactpersoon voor ons bedrijf van deze leverancier heeft ...

- ☐ Zijn verkoopkantoor in Nederland
- ☐ Zijn verkoopkantoor in een ander Europees land, te weten:
- ☐ Zijn verkoopkantoor in de Verenigde Staten, Canada
- ☐ Zijn verkoopkantoor in Azië
- ☐ Zijn verkoopkantoor in Latijns-Amerika
- ☐ Zijn verkoopkantoor in Afrika

D2 De duur van de relatie met deze leverancier

Hoeveel jaren doet uw bedrijf zaken met deze leverancier: Ja(a)r(en) en Maanden
☐ het precieze aantal is niet bekend; zeker meer dan 20 jaar.

D3 Hoe gaat deze leverancier met marktinformatie om?

	sterk mee oneens				sterk mee eens		
	1	2	3	4	5	6	7
Deze leverancier doet veel eigen marktonderzoek.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze leverancier is snel in het opsporen van veranderingen in consumentenvoorkeuren.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bij deze leverancier worden alle managementniveau's regelmatig over marktontwikkelingen op de hoogte gesteld.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marktinformatie wordt door deze leverancier professioneel door de organisatie verspreid.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze leverancier weet marktontwikkelingen goed te interpreteren.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze leverancier kan heel goed nieuwe inzichten in de markt omzetten in marketing inspanningen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze leverancier is heel goed in staat marktinformatie te commercialiseren.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D4 De overeenstemming tussen doelen van deze leverancier met die van uw bedrijf

	sterk mee oneens				sterk mee eens		
	1	2	3	4	5	6	7
Ons bedrijf en deze leverancier streven verenigbare doelen na.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beide bedrijven hebben dezelfde doelstellingen in deze relatie gemeenschappelijk.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze leverancier en ons bedrijf steunen elkaar's omzet en winstdoelstellingen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Onze doelstellingen verschillen aanzienlijk van de doelstellingen van deze leverancier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D5 Het vertrouwen van uw bedrijf in deze leverancier

	sterk mee oneens				sterk mee eens		
	1	2	3	4	5	6	7
De beloften die deze leverancier doet zijn betrouwbaar.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze leverancier is heel eerlijk in het zakendoen met ons bedrijf.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ons bedrijf vertrouwt deze leverancier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wanneer er problemen zouden zijn, zou deze leverancier klaar staan en bereid zijn om ons bedrijf assistentie te verlenen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze leverancier houdt rekening met de belangen van ons bedrijf, als er iets verkeerd gaat.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D6 De investeringen in de relatie met de leverancier

	sterk mee oneens				sterk mee eens		
	1	2	3	4	5	6	7
Als we stoppen zaken te doen met deze leverancier, gaat er veel kennis, die toegewijd aan deze relatie is, verloren.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Als ons bedrijf of deze leverancier verkoos met een ander bedrijf zaken te doen, zouden we veel gemaakte investeringen in deze relatie verliezen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We hebben veel geïnvesteerd in het opbouwen van onze gezamenlijke activiteiten.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D7 De afhankelijkheidsstructuur in de relatie tussen uw bedrijf en de leverancier

<i>In welke mate is de leverancier afhankelijk van uw bedrijf?</i>	sterk mee oneens					sterk mee eens	
	1	2	3	4	5	6	7
Als ons bedrijf stopt zaken te doen met deze leverancier, dan heeft deze leverancier een probleem om het verlies in omzet in ons verzorgingsgebied op te vangen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze leverancier is door en door afhankelijk van ons bedrijf.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Het zal voor deze leverancier moeilijk zijn om ons bedrijf te vervangen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze leverancier heeft voor ons bedrijf in ons verzorgingsgebied geen goed alternatief.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>In welke mate is uw bedrijf afhankelijk van deze leverancier?</i>	1	2	3	4	5	6	7
Als deze leverancier stopt zaken te doen met ons bedrijf, dan hebben we een probleem om het verlies in omzet in deze productcategorie op te vangen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Het zal voor ons bedrijf moeilijk zijn om deze leverancier te vervangen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Voor deze productcategorie is ons bedrijf door en door afhankelijk van deze leverancier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ons bedrijf heeft voor deze leverancier in deze productcategorie geen goed alternatief.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D8 De invloed van samenwerking met deze leverancier op onze verhoudingen met andere leveranciers

	sterk mee oneens					sterk mee eens	
	1	2	3	4	5	6	7
Als ons bedrijf (meer) gaat samenwerken met een deze leverancier, dan wordt het voor ons bedrijf moeilijker om samen te werken met concurrenten van deze leverancier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Een hechte samenwerking tussen ons bedrijf en deze leverancier zal de relatie tussen ons bedrijf en één van de concurrerende leveranciers verstoren .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samenwerking van ons bedrijf met deze leverancier is schadelijk voor de prestaties onze relatie met een andere concurrerende leverancier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Als ons bedrijf gaat samenwerken met deze leverancier, dan wordt het voor ons bedrijf makkelijker om samen te werken met concurrenten van deze leverancier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Een hechte samenwerking tussen ons bedrijf en deze leverancier zal de relatie tussen ons bedrijf en één van de concurrerende leveranciers positief beïnvloeden .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samenwerking van ons bedrijf met deze leverancier is bevorderlijk voor de prestaties in onze relatie met een andere concurrerende leverancier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E De prestaties van deze leveranciersrelatie

We zijn geïnteresseerd in de prestaties van deze leverancier voor uw bedrijf. In hoeverre heeft uw bedrijf van deze leverancier geleerd? Wat zijn de uiteindelijke opbrengsten van het zakendoen met deze leverancier? Hoe tevreden bent u over deze leverancier? Bent u van plan in de toekomst nog zaken te doen met deze leverancier? Geef u aan in welke mate u het met de volgende stellingen eens bent.

E1 Gezamenlijk leren over de consumentenmarkt voor de productcategorie

In de samenwerking met deze leverancier heeft uw bedrijf mogelijk meer ervaring opgedaan over de manieren waarop marktontwikkelingen voor deze productcategorie beter in de gaten kunnen worden gehouden.

	Sterk mee oneens					Sterk mee eens	
	1	2	3	4	5	6	7
<u>Aangaande het bespeuren van de marktontwikkelingen in deze productcategorie zijn we samen met de leverancier goed in ...</u>							
het verzamelen van marktinformatie.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
het aftasten van de consumentenmarkt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
het analyseren van het concurrerend productaanbod.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
het zoeken naar latente consumentenbehoeften.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
het experimenteren met nieuwe producten of consumentenpromoties.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Aangaande het begrijpen van de marktontwikkelingen in deze productcategorie zijn we samen met de leverancier goed in...</u>							
het ordenen van de verzamelde marktinformatie.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
het selecteren van marktinformatie op basis van relevantie.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
het verhelderen van de structuur van de markt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
het aan het licht brengen van onze aannames over de markt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
het verbreden van onze focus op deze markt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Aangaande het gebruiken van marktinformatie over deze productcategorie zijn we samen met de leverancier goed in...</u>							
het accuraat voorspellen van de marktvraag.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
het snel reageren op marktvraagveranderingen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
het adequaat anticiperen op marktvraagveranderingen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
het doeltreffend beïnvloeden van de marktvraag.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Aangaande de informatieuitwisseling met deze leverancier zijn we samen met de leverancier goed in..</u>							
het kritisch kijken naar de manieren waarop marktinformatie wordt verzameld.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
het kritisch kijken naar de verspreiding van deze marktinformatie.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
het kritisch kijken naar het systematisch analyseren van de uitkomsten onze samenwerking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E2 Totale strategische opbrengsten

Geef u aan in welke mate u het eens bent met de volgende omschrijvingen.

	Sterk mee oneens					Sterk mee eens	
	1	2	3	4	5	6	7
Samen met deze leverancier hebben we veel gezamenlijke winsten gerealiseerd.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samen met deze leverancier hebben we onze gezamenlijke omzetten in de productcategorie vergroot.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Met deze leverancier hebben we strategische voordelen ten opzichte van onze concurrenten gekregen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De relatie met deze leverancier heeft geresulteerd in een strategisch voordeel voor ons.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De voordelen uit deze relatie stellen ons in staat om effectiever te concurreren op de consumentenmarkt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De voordelen uit deze relatie stellen ons in staat om effectiever te concurreren op de inkoopmarkt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze leveranciersrelatie heeft belangrijke strategische opbrengsten opgeleverd.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E3 De prestatie van de leverancier in zijn totaliteit

Hoe zou u de prestatie van deze leverancier vergelijken met zijn naaste concurrenten? En hoe zijn de prestaties van deze leverancier in vergelijking met drie jaar geleden?

	Veel slechter		Ongeveer hetzelfde			Veel beter	
	-3	-2	-1	0	1	2	3
De omzetgroei ten opzichte van zijn concurrerende leveranciers in deze productcategorie is...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De groei in omzetaandeel ten opzichte van zijn concurrerende leveranciers in deze productcategorie is...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De winstgevendheid ten opzichte van zijn concurrerende leveranciers in deze productcategorie is...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Is significant afgenomen		Hetzelfde gebleven		Is significant toegenomen		
	-3	-2	-1	0	1	2	3
In de afgelopen drie jaar zijn de verkopen van deze leverancier in deze productcategorie bij ons...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In de afgelopen drie jaar is het omzetaandeel van deze leverancier in deze productcategorie bij ons...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In de afgelopen drie jaar is de winstgevendheid van deze leverancier in deze productcategorie bij ons...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E4 Tevredenheid van uw bedrijf over de relatie met deze leverancier

Geef u aan in welke mate u het eens bent met de volgende omschrijvingen.

	Sterk mee oneens				Sterk mee eens		
	1	2	3	4	5	6	7
De relatie met deze leverancier heeft ons bedrijf een dominante en winstgevende marktpositie in deze productgroep opgeleverd.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De relatie die ons bedrijf met deze leverancier heeft, is heel aantrekkelijk in termen van economische resultaten.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Het marketingbeleid van deze leverancier helpt ons bedrijf om meer resultaat te boeken.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze leverancier voorziet ons van een kwalitatief goede marketing en verkoop-ondersteuning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In de relatie met deze leverancier worden erg efficiënt activiteiten met ons bedrijf gecoördineerd.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ons bedrijf is zeer tevreden over de flexibiliteit waarmee we met deze leverancier op marktvraagveranderingen reageren.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De relatie met deze leverancier is sterk "consumentenvraag-gedreven."	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De manier van zaken doen met deze leverancier wordt gekenmerkt door wederzijds respect.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tegenover ons bedrijf is deze leverancier heel open over wat ons bedrijf zou moeten weten.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De relatie tussen ons bedrijf en deze leverancier wordt gekenmerkt door vijandelijke emoties.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze leverancier weigert ons om de redenen achter zijn beleid uit te leggen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E5 Het toekomstperspectief van uw bedrijf op de relatie met deze leverancier

Geef u aan in welke mate u het eens bent met de volgende omschrijvingen.

	Sterk mee oneens				Sterk mee eens		
	1	2	3	4	5	6	7
Bereidheid om te investeren in de relatie met de leverancier							
Als de leverancier het zou vragen, dan is ons bedrijf bereid om meer te investeren in de relatie met deze leverancier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ons bedrijf is bereid meer energie en geld te steken in het uitbouwen van de relatie met deze leverancier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In de toekomst zal ons bedrijf er aan werken om meer met deze leverancier samen te werken om de consument nog beter te bedienen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Toewijding aan de relatie met de leverancier							
Zelfs als ons bedrijf het zou kunnen, dan zou het niet stoppen zaken te doen met deze leverancier omdat ons bedrijf graag met hem geassocieerd blijft.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ons bedrijf wil graag lid blijven uitmaken van het netwerk van deze leverancier, omdat het oprecht plezierig vindt met hen zaken te doen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De positieve houding van ons bedrijf ten opzichte van deze leverancier is een voorname reden waarom wij met hen blijven samenwerken.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Continuïteitsverwachting							
Ons bedrijf verwacht de relatie met de leverancier nog lang te zullen voortzetten.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Voortzetting van de relatie met deze leverancier is eigenlijk vanzelfsprekend.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Het is waarschijnlijk dat onze bedrijf de komende twee jaar met deze leverancier zaken zal blijven doen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

F De Consumentenmarkt- en Inkoopmarktomgeving

In dit onderdeel stellen we enkele vragen over de consumentenmarkt en de inkoopmarkt.

Graag zouden we meer willen weten over de marktcondities van deze productcategorie. De vragen hebben betrekking op de marktturbulentie, groei, complexiteit en concurrentie.

In hoeverre bent u het eens met de volgende stellingen?

F1 Turbulentie en groei in de consumentenvraag

	sterk mee oneens				sterk mee eens		
	1	2	3	4	5	6	7
In deze productcategorie verandert de consumentenvraag voortdurend.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Binnen deze productgroep reageren consumenten alsmaar anders op marketinginspanningen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In deze productcategorie veranderen consumentenvoorkeuren snel.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geheel onverwacht zijn het steeds weer andere consumenten die producten uit deze productgroep kopen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De afgelopen drie jaar is de groei van de consumentenvraag naar deze producten sterk toegenomen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deze productcategorie kan omschreven worden als een "groei-markt"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

F2 Complexiteit in het distributiekanaal

	sterk mee oneens				sterk mee eens		
	1	2	3	4	5	6	7
<i>Het inkoopproces van deze product categorie...</i>							
... is relatief complex.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... wordt gekenmerkt door een relatief grote "time-lag" (tijdsvertraging) tussen het bestellen en het leveren ervan aan ons bedrijf.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... is traag in het kunnen reageren op marktvraagveranderingen vanwege de lengte van het distributiekanaal.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... is relatief gecompliceerd.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... is relatief technisch van aard.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... wordt gekenmerkt door een productiecapaciteit dat in het distributiekanaal beschikbaar is, en dat zich traag aan de consumentenvraag aanpast.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

F3 Intensiteit van concurrentie op de inkoopmarkt van deze productcategorie

	sterk mee oneens				sterk mee eens		
	1	2	3	4	5	6	7
Er zijn veel concurrenten van de leverancier op deze inkoopmarkt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tijdelijke handels-promoties (zoals prijskortingen) worden in deze inkoopmarkt vaak gebruikt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Op deze inkoopmarkt wordt voornamelijk op prijs geconcentreerd.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Binnen deze productcategorie geldt dat wat de ene leverancier aanbiedt, kan de andere leverancier vrijwel direct evenaren.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De concurrentie tussen de leveranciers binnen deze categorie is moordend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In deze inkoopmarkt is er nagenoeg elke dag sprake van nieuwe concurrentiele acties.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

F4 De gemeenschappelijke normen bij leveranciers over het delen van marktinformatie
 N.B. de volgende vragen gaan over de algemeen geldende norm bij alle leveranciers binnen deze productcategorie.

	sterk mee oneens					sterk mee eens	
	1	2	3	4	5	6	7
Bij de leveranciers van producten in deze productcategorie wordt in het algemeen verwacht dat elke vorm van marktinformatie dat retailers zou kunnen helpen, doorgegeven wordt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In deze inkoopmarkt is het gewoon dat retailbedrijven en leveranciers hun eigen vertrouwelijke marktinformatie met elkaar uitwisselen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In deze inkoopmarkt wordt verwacht dat leveranciers en retailers elkaar op de hoogte houden van zaken dat voor de andere partij van belang zou kunnen zijn.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leveranciers en winkelbedrijven informeren elkaar van tevoren van veranderingen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

G Afrondende vragen over uw bedrijf
 In dit onderdeel worden u enkele algemene vragen over uw bedrijf en u gesteld.

G1 Algemeen over uw bedrijf

A. In welke detailhandelssector(en) is uw bedrijf hoofdzakelijk werkzaam?

	<i>Food</i>	<i>Personal Care</i>	<i>Consumer electronics</i>	<i>Living</i>			
<input type="checkbox"/>	Supermarkten	<input type="checkbox"/>	Drogisterijen	<input type="checkbox"/>	Wit- en bruingoed	<input type="checkbox"/>	Doe-het-zelf
<input type="checkbox"/>	Slijterijen	<input type="checkbox"/>	Parfumerieën	<input type="checkbox"/>	Telecomwinkels	<input type="checkbox"/>	Verf- en behangz.
		<input type="checkbox"/>	Juweliers	<input type="checkbox"/>	Computershops	<input type="checkbox"/>	Tuincentra
	<i>Fashion</i>	<input type="checkbox"/>	Opticiens	<input type="checkbox"/>	Fotohandel	<input type="checkbox"/>	Huishoudelijke art.
<input type="checkbox"/>	Dameskledingzaken						
<input type="checkbox"/>	Herenkledingzaken						
<input type="checkbox"/>	Dames-en heren			<i>Education&Entertainment</i>	<input type="checkbox"/>		Speelgoedzaken
<input type="checkbox"/>	Baby- en kinder			<input type="checkbox"/>			Kantoorboekhandel
<input type="checkbox"/>	Schoenenzaken			<input type="checkbox"/>			Rijwielhandel
<input type="checkbox"/>	Algemene textiel			<input type="checkbox"/>			
<input type="checkbox"/>	Bodyfashion-zaken			<input type="checkbox"/>			
<input type="checkbox"/>	Textielsupermarkt			<input type="checkbox"/>			Warenhuizen
				<input type="checkbox"/>	Anders, te weten:	<div></div>	

B. Uw bedrijf is hoofdzakelijk te typeren als:

<input type="checkbox"/>	Groot-winkelbedrijf met 1 winkelketen	<input type="checkbox"/>	Inkooporganisatie
<input type="checkbox"/>	Groot-winkelbedrijf met meerdere winkelketens	<input type="checkbox"/>	In- en verkooporganisatie
<input type="checkbox"/>	Franchisegevers-organisatie		
<input type="checkbox"/>	Verkooporganisatie	<input type="checkbox"/>	Anders, te weten: <div></div>

C. Hoeveel werknemers heeft uw organisatie (inclusief de medewerkers van eventuele franchisenemers)

<input type="checkbox"/>	1-9	<input type="checkbox"/>	100 - 199	<input type="checkbox"/>	1.000 – 2.499	<input type="checkbox"/>	10.000 – 14.999
<input type="checkbox"/>	10-49	<input type="checkbox"/>	200-499	<input type="checkbox"/>	2.500 – 4.999	<input type="checkbox"/>	15.000 – 19.999
<input type="checkbox"/>	50 – 99	<input type="checkbox"/>	500-999	<input type="checkbox"/>	5.000 – 9.999	<input type="checkbox"/>	20.000 of meer

D. De consumentenomzet van ons bedrijf van het afgelopen boekjaar is (ongeveer): Euro's
 E. Hoeveel winkels heeft uw bedrijf in Nederland (inclusief evt. franchisenemers)? Winkels

G2 Concurrentie tussen uw bedrijf en andere retailers

	sterk mee oneens				sterk mee eens		
	1	2	3	4	5	6	7
De concurrentie in onze markt is moordend.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nagenoeg elke dag hoort men in onze markt van nieuwe concurrentiele acties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De activiteiten in onze markt zijn bijzonder vijandig.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In onze markt zijn veel promotie-campagnes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In onze markt geldt dat wat de ene retailer aanbiedt, kan de andere retailer vrijwel direct evenaren.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Onze concurrenten zijn relatief sterk.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In onze markt wordt voornamelijk op prijs geconcentreerd.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

G3 Hoe gaat uw bedrijf met marktinformatie om?

	sterk mee oneens				sterk mee eens		
	1	2	3	4	5	6	7
Ons bedrijf doet veel eigen marktonderzoek.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ons bedrijf is snel in het opsporen van veranderingen in consumentenvoorkeuren.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Binnen ons bedrijf worden alle managementniveau's regelmatig over marktontwikkelingen op de hoogte gesteld.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marktinformatie wordt door ons bedrijf professioneel door de organisatie heen verspreid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ons bedrijf kan heel goed nieuwe inzichten in de markt omzetten in marketinginspanningen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ons bedrijf is heel goed in staat marktinformatie te commercialiseren.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ons bedrijf weet marktontwikkelingen goed te interpreteren.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ons bedrijf kan heel goed nieuwe inzichten in de markt omzetten in marketing inspanningen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

G4 Samenwerkingsbereidheid van uw bedrijf

<i>Over het algemeen is de visie van ons bedrijf dat...</i>	sterk mee oneens				sterk mee eens		
	1	2	3	4	5	6	7
... hechtere relaties met leveranciers een groot voordeel bieden in het zakendoen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... zich aansluiten bij en hecht samenwerken met een leverancier staat ons toe om effectiever te worden.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... het is toepasselijk om informatie met leveranciers te delen als het nuttig is.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... meestal leveranciers toevertrouwd kunnen worden dat zij zich aan hun verplichtingen houden.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... leveranciers ons meestal niet zullen uitbuiten.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... hoe minder een leverancier weet over wat we doen, hoe beter het voor ons is.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

G5 Overig

A. Wat is uw functie?

B. Hoeveel jaar heeft u ervaring in een inkoopfunctie?
..... jaar en maanden

C. In hoeverre bent u persoonlijk betrokken bij de inkoop van uw bedrijf bij deze leverancier?

	-3	-2	-1	0	1	2	3	
Helemaal niet betrokken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Heel betrokken

D. In hoeverre heeft u er vertrouwen in dat u in staat was de vragen in deze enquête te beantwoorden?

	-3	-2	-1	0	1	2	3	
Helemaal niet met vertrouwen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Met veel vertrouwen

E. Vrouw/Man

☐ Vrouw
☐ Man

Tenslotte

Allereerst willen wij u hartelijk danken voor uw medewerking. Hieronder treft u ruimte aan voor eventuele op- en aanmerkingen op de vragenlijst. Wij verzoeken u zo vrij te zijn alle onduidelijkheden vragen, opmerkingen, kritiek, etc. hieronder te vermelden.

.....

.....

.....

.....

.....

.....

.....

HARTELIJK BEDANKT VOOR HET DELEN VAN UW INFORMATIE!
Desgewenst zullen wij u spoedig van de onderzoeksresultaten op de hoogte brengen.

APPENDIX VI.1

OPERATIONALIZATION AND DISCRIMINANT VALIDITY
TESTS FOR CONSTRUCT MEASURES:
MARKET CHANNEL ENVIRONMENT

Operationalization							
All items are measured on seven-point “strongly agree” to “strongly disagree” Likert scales unless otherwise mentioned.							
<i>Consumer Demand Turbulence (TRBLNC)</i> (3 items, $\alpha = 0.87$) (adapted from: Jaworski and Kohli, 1993)	<i>Purchase Complexity (CMPLX)</i> (3 items, $\alpha = 0.81$) (adapted from: Cannon and Homburg, 2001)						
1. In this product category, consumer demand keeps on changing over time.	1. The buying process in this product category is relatively complex						
2. Every time consumers react differently to marketing efforts within this product category.	2. The buying process in this product category is relatively complicated						
3. In this product category consumer preferences change in a rapid pace.	3. The buying process in this product category is relatively technical						
4. Very unexpectedly, different consumers buy products from this product category. (item deleted)							
<i>Consumer Demand Growth (GRWTH)</i> (2 items, $\alpha = 0.89$)	<i>Channel Inertia (INERTIA)</i> (2 items, $\alpha = 0.84$)						
1. During the past three years, growth in the consumer demand has been considerable.	1. The buying process in this product category features a relatively long time-lag between ordering and delivery to our firm.						
2. This product category can be called a "growth-market".	2. The buying process in this product category is slow in its ability to react to consumer demand changes due to the length of the channel.						
	3. The buying process in this product category is featured by a production capacity available in this channel and adjusts to consumer demand sluggishly. (item deleted)						
* item deleted from scale							
Discriminant Validity Tests							
Models	χ^2	df	χ^2/df	$\chi^2 diff$	TLI	CFI	RMSEA
No constraints between latent variables	39.26	30	1.31		0.98	0.99	0.043
Constrained models with perfect correlation between:							
TRBLNC and GRWTH	148.47	31	4.79	109.21*	0.71	0.80	0.15
TRBLNC and CMPLX	295.85	31	9.54	256.59*	0.52	0.67	0.23
TRBLNC and INERTIA	135.26	31	4.36	96.00*	0.77	0.84	0.14
CMPLX and GRWTH	152.07	31	4.91	112.81*	0.69	0.78	0.15
GRWTH and INERTIA	154.84	31	4.99	115.58*	0.68	0.78	0.16
CMPLX and INERTIA	108.30	31	3.49	69.04*	0.81	0.87	0.12

*Critical value for Chi-square at a 5% level = 3.84 (1 df)

*Critical value for Chi-square at a 5% level = 3.84 (1 df)

APPENDIX VI.2

OPERATIONALIZATION AND DISCRIMINANT VALIDITY TESTS FOR CONSTRUCT MEASURES: SUPPLIER NETWORK ENVIRONMENT

Operationalization							
All items are measured on seven-point “strongly agree” to “strongly disagree” Likert scales unless otherwise mentioned.							
Supplier Network Horizon (1 item)				Supplier Network Concentration (1 item)			
How many suppliers deliver goods to you in this product category?				What is the percentage in your buying budget for this product category spent at the four largest suppliers? (0 = less than 10%; 1 = 11 – 30% ; 2 = 31 – 60; 3 = more than 60%).			
Competition Intensity among Suppliers (4 items, $\alpha = 0.82$) (cf. Jaworski and Kohli, 1993)				Competition among Retailers (RETCOMP) (4 items, $\alpha = 0.79$) (cf. Jaworski and Kohli, 1993)			
<ol style="list-style-type: none">There are many competitors of this supplier in this purchase market. (item deleted)Temporary trade promotions (like discounts) are often used in this purchase market. (item deleted)In this purchase market, they mostly compete on price.Within this product category, anything that one competitor can offer, others can match readily.Competition between suppliers within this product category is cut throat.In this purchase market, one hears of a new competitive move almost every day.				<ol style="list-style-type: none">Competition in our marketplace is cutthroat.One hears of a new competitive move almost every day.The activities in our marketplace are particularly hostile.In our market there are many promotion-campaigns.*In our market, anything that one retailer offers, others can match readily. (item deleted)Our competitors are relatively strong.In our marketplace there is a lot of price competition. (item deleted)			
Information-Sharing Norms among Suppliers (NORMS) (2 items, $\alpha = 0.67$) (adapted from John and Heide, 1994)				Negative Connectedness (NEGNETW) (3 items, $\alpha = 0.87$)			
<ol style="list-style-type: none">In general suppliers of products in this product category expect that every market information that might help retailers, is passed on. (item deleted)In this purchasing market it is common that retail companies and suppliers exchange their own confidential market information.In this purchasing market, suppliers and retailers are expected to keep each other posted on matters that are important to them.Suppliers and retailers inform each other about changes in advance. (item deleted)				<ol style="list-style-type: none">If our firm is going to collaborate (more) with this supplier, than it will be more difficult for us to collaborate with competitors of this supplier.A closer cooperation between our firm and this supplier will disturb the relationship between our company and one of this supplier's competitors.Working together to this supplier can be detrimental to the performances in the relationship with other competing companies.			
Positive Connectedness (POSNETW) (3 items, $\alpha = 0.89$)							
<ol style="list-style-type: none">If our firm is going to collaborate (more) with this supplier, than it will be easier for us to collaborate with competitors of this supplier.A closer cooperation between our firm and this supplier will facilitate the relationship between our company and one of this supplier's competitors.Working together to this supplier can be beneficial to the performances in the relationship with other competing companies.							
Discriminant Validity Tests							
Models	χ^2	df	χ^2/df	$\chi^2/diff$	TLI	CFI	RMSEA
No constraints between latent variables	98.28	95	1.03		.99	.99	.014
Constrained models with perfect correlation between:							
SUPCOMP and RETCOMP	276.89	96	2.88	178.61*	.85	.88	.107
SUPCOMP and NORMS	340.93	96	3.55	242.65*	.74	.79	.13
SUPCOMP and NEGNETW	334.93	96	3.49	236.65*	.70	.76	.123
SUPCOMP and POSNETW	343.02	96	3.57	244.74*	.66	.73	.125
RETCOMP and NORMS	342.39	96	3.57	244.11*	.75	.80	.125
RETCOMP and NEGNETW	342.29	96	3.57	244.01*	.75	.80	.125
RETCOMP and POSNETW	**						
NORMS and NEGNETW	335.358	96	3.49	237.08*	.69	.75	.123
NORMS and POSNETW	332.13	96	3.46	233.85*	.68	.75	.122
NEGNETW and POSNETW	342.56	96	3.57	244.28*	.66	.73	.125

* Critical value for Chi-square at a 5% level = 3.841 (1 df)

** Covariance matrix not positive definite

APPENDIX VI.3

OPERATIONALIZATION AND DISCRIMINANT VALIDITY
TESTS FOR CONSTRUCT MEASURES:
RELATIONSHIP CHARACTERISTICS

Operationalization							
All items are measured on seven-point “strongly agree” to “strongly disagree” Likert scales unless otherwise mentioned.							
Trust in Supplier (TRUST) (4 items, $\alpha = 0.85$) (cf. Morgan and Hunt, 1994; Jap, 1999)				Relationship-specific Investment (RSI) (2 items, $\alpha = 0.67$) (cf. Anderson and Weitz, 1992; Jap, 1999)			
1. The promises of this supplier are reliable. 2. This supplier is very honest in dealing with our company. 3. Our firm trusts this supplier. 4. When problems arise, this supplier would go of its way to help our firm. (item deleted) 5. This supplier takes our firm’s interests into account, when something goes wrong.				1. If this relationship were to end, we would be wasting a lot of knowledge that’s tailored to their relationship. 2. If either company were to switch to a competitive retailer or supplier, we would lose a lot of the investments made in the present relationship. 3. We have invested a great deal in building up our joint business. (item deleted)			
Contract Formalization (FORM) (5 items, $\alpha = 0.84$; adapted from Jap and Ganesan,2000)				Supplier Dependence on Retailer (SUPDPND) (3 items, $\alpha = 0.82$) (cf. Kumar, Scheer and Steenkamp,1995)			
Our firm and this supplier ... 1. ... have a een specified and detailed agreement with each other. 2. ... have a formal written agreement stating each others obligations in detail. 3. ... have a contract that also includes specific penalties for any default. 4. ... govern our relationship with written contracts. 5. ... often refer to contracts in order to make a decision about differences of opinion.				To which extent is the supplier dependent on your firm? 1. If our firm ceases to do business with this supplier, then this supplier will have a problem in replacing compensation for the loss in sales from our trade area. (item deleted) 2. This supplier is through and through dependent on our firm. 3. It would be difficult for this supplier to replace our firm. 4. This supplier does not have a good alternative in our trade area.			
Retailer Dependence on Supplier (RETDPNP) (3 items, $\alpha = 0.84$) (cf. Kumar, Scheer and Steenkamp,1995)							
To which extent is our firm dependent on this supplier? 1. If this supplier ceases to do business with our firm, we will have a problem in replacing the loss in sales in this product category. 2. It would be difficult for our firm to replace this supplier. 3. Concerning this product category, our firm is through and through dependent on this supplier. (item deleted) 4. In this product category, our firm does not have a good alternative for this supplier.							
Discriminant Validity Tests							
Models	χ^2	df	χ^2/df	$\chi^2 diff$	TLI	CFI	RMSEA
No constraints between latent variables	198.98	109	1.83		.91	.93	.070
Constrained models with perfect correlation between:							
TRUST and TSI	229.92	110	2.09	30.94*	.88	.90	.081
TRUST and FORM	570.71	110	5.19	371.73*	.61	.68	.158
TRUST and SUPDPND	**						
TRUST and RETDPND	407.80	110	3.71	208.82*	.70	.76	.127
RSI and FORM	**						
RSI and SUPDPND	235.68	110	2.14	36.7*	.87	.89	.082
RSI and RETDPND	226.85	110	2.06	27.87*	.85	.90	.080
FORM and SUPDPND	**						
FORM and RETDPND	408.36	110	3.71	209.38*	.70	.76	.127
SUPDPND and RETDPND	376.35	110	3.42	177.37*	.74	.79	.121
* Critical value for Chi-square at a 5% level = 3.841 ** Covariance matrix is not positive definite							

APPENDIX VI.4

OPERATIONALIZATION AND DISCRIMINANT VALIDITY
TESTS FOR CONSTRUCT MEASURES:
SUPPLIER CHARACTERISTICS

Operationalization							
All items are measured on seven-point “strongly agree” to “strongly disagree” Likert scales unless otherwise mentioned.							
Market Information Processing Capabilities Supplier (4 items)	Goal Congruency (GOALCNG) (3 items, $\alpha = 0.82$) (adapted from Anderson and Weitz, 1989)						
Market Sensing Capabilities ($\alpha = 0.71$) (SUPINFSS) 1. This supplier performs a lot of market research on its own 2. This supplier is fast in tracing changes in consumer preferences	1. Our firm and this supplier pursue compatible goals. 2. Both companies have the same objectives in this relationship in common. 3. This supplier and our firm support each others’ sales and profit targets. 4. Our objectives differ significantly from those of this supplier (R)*						
Market Information Dissemination Capabilities* 3. At this supplier, all management levels are regularly updated about market developments. (item deleted) 4. Market information is professionally disseminated by this supplier throughout its organization. (item deleted)							
Market Relating Capabilities ($\alpha = 0.85$) (SUPINFRL) 5. This supplier knows well how to interpret market developments.* 6. This supplier is well capable of translating new market insights into marketing efforts. 7. This supplier is very good at commercializing market information.							
Top Management Support Supplier (SUP_TOP) (3 items, $\alpha = 0.84$) (adapted from Gruen and Shah, 2000)	Incentive Structure Supplier (SUP_INC) (2 items, $\alpha = 0.62$)						
The top management of this supplier provides our contact persons with the necessary financial resources to give shape to the collaboration with our firm. ... gives our contact person sufficient time to give shape to the collaboration with our firm. ... makes an adequate amount of personnel available to our contact person for the collaboration with our firm.	Our main contact person at this supplier receives appreciation from his/her own organization for the way in which he/she cooperates with our firm as a team. ... is being evaluated by his/her own organization for the way he manages the relationship with our firm. ... is mainly accountable for his/her own individual sales. (R) (item deleted)						
* item deleted from scale							
Discriminant Validity Tests							
Models	χ^2	df	χ^2/df	χ^2 diff	TLI	CFI	RMSEA
No constraints between latent variables	79.68	44	1.81		.93	.95	.072
Constrained models with perfect correlation between:							
SUPINFSS and SUPINFRL	84.18	45	1.87	4.50*	.92	.95	.074
SUPINFSS and GOALCNG	112.23	45	2.49	32.55*	.85	.90	.098
SUPINFSS and SUP_TOP	116.18	45	2.58	36.50*	.84	.89	.100
SUPINFSS and SUP_INC	102.23	45	2.27	22.55*	.88	.92	.091
SUPINFRL and GOALCNG	148.39	45	3.30	68.71*	.76	.84	.122
SUPINFRL and SUP_TOP	154.86	45	3.44	75.18*	.73	.81	.126
SUPINFRL and SUP_INC	101.77	45	2.26	22.09*	.88	.92	.090
GOALCNG and SUP_TOP	226.61	45	5.04	146.93*	.65	.76	.161
GOALCNG and SUP_INC	101.74	45	2.26	22.06*	.88	.92	.090
SUP_TOP and SUP_INC	90.89	45	2.02	11.21*	.90	.93	.081
* Critical value for Chi-square at a 5% level = 3.841							
** Covariance matrix is not positive definite							

APPENDIX VI.5

OPERATIONALIZATION AND DISCRIMINANT VALIDITY
TESTS FOR CONSTRUCT MEASURES:
RETAILER CHARACTERISTICS

Operationalization							
All items are measured on seven-point “strongly agree” to “strongly disagree” Likert scales unless otherwise mentioned.							
Market Information Processing Capabilities Retailer (4 items) (adapted from Jaworski and Kohli, 1993)				Firm's predisposition to ally with Suppliers(RETPRO) (Relational Proclivity) (cf. Johnson and Sohi, 2001) (3 items, $\alpha = 0.76$)			
Market Sensing Capabilities ($\alpha = 0.64$) (RETINFSS)				In general, in my firm the view is that...			
1. Our firm performs a lot of market research on its own				1. ... closer partner-type relationship with suppliers offer major advantages in doing business			
2. Our firm is fast in tracing changes in consumer preferences				2. ... teaming up and working closely with suppliers allows us to be more effective.			
Market Information Dissemination Capabilities				3. ... it is appropriate to share proprietary information with our suppliers if it is useful to do so.			
3. At our firm, all management levels are regularly updated about market developments. (item deleted)				4. ... most often, suppliers can be trusted to meet their obligations. (item deleted)			
4. Market information is professionally disseminated by our firm throughout our organization. (item deleted)				5. ... most of the time, suppliers will not take advantage of us. (item deleted)			
Market Relating Capabilities ($\alpha = 0.92$) (RETINFRL)				6. ... the less any supplier knows about how we do things, the better off we are . (R) (item deleted)			
5. Our firm knows well how to interpret market developments.*							
6. Our firm is well capable of translating new market insights into marketing efforts.							
7. Our firm is very good at commercializing market information.							
Top Management Support Retailer (own firm) (RET_TOP) (3 items, $\alpha = 0.78$)				Incentive Structure Retailer (own firm) (RET_INC) (2 items, $\alpha = 0.73$) (borrowed from Gruen and Shah, 2000)			
Our top management ...				Our firm ...			
1. ... provides us with the necessary financial resources to give shape to the collaboration with this supplier.				1. ... gives appreciation for the way in which we cooperate as a team with this supplier.			
2. ... gives us sufficient time to give shape to the collaboration with this supplier.				2. ... evaluates us for the way we manage the relationship with our firm.			
3. ... makes an adequate amount of personnel available to us for the collaboration with this supplier.				3. ... holds us mainly accountable for our own individual sales. (R) (item deleted)			
* item deleted from scale							
Discriminant Validity Tests							
Models	χ^2	df	χ^2/df	$\chi^2 diff$	TLI	CFI	RMSEA
No constraints between latent variables	51.45	44	1.17		.98	.99	.032
Constrained models with perfect correlation between:							
RETINFSS and RETINFRL	68.88	45	1.53	17.43*	.95	.96	.057
RETINFSS and RELPRO	83.93	45	1.87	83.93*	.91	.94	.073
RETINFSS and RET_TOP	79.89	45	1.78	79.89*	.92	.94	.069
RETINFSS and RET_INC	82.07	45	1.82	82.07*	.91	.94	.071
RETINFRL and RELPRO	194.19	45	4.32	194.19*	.73	.81	.142
RETINFRL and RET_TOP	173.62	45	3.86	173.62*	.61	.74	.132
RETINFRL and RET_INC	105.88	45	2.35	105.88*	.86	.90	.091
RETPRO and REL_TOP	195.84	45	4.35	195.84*	.72	.81	.143
RETPRO and REL_INC	110.28	45	2.45	110.28*	.88	.92	.087
RET_TOP and REL_INC	97.56	45	2.17	97.56*	.88	.92	.084
* Critical value for Chi-square at a 5% level = 3.841 (1 df)							
** Covariance matrix is not positive definite							

APPENDIX VI.6 CORRELATION MATRIX ANTECEDENTS

Construct	Market Channel Environment				Supplier Network Environment							Relationship Characteristics							Supplier				Retailer				
	1	2	3	4	5	6	7	8	9	10	11	13	14	15	16	17a	17b	18a	18b	19	20a	20b	21a	21b	22	23a	24b
Market Channel Environment 1: Consumer Demand Turbulence 2: Consumer Demand Growth 3: Purchase Complexity 4: Channel Inertia	1.00																										
	.36**	1.00																									
	.21**	.13	1.00																								
	.23**	-.06	.38**	1.00																							
Supplier Network Environment 5: Network Horizon 6: Network Concentration 7: Competition Intensity among suppliers 8: Competition Intensity among retailers 9: Information Sharing Norms 10: Negative Connectedness 11: Positive Connectedness	.18*	.06	.06	.12	1.00																						
	.05	.09	-.03	-.16**	.100	1.00																					
	.30**	.27**	.11	-.15*	.06	.13	1.00																				
	.24**	.18*	.08	-.02	.15	.45**	1.00																				
	.03	.00	.01	.02	.21**	-.02	-.03	-.08	1.00																		
	.12	.07	.19*	-.13	-.06	.04	.18*	.12	-.08	1.00																	
Relationship Characteristics 12: Relationship Age 13: Trust in Supplier 14: Relationship-specific Investment 15: Contract Formalization 16: Total Dependence 17a: Relative Retailer Dependence 17b: Relative Supplier Dependence	.11	.02	.09	.14	-.15	-.04	-.02	-.08	.16*	.03	1.00																
Supplier Characteristics 18a: Market Sensing Capabilities 18b: Market Relating Capabilities 19: Goal Congruency 20a: Top Management Support Supplier 20b: Incentive Structure Supplier	.11	.14	.03	-.12	.12	.07	.05	.02	.10	-.01	.07	.22**	.18*	-.07	.02	.27**	-.24**	1.00									
	.13	.16*	-.07	-.10	.10	.10	.02	-.06	.17*	-.04	-.01	.28**	.20**	.03	.00	.16*	-.25**	.69**	1.00								
	.02	.18*	-.03	-.04	.05	.05	-.03	.07	.02	-.02	-.01	.47**	.28**	.14	.12	.04	-.08	.28*	.39**	1.00							
	-.01	.15	.02	.06	.05	-.01	.03	.05	.13	-.05	.03	.27**	.20**	.21**	.15	-.13	.04	.12	.24**	.38**	1.00						
	-.02	-.01	.01	-.06	.04	-.09	-.08	-.04	.16*	.01	.06	.08	.08	.15	.17*	-.12	.13	.05	.10	.17*	.40*	1.00					
Retailer Characteristics 21a: Market Sensing Capabilities 21b: Market Relating Capabilities 22: Disposition to ally with suppliers 23a: Top Management Support Retailer 23b: Incentive Structure Retailer	-.06	-.01	-.02	.06	.11	-.14	-.09	-.02	.01	-.02	.07	-.08	-.08	.16*	.00	-.14	.09	.03	-.03	-.04	.16*	.24**	1.00				
	-.10	-.04	-.01	.00	.02	-.03	-.12	-.03	.06	-.02	.03	.05	-.05	.17*	.01	-.17*	.15	.16*	.11	.08	.20*	.25**	.53*	1.00			
	.12	.09	-.11	-.03	.09	-.16*	-.04	-.01	.11	-.16*	.04	.21**	.08	.08	.05	.00	.09	.05	.06	.30**	.18*	.24*	.16*	.20**	1.00		
	.02	-.06	.04	.17	.11	-.12	-.13	-.09	.08	.06	.03	.05	.13	.14	.16*	-.13	-.06	.06	.07	.09	.42**	.30*	.27**	.25**	.16*	1.00	
	.07	-.03	.06	.19*	.02	-.22	-.05	-.02	.15	-.02	.16*	.18*	.31	.25	.13	.00	.15	.01	.10	.24**	.37**	.53**	.23**	.22**	.35**	.38**	1.00

Note: * |r| ≥ 0.16 are significant at p < .05 for n = 161. ** |r| ≥ 0.20 are significant at p < .01 for n = 161 (listwise)

APPENDIX VI.7 CORRELATIONS BETWEEN SHARED CONTENT, SHARING MODE AND ANTECEDENTS

Shared Content			Frequency Contact				Sharing Mode				Exclusivity		Formalization		
Antecedents	Retailer's Shared Content		Supplier's Shared Content		By Retailer		By Supplier		Contact Frequency of Higher-level Management		Given by Retailer		Given by Supplier		Information Sharing
Market Channel Environment	-0.07		-0.07		.14	.13	.12	.12	.12		-0.06	-0.02		-0.10	
	.06		.21*		.29**	.31**	.03	.03	.15		.00	.13		.08	
	.02		-0.01		-0.05	-0.07	.03	.11	.11		.10	-0.01		-0.13	
	-0.12		-0.16		-0.07	-0.11									
Supplier Network															
	-0.12		-0.05		.07	-0.02	.11	.11	-0.04		-0.03	-0.03		-0.15	
	.20*		-0.02		.08	.12	.04	.08	.01		-0.05	-0.08		-0.09	
	-0.03		-0.03		.24**	.22**	.04	.01	.01		-0.13	.04		-0.01	
	-0.06		.02		.12	.08	-0.01	.00	.00		-0.11	-0.05		-0.06	
	.34**		.23*		-0.04	.01	-0.02	.04	.04		-0.12	.08		.12	
	-0.07		.01		-0.02	-0.03	-0.05	.09	.09		.17*	.01		.00	
	.10		.05		-0.08	-0.06	-0.07	.04	.04		.03	.10		.16	
Relationship Characteristics	.15 ¹		.07 ²		-.05 ³	-.07 ³	-.04 ³	.15 ³	.15 ³		.06 ³	.14 ³		.06 ³	
	.10		.21*		.11	.12	.03	.01	.01		.09	.12		.02	
	.12		.12		.16*	.15	.21**	.27**	.27**		.27**	.27**		.17**	
	.08		.14		.05	.03	.15	.07	.07		.00	.04		.32**	
	.26**		.20*		.15	.12	.17*	.35**	.16		.16	.20*		.09	
	-.08		-.01		-0.06	.01	-0.16*	-.02	-.02		.08	-.12		-0.05	
	.02		-.16		.02	.03	.01	.00	.00		-.02	.11		-.12	
Supplier Characteristics															
	.04		.50**		-.10	-.03	-.02	-.05	-.05		.12	.05		.23**	
	.13		.50**		.01	.05	.05	.03	.10		.11	.18*		.17*	
	.16		.37**		.14	.19*	.03	.00	.00		.02	.20*		.13	
	.08		.34**		.13	.16	.27	.18*	.12		-0.02	.14		.23**	
Retailer Characteristics	.21*		.23**		.18*	.22**	.25**	.16*	.16*		.13	.24**		.18*	
	.09		.09		.07	-.08	.19	-.02	-.02		-.10	.03		.23**	
	.30**		.25**		.03	.02	.16	.10	.10		-.09	.04		.22**	
	.23**		.18		.04	.02	.06	.18*	.18*		-.05	-.02		.06	
Covariates	.06		.02		.01	.04	.22*	.10	.10		.00	.04		.13	
	.13		.15		.05	.05	.13	.14	.14		.14	.21**		.17*	
	.07		.16		-.13	-.18	.24**	-.17*	-.17*		-.06	.00		.05	
Supplier Type (Brand = 1; private label = 0)															
n = 132 n = 112 n = 159 n = 159 n = 159 n = 159 n = 159 n = 159															

* p < .05; ** p < .01

APPENDIX VII.1 OPERATIONALIZATION AND DISCRIMINATION TESTS FOR CONSTRUCT MEASURES CONSEQUENCES: RELATIONSHIP PERFORMANCE AND QUALITY

Operationalization

All items are measured on seven-point "strongly agree" to "strongly disagree" Likert scales unless otherwise mentioned.

Economic Satisfaction (ECOSAT)

(3 items; $\alpha = .76$; adapted from Geyskens and Steenkamp, 2000)

1. The relationship with this supplier has provided our firm with a dominant and profitable market position in this product category.
2. The relationship with this supplier is very attractive with respect to economic results.
3. The marketing policy of this supplier helps our firm to get more results.
4. This supplier provides our firm with marketing support of high quality.*
5. In the relationship with this supplier, the activities with our firm are very efficiently coordinated.*
6. Our firm is very satisfied with the flexibility by which we and this supplier react to market changes.*
7. The relationship with this supplier is very "consumer demand driven".*

Social Satisfaction (SOCSAT)

(3 items; $\alpha = .71$) (adapted from Geyskens and Steenkamp, 2000)

1. The working relationship of our firm with this supplier is characterized by feelings of hostility.(R)
2. Interactions between my firm and this supplier are characterized by mutual respect.
3. This supplier is very open about things our firm ought know.(R)
4. This supplier refuses to explain the reasons for its policies.(R)*

Joint Profits (PROFIT)

(3 items, $\alpha = .89$; adapted from: Jap 1999)

1. Together with this supplier we have achieved a high level of joint profits between us.
2. Together with this supplier we have generated a lot of extra sales in this product category.

Willingness to invest in the relationship with the supplier (WILL)

($\alpha = .85$; adapted from Kumar, et al.1995)

1. If the supplier requested it, our firm would be willing to make further investment in the relationship with this supplier.
2. We are willing to put more effort and investment in expanding the business dealings with this supplier.
3. In the future our firm will work more with this supplier to serve the consumer better.*

Affective Commitment to the relationship with this supplier (AFF)

($\alpha = .78$; adapted from Kumar, et al.1995)

1. Even if our firm could, we would not drop the supplier because we like being associated with them.*
2. Our firm wants to remain a member of the supplier's network, because we genuinely enjoy our relationship with them.
3. The positive feelings of our firm towards the supplier are a major reason we continue working with them.

Continuity Expectations (CONT)

($\alpha = .89$; adapted from Kumar, et al.1995)

1. Our firm expects our relationship with the supplier to continue for a long time.
2. Renewal of relationship with supplier is virtually automatic.*
3. It is likely that our firm will still be doing business with this supplier in 2 years.

Attainment of competitive channel advantage (CCA)

(3 items, $\alpha = .88$; adapted from: Jap, 1999)

1. With this supplier we have gained strategic advantages over our competitors.
2. The relationship with this supplier has resulted in strategic advantages for us. (R)*
3. The benefits from this supplier relationship enabled us to compete more effectively in the consumer marketplace.
4. The benefits from this supplier relationship enabled us to compete more effectively in the purchasing market.*
5. This supplier relationship has resulted in strategically important outcomes.

* item deleted from scale

Discriminant Validity Tests

Models	χ^2	df	χ^2/df	χ^2 diff	TLI	CFI	RMSEA
No constraints between latent variables	141.16	98	1.44		.96	.97	.053
Constrained models with perfect correlation between:							
PROFIT and CCA	234.87	99	2.37	93.71*	.88	.91	.086
PROFIT and ECOSAT	211.08	99	2.13	69.92*	.89	.92	.084
PROFIT and SOCSAT	217.24	99	2.19	76.08*	.86	.90	.087
PROFIT and WILL	216.75	99	2.19	75.59*	.84	.89	.086
PROFIT and AFF	200.35	99	2.02	59.19*	.88	.92	.080
PROFIT and CONT	240.51	99	2.43	99.35*	.80	.86	.095
CCA and ECOSAT	181.20	99	1.83	40.04*	.92	.94	.072
CCA and SOCSAT	200.52	99	2.03	59.36*	.89	.92	.080
CCA and WILL	212.48	99	2.15	71.32*	.86	.90	.085
CCA and AFF	199.33	99	2.01	58.17*	.89	.92	.080
CCA and CONT	241.48	99	2.44	100.32*	.80	.86	.095
ECOSAT and SOCSAT	212.69	99	2.15	71.53*	.88	.91	.085
ECOSAT and WILL	212.69	99	2.15	71.53*	.87	.91	.085
ECOSAT and AFF	202.77	99	2.05	61.61*	.89	.92	.081
SOCSAT and WILL	227.12	99	2.29	85.96*	.85	.89	.090
SOCSAT and AFF	194.87	99	1.97	53.71*	.90	.93	.078
SOCSAT and CONT	212.85	99	2.15	71.69*	.88	.91	.085
WILL and AFF	199.66	99	2.02	58.50*	.89	.92	.080
WILL and CONT	242.22	99	2.45	101.06*	.80	.86	.095
AFF and CONT	200.20	99	2.02	59.04*	.90	.92	.080

* Critical value for Chi-square at a 5% level = 3.841 (1 df)

APPENDIX VII.2

BIVARIATE CORRELATIONS
BETWEEN SHARED CONTENT,
SHARING MODE, AND CONSEQUENCES

	Joint Market Learning				Relationship Quality				Relationship Performance		
					Satisfaction		Commitment				
	JD	JI	JU	JR	Eco. Sat.	Soc. Sat.	Will.	Affect Com.	Cont. Exp.	Joint Profit	CCA
Joint Market Learning											
Joint Detection of Market Development											
Joint Interpretation of Market Developments	.85**										
Joint Utilization of Market Information	.74**	.73**									
Joint Reviewing Joint Market Learning Process	.72**	.81**	.62**								
Relationship Quality											
Economic Satisfaction	.59**	.48**	.53**	.43**							
Social Satisfaction	.52**	.38**	.32**	.26**	.42**						
Willingness to invest	.29**	.29**	.14	.27**	.34**	.31**					
Affective Commitment	.25*	.26**	.25*	.23*	.33**	.40**	.42**				
Continuity Expectancy	.14	.13	.04	.01	.21*	.38**	.39**	.48**			
Relationship Performance											
Joint Point	.39**	.23*	.42**	.18	.63**	.20*	.13	.22*	.17		
Channel Competitive Adv.	.54**	.46**	.47**	.45**	.77**	.42**	.36**	.28**	.24*	.54**	
Degree of Shared Content											
By Retailer	.42**	.43**	.29**	.43**	.38**	.26**	.06	.01	-.02	.25*	.43**
By Supplier	.54**	.48**	.43**	.52**	.37**	.35**	.15	.14	.09	.23*	.39**
Sharing Mode											
Contact Frequency by Retailer	.09	.02-	.10	.01	.03	.06	.21*	.17	.16	.13	.19
Contact Frequency by Supplier	.13	.06	.18	.12	.11	.06	.26**	.15	.10	.13	.21*
Higher Management from Retailer	.28**	.19	.29**	.18	.21*	.04	.14	.05	-.01	.23*	.27**
Higher Management from Supplier	.06	.03	.15	.06	.24*	.04	.24*	.22*	.21*	.24*	.21*
Exclusivity given by Retailer	.13	.15	.10	.19	.19	-.04	.05	.19	.10	.09	.18
Exclusivity given by Supplier	.24*	.25*	.26*	.34**	.28**	.03	.08	.17	.11	.15	.28**
Formalization Information Sharing	.43**	.45**	.34**	.54**	.18	.17	.08	.09	-.02	.06	.25*
Note: JD. = Joint Detection of Market Development; JI. = Joint Interpretation of Market Developments; JI. = Joint Utilization of Market Information; JR= Joint Reviewing of Joint Market Learning Process; Eco.Sat = Economic Satisfaction; Soc.Sat = Social Satisfaction; Will. = willingness to invest; Affect.Comm. = Affective Commitment; Cont.Exp. = Continuity Expectancy; CCA = Competitive Channel Advantages *p<.05; **p<.01; n= 99 (listwise deletion)											

APPENDIX VIII.1 **EXPERIMENT:
MANIPULATION LEVEL OF TRUST**

Low Initial Trust

Smalsko MEMO

From: M. Jansen
CC: W. Teunisse, CEO
Concerning: Important issues of your new position
Date: April 28, 2000

Dear Successor:

Due to the sudden hectic of changing jobs - my promotion to OtherCo. and you coming from another company to fulfill my previous position - I was not able to properly inform you on all details of the job. I still regret that.

Therefore, I wish to underline some subjects by means of this memo. First, the password for the personal computer on your desk is 'cup'.

Second, your appointment with our Market Research Department is scheduled at 9:00 am May 2nd.

Third, as a supplier of coffee to supermarket chains it is crucial to develop good working relationships. I wish to make some comments on one of our working relationships: supermarket chain 'SHOPHERE'.

You should **not trust** 'SHOP HERE'. I don't have many good things to say. I don't feel we can trust these people to be very 'up front' with us. They sometimes play games or give us misleading cues.

Once we put ourselves in the position of having to ask 'SHOP HERE' to keep a trade secret away from competitors, though it was in SHOPHERE's best interest to spread the news. The secret spread like wildfire. I am convinced that we can not trust them.

Wishing you success with your new and challenging job,

Mark Jansen

High Initial Trust

Smalsko MEMO

From: M. Jansen
CC: W. Teunisse, CEO
Concerning: Important issues of your new position
Date: April 28, 2000

Dear Successor:

Due to the sudden hectic of changing jobs - my promotion to OtherCo. and you coming from another company to fulfill my previous position - I was not able to properly inform you on all details of the job. I still regret that.

Therefore, I wish to underline some important topics by means of this memo. First, the password for the personal computer on your desk is 'cup'.

Second, your appointment with the Market Research Department is scheduled at 9:00 am May 2nd.

Third, as a supplier of coffee to supermarket chains it is crucial to develop good working relationships. I wish to make some comments on one of our working relationships: supermarket chain 'SHOPHERE'.

You should **trust** 'SHOPHERE'. I have many good things to say. I feel we can trust these people to be very 'up front' with us. They will not play games or give us misleading cues.

Once we put ourselves in the position of having to ask 'SHOP HERE' to keep a trade secret away from competitors, though it was in SHOPHERE's best interest to spread the news. The secret never got out. I am convinced that we can trust them.

Wishing you success with your new challenging job,

Mark Jansen

APPENDIX VIII.2 EXPERIMENT: MANIPULATION LEVEL OF CONNECTEDNESS

Low Connectedness



Department of Market Research

Concerning: **Positioning SMALSKO versus NUTTREE**

It is also known that

- SMALSKO and NUTTREE have **never** been strong rivals.
- Traditionally, the positioning of both companies' brands has **very distinct** and is aimed to keep their own consumers.
- SMALSKO and NUTTREE have always **avoided price wars** and have educated consumers to appreciate brand image in their choice of coffee brands.
- As a result, consumers have developed a habit of **brand loyalty**.
- Not surprisingly, decisions from SHOPHERE favoring your biggest competitor NUTTREE will NOT have **any impact** on SMALSKO's sales and profit figures.

SMALSKO Market Research Department, February 2000

High Connectedness



Department of Market Research

Concerning: **Positioning SMALSKO versus NUTTREE**

It is also known that

- SMALSKO and NUTTREE have **always** been strong rivals.
- Traditionally, the positioning of both companies' brands has **very similar** and is aimed to attract each other's consumers.
- Many times, SMALSKO and NUTTREE have **begun price wars**, which conditioned consumers to be price-sensitive in their choice of coffee brands.
- As a result, consumers have developed a habit of **brand switching**.
- Not surprisingly, decisions from SHOPHERE favoring your biggest competitor NUTTREE will have a **major negative impact** on SMALSKO's sales and profit figures.

SMALSKO Market Research Department, February 2000

APPENDIX VIII.3 **EXPERIMENT:
MANIPULATION LEVEL OF
INFORMATION SHARING ANNOUNCEMENT**

Announcement: No Information Sharing

**SHOP HERE does not
share anything**

AMSTERDAM, August 2, 2000 -
Everybody in the industry has been curious about
SHOPHERE's decision on ECR Speculations
abound: what product categories would be
included? Who would become the lucky partners?

Yet it seems that the national biggest supermarket
chain has not made a decision.

At the presentation of SHOPHERE's second
quarter earnings, CEO Jan de Jong did not say
anything concerning this issue.

Even, he declined any comment on the matter
when one of *DailyFood*'s journalists asked questions
on the company's information-sharing intentions.

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Announcement: Information Sharing

SHOPHERE
1000 BASKETDRIVE
AMSTERDAM
THE NETHERLANDS

August 1, 2000

TO: SMALSKO Coffee Company

Dear Mr. Teunisse:

We are pleased to invite you and your account manager to discuss the
possibility to start an extensive ECR project, which includes sharing valuable
market information. In various product categories we are planning to start
similar initiatives and in the coffee category we have selected your company.

Overall, the coffee market did not report any growth in recent years, and we
think that close cooperation with one selected partner on the basis of full
disclosure of information could increase the profitability for both partners.

We look forward to your reply,

Yours Sincerely,

Jan de Jong
General manager SHOP HERE

APPENDIX VIII.4 OPERATIONALIZATIONS OF CONSTRUCTS EXPERIMENT

RELATIONSHIP QUALITY MEASURES	
<i>Economic Satisfaction (Adapted from Geyskens and Steenkamp, 2000)</i>	
SAT1	Its relationship with {SUPERMARKET S} has provided {YOUR COMPANY} with a dominant and profitable market position.
SAT2	{YOUR COMPANY}'s relationship with {SUPERMARKET S} is a very attractive one in economic terms.
SAT3*	{YOUR COMPANY} is very pleased with the high distribution coverage that SHOPHERE provides.
Cronbach's alpha (t ₁ , t ₂): 0.67 , 0.63	
Mean (t ₁ , t ₂): 5.04 , 5.33	
Standard deviation (t ₁ , t ₂): 1.48 , 1.06	
Range (t ₁ , t ₂): 1 to 7 , 2 to 7	
<i>Social Satisfaction (Adapted from Geyskens and Steenkamp, 2000)</i>	
SAT4	Interaction between {SUPERMARKET S} and {YOUR COMPANY} are characterized by mutual respect
SAT5	{SUPERMARKET S} is very open towards {YOUR COMPANY} about things that {YOUR COMPANY} ought to know.
SAT6	{YOUR COMPANY}'s relationship with {SUPERMARKET S} reflects a happy situation.
The relationship between the two companies is very positive.	
{YOUR COMPANY} is very satisfied with {SUPERMARKET S}.	
In general, {YOUR COMPANY} is pretty happy with its dealing with {SUPERMARKET S}.	
Cronbach's alpha (t ₁ , t ₂): 0.96 , 0.97	
Mean (t ₁ , t ₂): 3.55 , 4.18	
Standard deviation (t ₁ , t ₂): 1.81 , 1.57	
Range (t ₁ , t ₂): 1 to 7 , 1 to 7	
* These items were deleted from further analysis	
<i>Calculative Commitment (Adapted from Kumar, Steenkamp and Scheer, 1995)</i>	
COM7	If {SUPERMARKET S} requested it, {YOUR COMPANY} is willing to make further investment in supporting {SUPERMARKET S}'s coffee assortment.
COM8	{YOUR COMPANY} is willing to put more effort and investment in building their business with {SUPERMARKET S}.
COM9	In the future {YOUR COMPANY} will work to link their firm with {SUPERMARKET S}'s in order to serve the consumer better.
Cronbach's alpha (t ₁ , t ₂): 0.84 , 0.84	
Mean (t ₁ , t ₂): 3.85 , 1.64	
Standard deviation (t ₁ , t ₂): 1.64 , 1.33	
Range (t ₁ , t ₂): 1 to 7 , 1 to 7	
<i>Affective Commitment (Adapted from Kumar, Steenkamp and Scheer, 1995)</i>	
COM1	Even if {YOUR COMPANY} could, they would not drop {SUPERMARKET S} because they like being associated with them.
COM2	{YOUR COMPANY} wants to remain a member of the {SUPERMARKET S}'s network, because they genuinely enjoy their relationship with them.
COM3	{YOUR COMPANY}'s positive feelings towards {SUPERMARKET S} are a major reason they continue working with them.
COM4*	{YOUR COMPANY} expects their relationship with {SUPERMARKET S} to continue for a long time.
COM5*	Renewal of the relationship with {SUPERMARKET S} is virtually automatic.
COM6*	It is likely that {YOUR COMPANY} will continue doing business with {SUPERMARKET S} during the following 2 years.
Cronbach's alpha (t ₁ , t ₂): 0.84 , 0.84	
Mean (t ₁ , t ₂): 3.85 , 4.35	
Standard deviation (t ₁ , t ₂): 1.64 , 1.32	
Range (t ₁ , t ₂): 1 to 7 , 1 to 7	

APPENDIX VIII.5 MEASURES OF CONSTRUCTS EXPERIMENT

MANIPULATION CHECKS

<i>Honesty as part of Trust (Adapted from Kumar, Steenkamp and Scheer, 1995)</i>		<i>Benevolence as part of Trust (Adapted from Kumar, Steenkamp and Scheer, 1995)</i>	
HON1	Even when {SUPERMARKET S} gives {YOUR COMPANY} a rather unlikely explanation, {YOUR COMPANY} is confident that they are telling them the truth.	BEN1	Though circumstances change, {YOUR COMPANY} believes that {SUPERMARKET S} will be ready and willing to offer them assistance and support.
HON2	{SUPERMARKET S} often provides {YOUR COMPANY} information, which later proves to be inaccurate (r)	BEN2	When making important decisions, {SUPERMARKET S} is concerned about {YOUR COMPANY}'s welfare.
HON3	{SUPERMARKET S} usually keeps the promises they make to {YOUR COMPANY}.	BEN3	When {YOUR COMPANY} shares their problems with {SUPERMARKET S}, they know that {SUPERMARKET S} will respond with understanding.
HON4	Whenever {SUPERMARKET S} gives {YOUR COMPANY} advice on their business operations, we know they are sharing their best judgment.	BEN4	In the future {YOUR COMPANY} can count on {SUPERMARKET S} to consider how its decisions and actions will affect them.
HON5	{YOUR COMPANY} can count on {SUPERMARKET S} to be sincere.	BEN5	When it comes to things, which are important to {YOUR COMPANY}, they can depend on the {SUPERMARKET S}'s support.
Cronbach's alpha (t ₁): 0.87		Cronbach's alpha (t ₁): 0.90	
Mean (t ₁): 4.22		Mean (t ₁): 3.48	
Standard deviation (t ₁): 1.60		Standard deviation (t ₁): 1.36	
Range (t ₁): 2 to 7		Range (t ₁): 1 to 7	
<i>Conflict (Adapted from Kumar, Steenkamp and Scheer, 1995)</i>		<i>Connectedness (Adapted from Hakansson, Anderson and Johanson, 1994)</i>	
	When {YOUR COMPANY} reflects on its relationship with {SUPERMARKET S}, {YOUR COMPANY} feels anger.	CNC1	If supermarket chain {SUPERMARKET S} starts cooperating with competitor {YOUR COMPETITOR}, {SUPERMARKET S} makes it difficult to work together with {YOUR COMPANY}.
CNF2	When {YOUR COMPANY} reflects on its relationship with {SUPERMARKET S}, {YOUR COMPANY} feels frustration.	CNC2	Too close a relationship between {SUPERMARKET S} and {YOUR COMPETITOR} will destroy the balance between {YOUR COMPANY} and {SUPERMARKET S}.
CNF3	When {YOUR COMPANY} reflects on its relationship with {SUPERMARKET S}, {YOUR COMPANY} feels resentment.	CNC3	Collaboration of {SUPERMARKET S} with {YOUR COMPETITOR} is harmful to {SUPERMARKET S}'s relationship with {YOUR COMPANY}.
CNF4	When {YOUR COMPANY} reflects on its relationship with {SUPERMARKET S}, {YOUR COMPANY} feels hostility.	CNC4	Although {SUPERMARKET S}'s working together with {YOUR COMPETITOR} will likely provide some benefits to them, {YOUR COMPANY} may not be happy about this.
CNF5	A high degree of conflict exists between the {SUPERMARKET S} and {YOUR COMPANY}.		
CNF6	{SUPERMARKET S} and {YOUR COMPANY} have major disagreements on key issues.		
Cronbach's alpha (t ₁): 0.94		Cronbach's alpha (t ₁): 0.78	
Mean (t ₁): 3.64		Mean (t ₁): 5.1	
Standard deviation (t ₁): 1.61		Standard deviation (t ₁): 1.12	
Range (t ₁): 1 to 7		Range (t ₁): 2 to 7	

SAMENVATTING (SUMMARY IN DUTCH)

SAMENVATTING (SUMMARY IN DUTCH)

Na een ongekend snelle professionalisering waarin de slaapverwekkende gefragmenteerde kleingruttershandel zich ontpopte tot een hypercompetitieve, geconsolideerde en technologisch geavanceerde bedrijfstak staat er bij de retailbranche opnieuw een radicale ontwikkeling voor de deur. Deze keer belt de vernieuwing aan bij de achterdeur. Deze zogenaamde *Back-End Revolution of Retailing* wordt mogelijk gemaakt door de recente ontwikkelingen in informatie- en communicatietechnologie. Daar komt bij dat door een toenemende standaardisering in productcodering en een al wijdverspreide adoptie van Web-based communicatiemiddelen de mogelijkheden voor retailers zodanig zijn vergroot dat ze nu hun leveranciersrelaties (supply chain management) drastisch kunnen vernieuwen. Vernieuwing in de retailer-leverancier relaties is hoogst noodzakelijk want het is voor distributiekanaalen nog steeds erg lastig om de juiste producten in de juiste hoeveelheden op het juiste moment op de juiste plek te krijgen. Dat wordt zeker moeilijker te bewerkstelligen als de consumentenvraag vaker onvoorspelbaar verandert.

In de nieuwe manier van zaken doen met hun leveranciers kunnen retailers grofweg kiezen tussen twee strategieën. Ze besluiten ofwel om die nieuwe digitale mogelijkheden te gebruiken om hard tegen hun leveranciers te vechten, ofwel om met hen samen te werken. Een voorbeeld van de vechtstrategie is het organiseren van gemeenschappelijke elektronische marktplaatsen met reversed auctions waardoor vooral de concurrentie tussen leveranciers verhevigd wordt en inkooprijzen naar beneden worden gedreven. De andere strategie die de Back-End Revolutie biedt, is het aangaan van samenwerking met de leveranciers. Retailers zouden samen met hun handelspartijen meer kunnen streven naar het omvormen van de gezamenlijke aanbodketen tot een vraaggedreven kanaal, dat beter, sneller en tegen lagere kosten in consumentenbehoeften voorziet. Efficient Consumer Response (ECR), Quick-response (QR), Continuous Replenishment Planning (CRP), Vendor-Managed Inventory (VMI), Collaborative Planning Forecasting and Replenishment (CPFR), Category Management (CM) en Collaborative Customer Relationship Management (CCRM); allemaal vormen van kanaalsamenwerkingen. Essentieel voor het slagen van zo'n kanaalpartnerschap is dat beide partijen, retailers en leveranciers, elkaar op de hoogte houden van de laatste marktontwikkelingen. Het elkaar informeren over wat zij over de markt weten is het centrale onderwerp van dit proefschrift. Heel specifiek gaat dit proefschrift in op drie aan elkaar verwante onderzoeksvragen:

1. Wat zijn de eigenschappen van het delen van informatie in distributiekkanalen?
2. Wat zijn de antecedenten voor het delen van marktinformatie?
3. Wat zijn de gevolgen van het delen van marktinformatie?

Op basis van een rijke variëteit aan onderzoeksmethoden worden er antwoorden op deze drie vragen geformuleerd. De eerste onderzoeksmethode is literatuuronderzoek. Om er zeker van te zijn dat dit proefschrift iets nieuws aan de kennis over het delen van marktinformatie toevoegt, is het belangrijk om eerst te weten wat er al over bekend is. In Hoofdstuk 2 wordt aan de hand van ruim 120 verschillende studies de bestaande inzichten uit drie verschillende onderzoeksperspectieven geïnventariseerd. De drie onderzoeksperspectieven die in dat hoofdstuk de revue passeren zijn: supply chain optimalisatie benadering, de spel-theoretische benadering, en de gedragswetenschappelijke empirische benadering.

De nieuwe inzichten, die in deze dissertatie gepresenteerd worden, zijn gebaseerd op data die op twee verschillende manieren verzameld zijn: een enquête en een experiment. De enquête is gehouden onder meer dan 170 professionele inkopers van Nederlandse retailorganisaties. De deelnemers aan het experiment waren studenten met een grote interesse in marketing en processen binnen handelsrelaties. Hieronder wordt per onderzoeksvraag een overzicht gegeven van de belangrijkste bevindingen in het proefschrift:

Wat zijn de eigenschappen van het delen van informatie in distributiekkanalen?

In de praktijk van distributiekkanalen wordt het intensiever delen van marktinformatie aangeduid met diverse namen. Dat geeft al aan dat er een rijke verscheidenheid bestaat in de overeenkomsten op basis waarvan de retailer en leverancier elkaar inzicht geven in de eigen marktinformatie. Van het eenvoudig frequent en elektronisch uitwisselen van bestel- en leveringsinformatie in EDI- en QR-arrangementen, tot het uitwisselen van strategische klanten- en concurrentie-informatie (CM en CCRM). Hiertussen zijn er allerlei vormen als het delen van logistieke informatie (VMI), vraagvoorspellingen, en sales promotie planning (CPFR). Niet alleen het type marktinformatie dat uitgewisseld wordt, maar ook de manier waarop informatie gedeeld wordt kan per bedrijf uiteenlopen. Partijen kunnen verschillen in de formalisatie van hun informatieuitwisseling, in de exclusiviteit ervan, in de contactfrequentie en in de betrokkenheid van hoger management.

In Hoofdstuk 5 wordt op basis van de enquêteuitkomsten systematisch gekeken naar de verscheidene aspecten van marktinformatie-uitwisseling tussen retailer en leverancier. Een

belangrijke les is om de gedeelde informatie (Gedeelde Inhoud, *Shared Content*) te scheiden van de manier waarop marktinformatie gedeeld wordt (Deelwijze, *Sharing Mode*). Wat betreft de Gedeelde Inhoud, toont dit proefschrift empirisch bewijs dat hierin een hiërarchische (opeenvolgende) rangschikking van 5 niveau's bestaat. Het nul-niveau is *geen* informatie uitwisselen; het hoogste is "vier" en betekent dat er inzicht gegeven wordt in strategische klanten-, concurrentie- en businessproces-informatie. We hebben ontdekt dat kanaalpartijen pas strategische marktinformatie doorgeven nadat ze elkaar inzicht hebben gegeven in hun meer operationele soorten van informatie. In onze steekproef geeft 80% van de retailers en 64% van de leveranciers inzicht in enige marktinformatie (hoger dan niveau 0). Vierentwintig procent van de retailers geeft inzicht in het hoogste niveau, terwijl 16% van de leveranciers dat doen. Aangaande de Deelwijze, wordt er over het algemeen vrij frequent uitgewisseld, vindt het zelden exclusief plaats en in weinig gevallen wordt er uitvoerig geformaliseerd. Hoewel er een verband bestaat tussen Gedeelde Inhoud en Deelwijze laat dit proefschrift zien dat het niveau van de gedeelde informatie niet automatisch iets zegt over de manier waarop informatie uitgewisseld wordt. In de latere hoofdstukken wordt het belang van het onderscheid tussen Gedeelde Inhoud en Deelwijze onderstreept.

Wat zijn de antecedenten voor het delen van marktinformatie?

Oftewel: waarom delen sommige bedrijven wel marktinformatie met elkaar of anderen niet? Hoewel de voordelen van ketensamenwerking en het delen van informatie bij veel retailers en fabrikanten bekend en evident zijn, laten diverse beschrijvende onderzoeken zien dat het doorgeven van marktinformatie aan elkaar toch nog maar sporadisch plaatsvindt. De vraag waarom bepaalde bedrijven wel en andere geen informatie uitwisselen met hun kanaalpartijen is nog nooit grootschalig en in diverse retailbranches tegelijk onderzocht. Voor deze tweede onderzoeksvraag formuleert Hoofdstuk 3 een veelomvattend onderzoeksmodel dat gestoeld is op de sociale ruiltheorie. Die theorie stelt dat bedrijven een relatie met een ander voortzetten en uitbouwen wanneer de voordelen voor hen de nadelen overstijgen. Dat wil zeggen dat strategische marktinformatie pas wordt gedeeld wanneer de voordelen voor een retailer of leverancier groter zijn dan de nadelen. De hypothesen hierover worden in Hoofdstuk 6 op basis van de enquêteresultaten getoetst. De voornaamste conclusie is dat bedrijven [meer] strategische informatie delen in twee gevallen. Ten eerste delen zij informatie vanuit een positie van sterkte: als ze zelf capaciteiten hebben ontwikkeld om de marktinformatie goed te gebruiken. Ten tweede zijn ze geneigd intensiever informatie te delen binnen kanaalrelaties waarvan ook de andere partij sterk afhankelijk is. Interessant en misschien wel counter-intuïtief is dat deze studie laat zien dat het vertrouwen van de retailer in de leverancier geen aantoonbare stimulerende rol speelt. Eveneens verrassend is dat turbulentie in de consumentenvraag

retailers lijkt ontmoedigen om informatie te delen. Juist in tijden van een onzekere consumentenvraag is real-time marktinformatie waardevoller voor een betere prestatie van het gehele distributiekanaal.

Wat zijn de gevolgen van het delen van marktinformatie?

De derde onderzoeksvraag, die in deze dissertatie aan de orde wordt gesteld, is of het delen van marktinformatie leidt tot een betere prestatie van het distributiekanaal. Kan het delen van informatie daadwerkelijk bijdragen aan het succes van de omvorming van de aanbodketen tot een vraaggedreven kanaal? Leren informatiedelende bedrijven beter van de ontwikkelingen in de consumentenmarkt? Resulteert het uitwisselen van marktinformatie in hogere gezamenlijke winsten en het creëren van concurrentievoordelen in het kanaal? Draagt het bij aan het verbeteren van de relatiekwaliteit tussen retailer en leverancier? In de hoofdstukken 7 (enquête) en 8 (experiment) toetst dit proefschrift of het informatiedelen daadwerkelijk de gewenste positieve gevolgen heeft. Zowel de uitkomsten van enquête als die van het experiment bevestigen dat kanaalrelaties beter worden naarmate er meer informatie wordt gedeeld. Bovendien laat de enquête zien dat wanneer retailer en leverancier hogere niveaus van marktinformatie uitwisselen, zij beter van de markt leren, meer gezamenlijke winst genereren en extra concurrentievoordelen creëren. Dieper gaande analyses laten voorts zien, dat vooral in omstandigheden met een turbulente consumentenvraag de leer-effecten en concurrentievoordelen aanwezig en omvangrijk zijn. Dit demonstreert dat de retailers die hun eerste reactie om niet te delen in dergelijke omstandigheden negeren, daar uiteindelijk voor beloond worden met betere resultaten voor het kanaal.

Direct relevant voor bedrijven is dat Hoofdstuk 9 op basis van de onderzoeksbevindingen duidelijke richtlijnen geeft die retailers en leveranciers kunnen hanteren om de condities voor en de effectiviteit van het delen van marktinformatie te verbeteren.

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Willem Smit (Hendrik-Ido-Ambacht, 1972) is currently working as a Research Fellow at IMD - International Institute for Management Development in Lausanne, Switzerland. Prior to this, Willem graduated with a Master's degree in Marketing from the Rotterdam School of Management, Erasmus University. He also studied management at McGill University in Montréal, Canada. After several years in business, he returned to academia and started his PhD at the Erasmus Research Institute of Management, Erasmus University Rotterdam. He has presented his research on marketing at different academic and professional conferences in both Europe and North America.

All through his PhD research, Willem teamed up with three communities. First, he worked with the business community on several research and consulting projects, such as future retail formats of car dealers (with Automotive), online retailers' market intelligence (with Thuiswinkel.org), future competitiveness of garden centers (with Dibevo), supplier involvement in the fashion industry, and soccer clubs' fan loyalty (with Sparta and Excelsior). Second, he internationalized EPAR, the Erasmus University's PhD Association, to better represent his fellow PhD candidates' community and third, he served the academic community as an ad-hoc reviewer for Marketing Science, IMP conference, and Industrial Marketing Management.

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Market Information Sharing in Channel Relationships Its Nature, Antecedents, and Consequences

Efficient Consumer Response, Quick-response, Continuous Replenishment Planning, Vendor-Managed Inventory, Collaborative Planning Forecasting and Replenishment – all are names for channel arrangements in which retailers and suppliers actively work together in transforming the supply chain into a demand-driven channel in order to fulfill consumer wishes better, faster, and at lower costs. For collaborative channel arrangements it is essential that retailers and suppliers keep each other informed about the latest consumer market developments. This dissertation focuses on market information sharing practices in retailer-supplier channel relationships. By investigating the underlying nature, it finds that it is important to separate sharing mode from the shared content. The sharing mode in the information sharing arrangement is the way in which information is communicated between the retailer and the supplier. A key lesson is that the content shared in a channel relationship follows a hierarchical structure, meaning that channel members share more confidential and strategic information only after disclosing more operational and tactical market information. The dissertation also exposes the circumstances in which channel firms are most inclined to share strategic market information in a more collaborative manner. Furthermore, two empirical studies with different methodologies demonstrate that market information sharing leads to a better channel performance. This dissertation not only provides an in-depth insight into market information sharing practices, but also gives marketers precise guidelines to design effective market information sharing arrangements.

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