

**CONTRACTUAL NORMS IN
CHAIN - VENDOR RELATIONS:**

**COMMITMENT OF RESOURCES AND FULFILMENT OF
PROMISES AS A PROBLEM OF
COLLECTIVE ACTION**

by

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PREFACE

Whether today is a happy or a sad day, is a question which I have not got a clear answer to. Surely, it is a happy day, as I end a work process that started four years ago. In the beginning, which means the first year or so, the frustrations were endless. To be honest, there were moments when I thought I could not make it. The last three years, however, have been some of the richest and most stimulating of my life. Hence, to leave them is also connected to a feeling of melancholy.

This would never have been so, if it was not for the trust, encouragement and support of my academic supervisors, Professor Torger Reve and Associate Professor Sven A. Haugland. Torger has the important ability to quickly grasp the core features of a problem, and to indicate an adequate and doable solution to it. This has been his main function as a supervisor. Sven has an almost infinite patience and generosity, which I have egoistically exploited for discussing larger issues, as well as details, for quite a number of hours. Both have the, to my experience, core quality of a good supervisor: A high professional standard combined with the ability to give the candidate the trust and freedom to develop his own ideas.

Torstein Nesheim gave me highly valuable comments on and insights about collective action theory in general, as well as the logical structure of the research problem. As a combination of his generosity in sharing insights, as well as timing (this was summer 1992), Torstein was central in getting the project off the ground.

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In spite of all the support and encouragement I have received, I am entirely responsible for the accuracy of any information contained in this dissertation. Specifically, any deficiencies in arguments, analysis, and conclusions are entirely my responsibility.

This dissertation is dedicated to my parents; Aksel and Ingeborg A. Rokkan.

Bergen, June 21, 1995.

Aksel I. Rokkan

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CHAPTER 1: RESEARCH PROBLEM

The aim of this first chapter is to present and define the research problem to be treated in this study. To do that, the research problem is defined according to three dimensions; phenomenon of investigation, position of the study within a nomological network (theoretical position), and structural context (specific type of interorganizational relation (IOR) that the research problem is related to) The chapter closes with a brief outline of the study, in order to clarify the link between research problem defined and theoretical discussions in following chapters.

The research problem that I intend to analyze in this study, theoretically as well as empirically, can be defined as follows:

What are the governancial and behavioural preconditions for a voluntary chain to have (establish and maintain) vendor relations characterized by relational exchange (relational norms)?

The definition above is relatively restricted or narrow. It is therefore fruitful to discuss it according to three dimensions - phenomena, theory and structural context - in order to link it to the broader research agenda it certainly belongs to. Although the use of these analytical dimensions is helpful in defining the research problem, it is also important to realize that the first two dimensions are interrelated: Certain theories deal with certain phenomenas, and the relevance of a phenomena is often defined by theory. This dialectic relation between phenomena and theory is fruitful rather than problematic, as it is helpful in grasping the research problem beyond its particulars (variables and setting).

1.1 Phenomenon

The phenomenon can be described in two dimensions. First, the definition of the research problem refers to voluntary chains and vendor relations of such chains. That is, it refers to two interorganizational systems; the voluntary chain (being an interorganizational system in itself), and the chain - vendor relation. More specifically, it refers to the interaction of these

two interorganizational systems: the interaction of the way the chain is governed (coordinated) on the one hand, and the degree to which vendor relations of the chain is characterized by relational exchange on the other. Setting aside the terms "voluntary chain" and "vendor" for a moment, this refers to a broad phenomenon that has received little attention within existing literature on interorganizational relations, at least within the political economy tradition, namely external relations of interorganizational systems (see chapter 3 for a review). Second, the definition refers to relational exchange (relational norms), and preconditions for such exchange. Relational exchange has received considerable attention within IOR literature the last decade. However, existing literature on relational exchange has mainly been concerned with effects of legitimacy of power/influence on relational exchange, by and large leaving out central questions regarding commitment and delivery of resources as a central aspect of such relations (Thibaut & Kelley 1959, Ring & Van de Ven 1994). Further, there have been studies of effects of relational exchange on relationship outcomes, like transaction costs (Noordwier, John & Nevin 1990) and relationship satisfaction (Haugland & Reve 1993). Hence, questions regarding preconditions for relational exchange should be addressed, not at least because it enables critical testing of relational contracting theory.

Hence, the phenomenon of the study - what it is, and why it is interesting - can be described by linking it to two different, but highly related, research traditions. Of analytical reasons, I will however focus on the latter: As relational exchange (relational norms) is my specific dependent variable, I follow the recommendation given by Art Stinchcombe that I should "know my dependent variable". That is, I should focus on factors that can be expected to affect its variance.

To repeat, two factors that have the potential of explaining relational exchange is commitment of resources in the relation, and ability to deliver (ability to fulfill commitments). These are arguably aspects of the same phenomena, the level of resources used or invested in a relation. The study exclusively focuses on the chain's capacity in these respects. To see why, the structural context (theoretically as well as empirically) of the study should be considered:

1.2 Structural context

The structural context of the study is the voluntary chain and its vendor relationship. In order to describe this kind of interorganizational system, I start with noting that the voluntary chain is a specific type of a joint venture: "The unique feature of a joint venture is that a new firm is created, with its own capital structure, as well as the sharing of other resources" (Webster 1992, p. 8). A joint venture is owned by its member companies (which are independent actors) on an equal basis. The joint venture itself is a distinct organization, with its own identity, CEO, board of directors etc (cf., Van de Ven 1976). Motives for establishing joint ventures can be many, like access to resources, scale economies, reduced transaction costs, and improved negotiating power in relationships with external actors. Using less abstract terms, the typical motive for establishing and joining a voluntary chain is related to more productive and cost-efficient marketing functions, both in the input and the output sector. The establishment of a joint venture or a voluntary chain means that certain value activities are taken (partly or fully) from the individual members, and into the IOR. This implies that it will be responsible, as an agent for its members, for handling relationships with external actors connected to these activities.

Even if a chain arrangement can be considered as an agent acting on behalf of its members, I will argue that the reverse PA - relationship is the fundamental one: The chain - acting on behalf of the members - is at the same time dependent on them for achievement of its strategic and operational goals. Let me illustrate this with some examples: If a chain is to establish a specific quality profile, it will be dependent on the quality profile of the individual member. Or, if it tries to establish a common buying arrangement for its members, thus lowering buying costs for the members due to increased negotiating power and lower prices - it will be dependent on the buying behaviour of its members. The fundamental problem is that actions in the interest of the collective of members/the chain, are not necessarily in interest to the individual member. Members can try to free-ride on the quality profile of the chain, or to participate only in the most profitable parts of a common buying arrangement. But such behaviour may hamper goal-achievement and threaten the cooperation within the chain.

Organizational arrangements, being voluntary chains or whatever, are in their very nature instruments of overcoming some kind of collective action problem that exists due to specialization and hence a need for coordination. This can be described as the characterizing feature of organizations. Hence, voluntary chains are not different from other organizational arrangements. An important basic feature of voluntary chains, however, is that they are indeed loose organizational arrangements. This can be described more precisely by saying that the tightness of the voluntary chain, as an institutional arrangement, will vary drastically. Then, if there is reason to believe that this variance is important in explaining ability to mobilize resources, it should be expected to have predictive power related to contractual norms in chain - vendor relations. Note that the focus on the chain's ability to mobilize resources is based on arguments about relative variation. Note also that, by inspection of relational contracting theory, this variance can be expected to effect resource mobilization of other party, both based on selection arguments (strong chains selecting strong partners), but most notably based on the interactive processes argued for in the relational contracting theory (investments of one party triggers investments by the other, etc).

1.3 Theoretical position

To briefly summarize the two previous paragraphs, I argue that (i) according to relational contracting theory, the actor's ability to commit resources and to deliver (fulfill promises given) are important preconditions for relational exchange to develop, and (ii) the voluntary chain will vary considerably in these respects, as it is a loose institutional form. In order to model this problem theoretically, I will use a political economy - type of model. What does that mean?

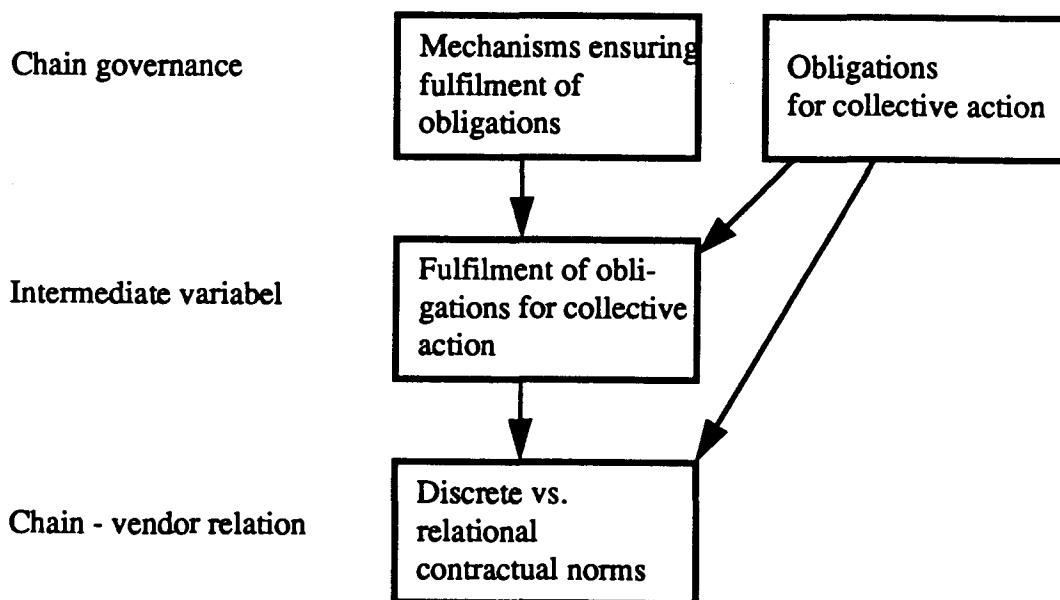
The term "political economy" has several meanings. Initially, it was closely linked to Adam Smith and economics. Later, it has been related in general to models incorporating economic as well as sociopolitical variables in studies of social systems (e.g. Zald 1970, Benson 1975, Hernes 1975, Lindblom 1977). Finally, it refers to such models within marketing/distribution channels (Stern & Reve 1980, Arndt 1981). I am indeed most closely related to this third meaning of the term. Note however that all of these "models" are neither models nor theories, but basically frameworks where the aim is to "chart out and classify" variables. Hence, the

overall framework should be linked to substantial theory in order to make theoretical predictions.

And this is what I will do. When modeling (chapter 4 & 5), I start with theories about collective action (most notably Hechter 1987). Based on this general framework, I isolate variables based on (i) political economy (Stern & Reve 1980) and empirical studies within that tradition, and (ii) game theory (Hardin 1982) and agency theory (Eisenhardt 1989). If this seems theoretically complex, I argue that it is not: Really it is nothing more than to "translate" general theoretical constructs into less abstract constructs that is more relevant to the particular phenomena to be studied.

The overall analytical model related to the research problem can be illustrated as in Figure 1.1:

Figure 1.1: OVERALL ANALYTICAL MODEL



1.4 Potential contribution of the study

The study has several potential contributions to existing IOR literature and practise: First, and most important, it has the potential of increasing our knowledge about the resource aspect of relational contracting. Although being an important dimension of relational exchange, it has received little attention so far (an exception is the study of Heide 1994). Related, this will have managerial implications: What is needed for a voluntary chain to be a competent partner in a distribution channel with tighter cooperation between the actors involved? Second, the study is a potential contribution to the nomological network of political economy, by adressing the question: What are the potential effects on the transaction climate in an external relation, of changes in the internal polity and economy of a voluntary chain? Hence, the study deals with interaction effects of two political economies. And third, the study has the potential of increasing the knowledge about collective action in interorganizational systems. Managerial implications can be linked to the question: How can an interorganizational system be governed so that the effectiveness of the system is increased, at the same time as conflict level and implementation problems are kept at a minimum?

1.5 Outline of the study

The dissertation is organized as follows: In chapter 2, I discuss the overall perspective or idea of the study; that is the argument that commitment of resources and fulfilment of obligations are important aspects of relational contracting - and that this perspective has attained little empirical attention within the field of interorganizational relations/relational contracting. The discussion is based on and linked to a review of the relational contracting literature. In order to position the relational contracting perspective within the broader context of IOR studies, I also make a brief discussion of the various perspectives within the field since it's beginning in the late sixties. In order to model mobilization of resources in the chain, I build a political economy kind of model. As this study can be positioned within that tradition as well, political economy is reviewed and analyzed in chapter 3. In chapter 4, theoretical variables that can explain relational contracting in voluntary chain - vendor relations are suggested. The discussion is summarized in a comprehensive model. In chapter 5, empirical hypotheses are presented. In chapter 6, the design of the empirical study is

presented. In chapter 7, the measurement model and operationalization of variables are presented. Construct validation is reported in chapter 8. Hypotheses testing and empirical results are presented in chapter 9. The dissertation closes with a discussion of theoretical and methodological implications in chapter 10.

CHAPTER 2: RELATIONAL CONTRACTING THEORY

The major objective of this chapter is to give a theoretical foundation for the overall perspective of this study - the basic proposition that mobilization (commitment and delivery) of resources is an important feature of relational contracting, as well as that this dimension of relational contracting theory has received little empirical attention. The chapter has three major parts. First, a brief review of the various theoretical perspectives on interorganizational relations is done, in order to position relational contracting theory (as well as political economy, see chapter 3) within this wider research area. Second, important theoretical formulations on relational contracting are discussed, both as a basis for the theoretical perspective on relational contracting used in this study, as well as a basis for dimensionalizing relational contracting in commercial exchange relations. Third, I review and analyze empirical studies of relational contracting, most notably in order to demonstrate the lack of empirical testing of the theoretical perspective chosen.

2.1. Perspectives on interorganizational relations (IORs)

The field of interorganizational studies is vast, and I neither intend nor hope to render a complete presentation of it in this chapter. What I do intend, is to give a smaller but hopefully still usable map of the field, that can make it possible for me to explain where we are and in what direction we are moving in this dissertation. Special attention is given to studies of IORs within distribution channel contexts. The section is organized into the following paragraphs: (i) Phenomena and levels of analysis (ii) Factors explaining IOR formation (iii) Dimensions of IOR formation (iv) IOR outcomes: Explanation types within IOR research/Empirical studies (v) Theoretical perspectives on IORs

(i) **Phenomena and levels of analysis.** There is an extensive literature on "relations between organizations", and a considerable amount of heterogeneity, both regarding phenomena investigated and theoretical traditions. As a start, consider a few of the labels used to describe the research object: Interorganizational relations (IOR) (e.g. Van de Ven 1976, Stern & Reve 1980, Galaskiewicz 1985, Oliver 1990), hybrids (Williamson 1991), networks (Håkanson 1982, Powell 1990, Grandori & Soda 1992) and strategic alliances (e.g. Lorange & Roös 1992, Parkhe 1993). Of these, I will usually refer to the phenomena as "interorganizational relations" (IOR). I prefer this label because I find it fairly "neutral": The term "hybrids" conceptualizes IORs as an intermediate institutional form between markets and hierarchies. The term "networks" refers sometimes to a given level of analysis, and sometimes to the "network" as a distinct organizational arrangement with its own characteristics and properties, qualitatively different from both markets and firms. Finally, the term "strategic alliances" at least implicitly assumes long-term cooperative relations with high ("strategic") importance for the parties involved.

Hence, an IOR can be defined as follows:

"An inter-organizational relationship occurs when two or more organizations transact resources (money, physical facilities and materials, customer and client referrals, technical staff services) among each other" (Van de Ven 1976)

"IORs are the relatively enduring transactions, flows, and linkages that occur among or between an organization and one or more organizations in its environment" (Oliver 1990).

The two examples illustrate the problems in defining the phenomena, and discriminating IORs from e.g. pure market transactions. Let me summarize by saying that we have an IOR when we have the following three conditions (i) two or more (independent) organizations, (ii) when there are transactions between them deviating from pure spot market transactions, and (iii) and when these transactions have some duration.

Van de Ven (1976) further claims that IORs are social systems with the following properties: (i) IOR members behave in pursuit of individual as well as collective goals (ii) there is a need for coordination of behaviour due to specialization and reciprocal dependence (iii) the IOR is a distinct social unit with identity, capable of acting as a social unit. I find that the third condition is questionable, and somewhat contrary to Van de Ven's own definition of an IOR: If we demand that an IOR should have a distinct identity, highly loosely coupled systems should not be regarded as IORs. Van de Ven is however right in pointing at the organization-like characteristics of IORs; specialization, reciprocal dependence, converging as well as diverging goals, and the need for coordination.

Several levels of analysis can be used when studying IORs (Aldrich & Whetten 1981); the dyad (a relation between two organizations), the organization-set (or what Achrol, Reve & Stern (1983) called the primary task environment; the totality of relations between a focal organization and its exchange partner like customers, vendors, competitors etc), the action-set (temporal alliances with limited and well-defined objectives; e.g. project groups) and finally the network, defined as "the totality of all the units connected by a certain type of relation".

The literature on IORs is heterogenous in several respects. First, such systems are studied within several research traditions, like organizational theory, marketing, sociology/political science, economics etc. Related of course, and as briefly reviewed later in this chapter, the phenomenon is studied from different theoretical perspectives. Third, and to some degree related to the various theoretical perspectives, both regarding factors explaining IOR formation, and dimensions of IOR organization, there is a lot of divergence:

(ii) **Factors explaining IOR formation:** According to Arndt (1979), three major reasons for the establishment of IORs (or what he called "domesticated markets") is reduction of uncertainty of operations, reduction of transaction costs, and the synergy of combining complementary operations. Other reviewers of the field, e.g. Galaskiewicz (1985) and Oliver (1990), pay more attention to political, normative and institutional factors fostering the development of IOR. Hence Galaskiewicz (1985) identifies three major areas of IOR research, resource procurement and allocation, political advocacy, and organizational legitimation. Oliver (1991) identifies six major motivation forces of IOR establishment: (i) Necessity; IOR

formation in order to meet legal or regulatory requirements (ii) Asymmetry; exercise of power (iii) Reciprocity; IOR formation to enhance cooperation, collaboration and coordination (iv) Efficiency (v) Stability/predictability and (vi) Legitimacy. Hence, factors explaining IOR formation in the literature range from efficiency considerations, scale economies, and predictable and stable access to resources, via power considerations (whether the organization is using/establishing or reacting on other actors use of power), to considerations of organization legitimacy.

(iii) **Dimensions of IOR organization:** As with factors explaining IOR formation, there are several traditions and attempts concerning what dimensions to use when classifying IOR organization. At least four different approaches can be identified (cf., Grandori & Soda 1992): First, the institutional economics view (e.g. TCA), arguing that IORs are intermediate or "hybrid" types of organization, that can be understood by focusing on ownership structures and property rights. A 1:1 relation between institutional arrangement and use of various governance mechanisms (basically price and authority) is assumed. Second, on the other extreme is the "networks-as-a-distinct-type-of-organization" view (cf., Håkanson 1982, Powell 1990), claiming that IORs cannot be fully understood except if properties of such systems, distinct of those found within both markets and organizations, are explored. Third, studies of IORs based on organization theory conceptualize IORs as organizational systems (cf., Van de Ven 1976) that can be described in terms of mechanisms of organizational control, social and political behaviour within these systems etc. Importantly, contrary to the assumptions within institutional economics, conditions under which IORs are effective are not necessarily intermediate with respect to those of firms and markets. Finally, there are some attempts to classify IORs in terms of "functions" or "types", (cf., Daft 1983, ch. 2, Grandori & Soda 1992). As an example, Grandori & Soda (1992) distinguish between "proprietary network" (business groups, joint ventures, capital ventures), "bureaucratic networks" (franchising, consortia), "contractual networks" (trade associations, poles & parks) and "associational networks" (trade associations, poles & parks).

Of these four approaches, I find the "functions or types" - approach most problematic. Looking at IORs in that way, we may end up with an infinite numbers of IOR types - like they did in the search of various "personality types" within psychology some decades ago. In arguing that we should look for "generic" types of structures and processes that can describe organizations as well as interorganizations - hence simplifying to be able to understand - I also have some problems with the "network-as-a-distinct-type-of-organization" - approach. However, new phenomena might demand new theoretical concepts, so I will not exclude the potential fruitfulness of such a research agenda. Finally, I find that both the approaches based in institutional economics and organization theory have had the most to say so far within IOR research. I would characterize them more as complementary than competitive. However, by and large they are fairly "meso"-oriented in their way of describing IORs (the first one being more macro than the latter). Thus, both more micro-oriented approaches (organizational behaviour within complex organizational arrangements lacking clear boundaries) and more macro-oriented approaches (e.g. effects of contractual law, national culture) might be called upon.

(iv) IOR outcomes/explanation types within IOR research

(a) The disregard of IOR outcomes. Broadly speaking, there has been little interest in measuring IOR outcomes within the field. Instead, focus has been on variation in IOR structure given various external conditions and variations in behavioural dimensions of IORs given various structural solutions. Arguments in support of such a research strategy are the following: First, the argument of most notably TCA (Williamson 1985), but also political economy (Stern & Reve 1980) and resource - dependence theory (Pfeffer & Salancik 1978), that - assuming (bounded) rational goal-oriented actors and natural selection - the structural solutions chosen are the best available to decision makers, and if not, such solutions will disappear due to natural selection. Second, the argument of the behavioural studies is that in order to understand effectiveness and efficiency within IORs, social processes within such systems must be understood.

(b) Studies of IOR outcomes. Despite the observation in (a), there are some studies of IOR outcomes. Studies by Etgar (1976), Reve & Stern (1986) and Ytreberg & Reve (1989) are all examples of comparative studies of overall IOR results in alternative institutional arrangements. These studies all indicate that more integrated IOR systems are more effective (using rough measures as sales/employee) than less integrated systems. Other observations, e.g. the increased market shares since 1989 of more integrated systems within the setting of Ytreberg & Reve's study - gives support to the findings.

Examples of studies on more restrained result dimensions and/or more restrained causal relationships are studies of determinants of transaction costs (e.g., Noordwier et.al. 1990, Nygaard 1992) and Heide & John's (1988) study of offsetting investments as an alternative to vertical integration when transaction-specific investments are at stake for a smaller firm unable to use vertical integration. Heide & John's finding was that such investments reduced dependency, and increased actors results. Noordwier et.al. (1990) and Nygaard (1992) studied - using perceptual data - effects of governance structure and degree of relationalism on transaction costs.

(c) Conclusion Although highly valuable, the studies mentioned above demonstrate some of the difficulties when investigating IOR results. Most notably: Very crude result measures are used, actually none of the studies above have used any kind of "bottom-line" information. Next, we might also question what factors that really are fostering IOR effectiveness; specific investments (increasing the effectiveness of the system), tighter governance, or combinations of these?

v) Theoretical perspectives on IORs

The sixties are usually perceived as the "birth" of "modern" organizational theory, with introduction of central theoretical concepts as bounded rationality (Simon 1957, Cyert & March 1963) and the increased interest in the environment of the organization - the "organizations-as-open-systems" - approach (e.g., Emery & Trist 1965, Thompson 1967). Also, examples of explorations of various linkages between organizations can be found (e.g., Warren 1967). Within distribution channel research however, the main focus was on applied micro-economic models (e.g. Bucklin 1966).

During the seventies, several major theoretical developments within IOR research occurred, some stemming from the field itself, other to be imported into the field. Three major approaches are transaction cost economics, resource dependence theory and the behavioural research paradigm of distribution channels.

(a) **Transaction cost economics (TCA)** (Williamson 1975, Coase 1937) is concerned with efficient organization of economic activities (transactions). Focus is on the comparative efficiency of the institutional arrangement surrounding transactions, within a market-hierarchy continuum. Two central premises of TCA are bounded rationality and a non-ignorable tendency of economic actors to behave opportunistically. Given these assumptions, transactions with increasing levels of transaction-specific investments, uncertainty and exchange frequency make hierarchical solutions more efficient than market solutions. That is; transaction costs ex ante and ex post are reduced by internalization and the use of authority mechanisms within the hierarchy. In later formulations and applications of the theory (e.g. Stinchcombe 1985, Joskow 1987, Williamson 1991), the theory has been modified by including intermediate ("hybrid") institutional arrangements like long-term contracts between economic actors. Still however, the focus of TCA is on institutional arrangements and not on governance mechanisms used within them, as a 1:1 relationship between market/price and hierarchy/authority is assumed.

(b) Resource-dependence theory (RD) (Thompson 1967, Pfeffer & Salancik 1978) views organizations as social units dependent on access to resources with an uncertain supply. To secure such access, interorganizational linkages are established. In some important respects, TCA and RD have a common basis for explaining IORs; uncertainty and dependence/asset specificity. Further, both theories are mainly concerned with structure. Finally, rational actors are basically assumed. The main difference of the two theories is the basis used for explaining behaviour, within TCA actors thrive for efficiency, whereas RD has its focus on effectiveness. Related, the basis for long-term organizational survival is somewhat different, within TCA economic efficiency is the basis for survival, whereas the basis for survival within RD is most importantly power and legitimacy.

(c) Behavioural research paradigm of distribution channels/power-conflict studies(Stern 1969, see e.g. Reve & Stern 1979 or Gaski 1984 for reviews) has its main focus on the design of mechanisms for controlling channel member behaviour - that is the establishment and use of power - and the resulting sentiments and behaviour of such mechanisms. As such, this tradition has given important insights to the behavioural foundations of distribution channel organization and performance. However, little attention is given neither to the contextual antecedents nor overall consequences of these power-conflict processes (cf. Heide 1994).

Research on IORs has witnessed several attempts to integrate the various perspectives above. In addition, some new ideas have emerged - however related to some of the concepts briefly mentioned above. Although they in various ways are closely related, I discriminate between four separate approaches; the political-economy paradigm, the relational contracting paradigm, the price-authority-trust paradigm, and finally the interaction and network approach. In order to simplify the discussion, I start with the price-authority-trust paradigm.

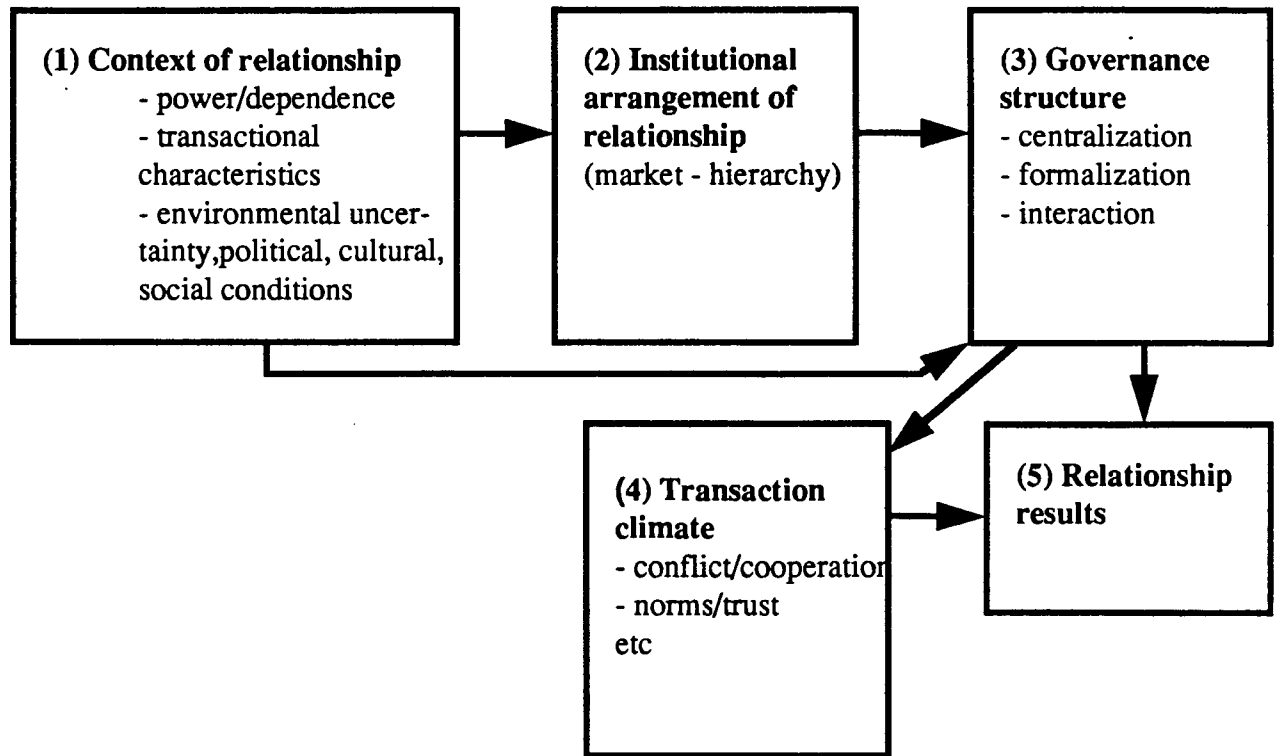
i) **Price, authority and trust.** In a much-cited article from 1989, Bradach & Eccles propose that price, authority and trust are three separate and independent governance mechanisms that can be combined in a variety of ways. The core of Bradach & Eccles' argument is that the various governance mechanisms are connected to - I choose the label asymmetrical - advantages and disadvantages, so that various combinations are optimal. To take an example, Williamson argues that markets have superior ("high-power") incentives, whereas options within hierarchies are monitoring and use of fiat. Then, as an example, if an oil company uses a combination of independent and company-owned dealers, the latter can be used as a superior source of information about for example cost structures, as an input to optimal contracts with independent dealers. Contracts with independent dealers on the other hand, can be used for creating and maintaining competitive pressure within the corporate-owned distribution channel (e.g., Nygaard 1992). Examples of combinations of governance mechanisms are - according to Bradach & Eccles - profit centers (price-authority in hierarchies), "hierarchical" contracts (Stinchcombe 1985) (price-authority in markets), the quasifirm (Eccles 1981) (trust within a market structure) etc.

The price-authority-trust paradigm calls for more multidimensional pictures of IOR governance and behaviour, and is as such highly valuable. However, I have some difficulties with the basic idea of the authors; price, authority and trust as independent governance mechanisms that can be combined in a variety of ways. Let me focus on authority and trust. First, as demonstrated by e.g. research done within the behavioural paradigm, these dimensions are not independent: Use of authority might hinder the development of trust within IOR relations. Second, there is the questions of instrumentality. To take the argument to its extreme, we might say that trust is a "state that is essentially a by-product", that is, it cannot be brought about directly and intentionally, only indirectly by the intentional use of other means (Elster 1983, ch. 2). As an example given by Elster, "one cannot will sleep, but one can will taking a sleeping pill and hence sleep, at one remove" (p . 53). Then, we might regard trust, relational norms and the like as second-order governance mechanisms; governing and stabilizing social relations when existing, but beyond the scope of organizational design.

ii) **The Political Economy - paradigm (PE)** (Stern & Reve 1980, Arndt 1981, 1983, Achrol, Reve & Stern 1983). The main elements of the political-economy model is summarized in Figure 2.1. PE is an attempt to integrate economic and socio-political theories of distribution channels. In doing this, the interaction of structural and processual properties of such systems is explored. With some simplifications, we might divide the model into two: a. The internal PE, the interaction of 3,4 and 5 in Figure 2.1, and b. the external PE, the interaction of 1,2 and 3 in Figure 2.1. Hence, referring to e.g. Heide's (1994) criticism of the behavioral research paradigm, PE is a framework for exploring both antecedents to and consequences of decision structures and power use in distribution/IOR systems. However, the PE - research tradition might be criticised from several angles (see an extensive discussion in chapter 3). Most importantly: The objective of PE was to integrate economic and sociopolitical theories of distribution systems. However, I argue that the integrative potential of the paradigm has been somewhat limited, or it hasn't been fully exploited yet.

Put simply, the PE-studies have been focusing on either antecedents to (1-2 i Figure 2.1) or consequences of (4-5 in Figure 2.1.) the governance structure (3 in Figure 2.1) in IORs. What we then end up with, is at worst no more than extended TCA/RD or power-conflict studies of distribution systems. This problem is also linked to the imprecise use of constructs within PE. To take the best example, what I in Figure 2.1 have labeled "governance structure" is no doubt mechanisms of bureaucratic structure and decisions influence - that is "sociopolitical" elements of a channel relation. For some reason, Stern & Reve (1980) labeled them "economic" processes. As another example, the effects of governance structure and transaction climate on relationship results are to varying degrees exploited within the PE-framework. When not so, the distinction between PE (3-4-5 in Figure 2.1) and the behavioural approach vanishes.

Figure 2.1: The Political Economy model (somewhat simplified)



Although considering the critical comments above, I will argue that PE has played and can continue to play an important "paradigmatic" role within IOR and distribution channel research; most notably when (in the past) and if (in the present): (i) the interplay of sociopolitical and economic processes are (really) considered, e.g. by including incentive-like variables in the model. In this respect, ideas from e.g. the principal-agency literature (e.g., Eisenhardt 1989) would be useful. (ii) relationship results in various dimensions (e.g., economic results, system ability to effectively cope with third-party actors, legitimacy, power in third-party relations) are considered, and (iii) IOR system - environment and inter-IOR system relations are considered.

(ii) The relational contracting paradigm (RC) Building on ideas from in particular Ian Macneil (1978, 1980, 1981), several studies have focused on preconditions for and effects of variations in the contractual norms in interorganizational relations. The basic concept - norms - are imported from sociology and law and can be defined as expectations about behaviour that are at least partially shared by a group of decision makers (cf., Heide 1994). Ian Macneil's contribution is mainly to conceptualize and dimensionalize contractual norms. According to him, such norms vary in a discrete - relational continuum, where the former can be represented by distant, market-like relations, and the latter by close, cooperative relations (as found in families and friendships). The most fundamental root of a norm or norms is society (Macneil 1980, p. 1), but the social unit referred to may vary from entire societies to groups of individuals. Whatever the level of analysis might be, I will argue that RC and PE share a view of actors orientation (e.g. cooperation vs. competition, discrete vs. relational norms) as embedded in the social structure. Within IOR, the unit of analysis has usually been the dyad, e.g. a buyer-seller relation. Hence, variations in governance structure and asset specificity/resource dependence balances have been mostly studied as preconditions for relational norms to develop.

The main difference between RC and PE is that norms within PE basically are modeled as a result of governance mechanisms used in a relation, whereas they within RC are considered as governance mechanisms in its own right. If, however, my arguments concerning the embeddedness (level of trust embedded in governance structure)- and second-order (by-product) nature of contractual norms within IORs are about right, the two theories build on fairly convergent assumptions.

(iv) The network approach (NA)

Rooted in the "IMP - group" and Swedish universities (Uppsala and Stockholm), a "Network" approach has been introduced into IOR research since the mid-seventies (e.g. Håkansson 1982, 1987, Johansson & Mattsson 1987, Håkansson & Snehota 1989). As a result of frustrations with the microeconomic way of thinking about business-to-business interactions (atomistic actors, "free" competition), descriptive studies of long-term business interactions was undertaken. This tradition can be summarized as follows: First, the focus is on the

development of mutual dependencies (based on interlocked resources, mutual adaptation and learning processes, etc) and social processes within such relations. In that respect, the network approach is highly related to - in particular - resource dependence theory. Close social ties based on reciprocity and trust is assumed. Second, the level of analysis is the network. In that vein, the NA is fairly "holistic".

My main objection regarding the network approach, is related to the third characteristic (or cluster of characteristics) of the network approach. Formal modeling of the phenomena(s) investigated is somewhat underdeveloped (as exceptions, see e.g. JM-articles by Hallén et.al. 1991, and Anderson et.al. 1994), and the research tradition is rather descriptive in kind. The larger amount of empirical studies are isolated case-studies, making generalizations difficult. As a result of these (and related) characteristics concerning theory building and empirical testing of the theory, predicative validity and critical testing of the assumptions behind the theories is still somewhat missing.

The various approaches in perspective

I will summarize the discussion so far in the Table 2.1 (next page):

The table focuses on three questions: First, there is the time dimension, to get a picture of the temporal development of the field. Second, I have tried to classify the theories according to whether price, authority or trust (or choices between two or three of these) are primary focused. But here, whether the primary focus (if any) of the models are on structure vs. process is not considered. Third, particular attention is directed to the role of trust and relational elements in these various approaches

Some conclusions: First, there has been some movement from microeconomic models via power-dependence to trust-based perspectives. This must however be seen in perspective: To understand the use of authority, e.g. economic preconditions (market failure) must be understood (TCA, PE 2). To understand the existence of trust, e.g. the use of authority mechanisms must be understood (behavioural research paradigm, PE 1). Then, as a second conclusion, research within IORs are mainly interparadigmatic in its orientation -

TABLE 2.1: The various IOR approaches compared

Time	Price	Authority	Trust
---1970	Ec. approach (e.g. Bucklin 1966)		
1969---			BRP (e.g. Stern 1969)
1975---	TCA (e.g. Will- amson 1975)		
1978---		RD (Pfeffer & Salancik 1978)	
1980---	PE 2 (Achrol, Reve & Stern 1983)		PE 1 (Stern & Reve 1980)
1980---	RC	-----	RC (Macneil 1980)
1982---			NA (e.g. Håkan- son 1982)
1989---	-----	PAT (Bradach & Eccles 1989)	-----

TABLE 2.1 (cont.)

Perspective on trust and relational elements:

Ec. approach	No major concern
TCA	Lack of trust as major reason for institutional arrangements
RD	No major concern
BRP	"outcome" dimension
PE	"outcome dimension"
RC	Governance mechanism
PAT	Governance mechanism
NA	Basic characteristic of IORs

price-authority-trust most extremely - although we might (as done in the table) classify the economic approach, resource-dependence theory and the network approach as mainly focusing on price, authority and trust, respectively.

2.2. Contractual norms in business relationships: The theory

To discuss contractual norms and relationalism in IORs, we should take a look at IORs as such. Of the reasons briefly discussed in this chapter (transaction costs, resource dependence, etc) markets have become increasingly "domesticated" (Arndt 1979) - that is the nature of commercial exchange is somewhat changed from simple and pure market transactions to more complex long-term transactions between identifiable actors. The "invisible hand" of the market is replaced with a "visible" hand of long-term commercial relationships, as described by various authors (e.g., Maccaulay 1963, Benson 1975, Ven de Ven 1976, Arndt 1979, Stern & Reve 1980, Oliver 1990)

Although price and market mechanisms still are functioning within such relations, a distinct feature of them compared to market transactions is coordination by visible mechanisms of bureaucratic structuring and normative control. The tighter the cooperative venture is, the more non-market coordination is introduced into the relation.

Two types of non-market relations are discussed in the literature: Hierarchical or authority-based relations, and bilateral relations. I will discuss these two types of non-market governance, and the market - nonmarket governance continuum, in the paragraphs to follow:

(i) Market vs. non-market governance (ii) Non-market governance as a heterogenous syndrome (iii) The pros and cons of relational contracting (iv) Developing relations: Power, resource commitment and ability to deliver (v) The dimensions of relational exchange

(i) **Market vs. non-market governance:** The managerial choice and/or competitive selection of market vs. non-market forms of exchange can be explained by the factors discussed regarding formation of IORs; characteristics of the transaction, resource dependence, political and normative pressures etc. I will not discuss these any further. Note however that such dimensions can hardly be regarded solely as given parameters to decision makers, as they are affected by strategic decision making (Child 1972, Krapfel 1982, Hutt et.al. 1986). Organizations can act proactive as well as reactive to their environments. This is somewhat important to my analysis, cf. paragraph (iv) below.

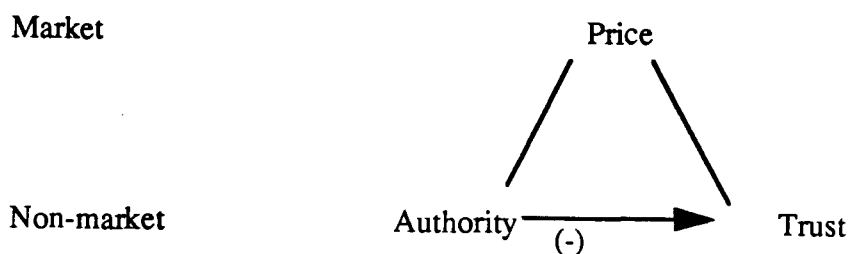
(ii) **Non-market governance as a heterogenous syndrome.** We can, according to e.g. Heide (1994), identify two distinct types of non-market governance, unilateral authority-based and bilateral norm-based governance ("relationalism"). Further, according to relational contracting theory (Macneil 1980), we can distinguish between discrete and relational norms of exchange. These various ideas must be clarified:

The fundamental idea of authority-based governance is that the invisible hand of price signals in a market is replaced by the visible hand of hierarchical decision-making in some sort of an organization. The fundamental idea of relational contracting theory is that an "integration into a relation" takes place between the exchange parties, hence price is replaced by social

norms of long-term cooperation and non-opportunistic behaviour. Although distinct ideas, I will argue they have overlapping elements: First, in both types (authority-based governance and relationalism) of situations some form of relationship is created. Hence, elements of social relationship are introduced into exchange. In terms of relational contracting theory, discrete type of exchange norms should exclusively be found in market-like situations (Heide 1994) (but notably, we should think of these as continuous and not dichotomous variables). This argument is in line with e.g. later formulations of TCA (e.g. Williamson 1985, 1991), game-theoretical studies (Axelrod 1984, Hardin 1982), and empirical studies on combinations of price, authority and trust (Haugland & Reve 1994). Next however, there are - both theoretically and based on empirical studies - strong reasons to expect a trade-off between the use of authority and the development of relationalism in relations (Argyris 1964, Dwyer & Oh 1987, Reve 1989, Moss Kanter 1989, Heide 1994, Haugland & Reve 1993). This is in line with the common view that relationalism develops over time, starting (at some point in time) with a discrete market relationship, extending into a relation with a lessened need for authority safe-guards as relational norms develops. The causal relation between power (authority) and relationalism is somewhat dubious, the processes going on is probably interactive. Based on the previous empirical studies done, I will, however, assume power to have a negative causal effect on relationalism.

The discussion can be summarized as in Figure 2.2:

Figure 2.2: Price, authority and trust/relationalism



(iii) The pros and cons of relational contracting

(a) Relationalism and transaction costs. Trust between the partners involved in the transaction is one important element of relationalism. The concept is discussed by several writers (e.g. Gambetta 1988, Bradach & Eccles 1989, Lunnan 1992), and can be described as follows: "Trusting a person means believing that when offered the chance, he or she is not likely to behave in a way that is damaging to us, and trust will typically be relevant when at least one party is free to disappoint the other, free enough to avoid a risky relationship, and constrained enough to consider the relationship an attractive option" (Gambetta 1988). Hence, relational exchange might offer reduced transaction difficulties and costs both ex ante and ex post, as indicated by e.g. Noordwier et.al (1990) and Heide & John (1992).

(b) Relationalism and output. Important as the transaction cost - arguments are, the most heavy arguments concerning relational exchange are connected to the output side of a relation, and further - discriminating between output quantity and output quality - to the qualitative aspects of relationship output. Consider first the transaction cost problem once more: The "traditional" TCA solution to transaction difficulties is internalization (hierarchy). Such a solution has its own costs and transactional difficulties; the costs of running an organization, funding and investment risks (cf. Perrow 1986). A standard prediction of organization theory is that bureaucratic organizations are cost-effective in handling standardized, routine tasks in large scales. On the other hand, bureaucracies kill creativity and flexibility. In a world of rapid changes, heavy competition and demanding consumers, the need for information about consumer needs and preferences, the ability to process and understand such information, and the call for creative and "new" solutions to these complex and ever-changing needs and preferences, relationalism is becoming more important. Hence, trust and relational norms are argued to foster information exchange, reciprocal learning, innovativeness, flexibility and the ability to create integrative solutions within a relation (Argyris 1964, Moss Kanter 1989, Rognes 1991, Haugland 1992, Lunnan 1992). Indeed, this kind of arguments could be traced back to e.g. the difference between mechanic and organic types of organizations (e.g. Burns & Stalker 1961)

(c) Relationalism costs: Inflexibility and opportunity costs

As some researchers (Dwyer & Oh 1987, Eisenhardt 1992) have pointed out, relational exchange ventures might end as "unhappy marriages". The development of social ties might hinder the dissolution of alliances that no longer have any efficiency. Parties with highly divergent goals may spend considerable resources in conflict and haggling processes. Attractive exchange opportunities with other companies are lost. In short, sometimes considerable investments made in alliances contribute little to the earnings of the companies involved.

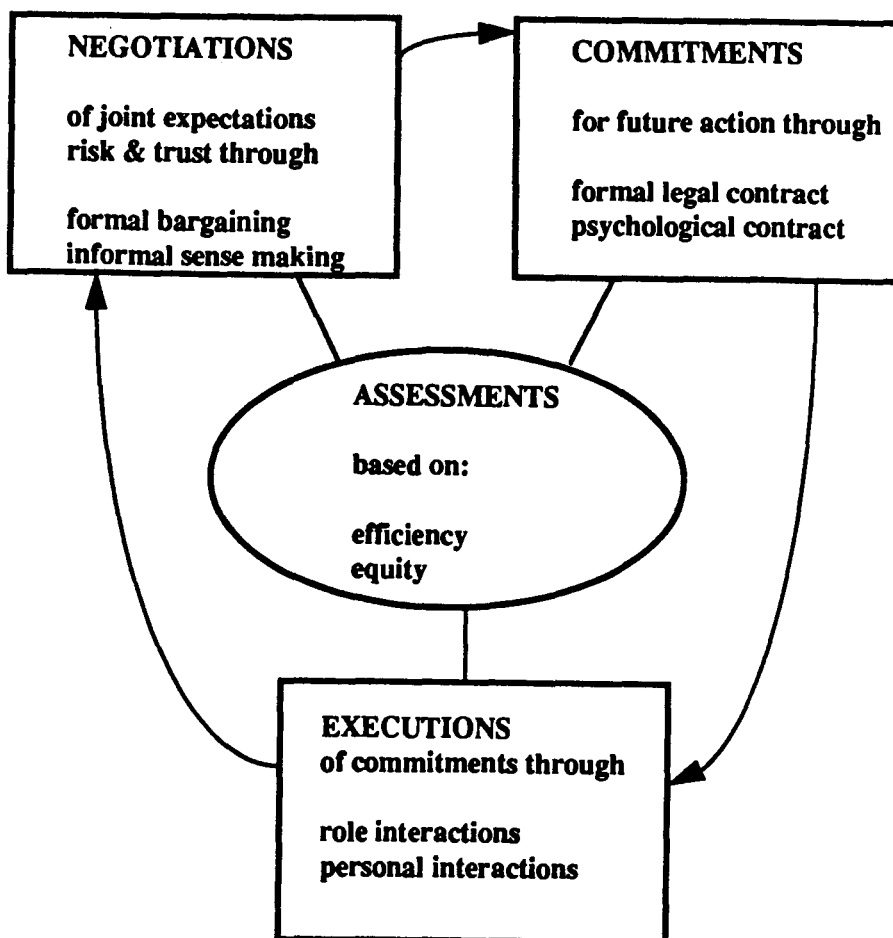
Thus, there might be important relationalism costs. But here, it is important to remember that exactly the same type of trouble can be expected with hierarchical solutions, and probably at a larger scale. Hence, primary focus should be at output considerations: In contexts with a drift towards more complex marketing practices and products, we should expect more relational exchange arrangements - if parties involved are able to handle such practices.

(iv) Developing relations: Power, resource commitment and ability to deliver

The probably most fundamental idea of Ian Macneil's work is that to understand exchange relations, the social context of the relation, its history and traditions, must be considered: "The fundamental root, the base, of contract is society. Never has contract occurred without society, never will it occur without society, and never can its functioning be understood isolated from its *particular* society" (1980, p. 1-2). At the same time, society can refer to several levels of analysis, like entire societies, particular industries, individual firms, groups of individuals etc (Heide & John 1992, p.34). Within IOR research, the unit of analysis referred to regarding norms and relationalism is usually interfirm dyads, and that is the also the case in this study.

Several authors have explicitly focused on relationalism as a developmental process (Thibaut & Kelley 1959, Dwyer & Oh 1987, Ring & Van de Ven 1994, Heide 1994). That is, the transformation from "non-society" - where the parties are purely atomistic actors within a larger context (market) - to a relation goes through various stages, e.g. awareness, exploration, expansion, commitment and at some time dissolution (Dwyer et.al. 1987). Complementary - and somewhat more telling I think - to such a "linear" model of relationship evolution is process models focusing on repetitive substantive elements of relationalism development, e.g. Ring & Van de Ven (1994) (see figure below).

Figure 2.3: Process Framework of the Development of Cooperative IORs
(from Ring & Van de Ven 1994, p. 97).



I will address three central elements of relationship development:

(a) Resource commitment: A marriage is extremely more committing than a one-night-stand. The same is true for commercial relationships. The amount of resources engaged increases as the relationship develops - if it develops. That is, actor's decision about further investments in the relation is dependent on assessments of relationship outcomes compared to its various costs and alternatives available (Thibaut & Kelley 1959, Ring & Van de Ven 1994).

The positive effect on relational development of resource commitment is first an effect of lock-in effects and increased switching costs (Williamson 1985, Katz 1989, Heide 1994), which in turn promotes behaviour that ensure the continuance of the relationship. The number of alternative exchange relations with an equal cost-benefit balance is reduced.. A "shadow of the future" is created - that is an increased probability of meeting the other partner again in future interactions with an unknown time horizon - hence fostering more relation-oriented behaviour (Hardin 1982, Axelrod 1984, Heide & Miner 1988). Second, committing or investing resources in the relation can in general be expected to increase the effectiveness of the relation, hence producing highly valuable outcomes for the actors engaged. And third, committing resources to a relation is a way of communicating intentions for prosocial or collective action, hence enhancing the normative fundament of the relation (Elster 1989).

The effect of resource commitment on relationship development can be illustrated by constructs and propositions derived from negotiation theory (Lax & Sebenius 1986, Rognes 1991). A decision maker responsible for handling external exchange relations of an organization is facing a situation of "indirect management" (Lax & Sebenius 1986, p. 314); "...situations as those in which authority and resources are diffused among many people while accountability are relatively concentrated". That is, he or she is facing a situation where the capability of handling a relation and negotiating in it is dependent on the access to economic and political resources in his or her own organization. The fundamental proposition is that when integrative solutions (negotiation outcomes of a relational kind) are the primary objective, extensive mandates to negotiate (high level of resources) are needed (Rognes 1991, Ring & Van de Ven 1994).

(b) Ability to deliver.

A second feature of developing relations is that the capability to do so is a function of actors ability to deliver, that is to keep promises. Surely this dimension is clearly related to the role of committed resources. If a resource is 100% committed in some theoretical sense, non-deliverance is impossible. Referring back to e.g. negotiation theory, we should keep in mind that this is seldom the case. Commitments are always to some degree based on promises with varying enforceability. Illustrative is the story about the pig and the hen discussing production of bacon and egg. The pig said to the hen: "Well, you might be involved in the process, but I'm committed to it". The hen might however has committed itself to deliver eggs through some kind of contract, with or without doing so at the time of deliverance.

The impact of ability to deliver on the expansion of a relation are recognized by several writers (Thibaut & Kelley 1959, Frazier 1983, Dwyer & Oh 1987). Previous exchange outcomes provide a test of the other party's ability and willingness to deliver satisfaction. Fulfilled obligations increase the attractiveness of an actor, and hence other actor's motivation to maintain and extend relationship with him/her. Further, inability to keep promises will by definition reduce the level of trust in the relation, and trust is a fundamental aspect of relationalism.

(c) Power. Power is defined as the ability of one actor (A) to get another actor (B) to do something he otherwise wouldn't do (Dahl 1957, Emerson 1962). Influence is the degree to which power actually is used, that is the degree to which B actually changes behaviour due to A's influence. The most fundamental basis for power is asymmetrical dependence; A's power in his/her relationship with B is a function of (i) degree of control of outcomes (ii) value of these outcomes for B, and (iii) B's access to alternatives.

Both asymmetrical dependence (power) and (unilateral) influence - closely related construct as they are - can as a starting point be expected to hamper development of relational exchange. But these types of social processes are unidimensional, as power sometimes is accepted due to traditions and situational characteristics. Hence, both (i) legitimate power (authority) - based on common law, organizational rules and regulations (Weber 1947), and

(ii) power based on ability to reward and social identification (French & Raven 1959, Raven & Kruglanski 1970) can be expected to enhance relational exchange.

Studies of the relationship between power/influence and development of relationalism within IORs by and large seem to support such propositions. Hence, unilateral influence (Dwyer & Oh 1987, Reve 1989, Haugland & Reve 1993) and imbalanced power structures (Heide 1994) seem to hamper development of relational exchange, on the other hand authority based on rules and regulations (Dwyer & Oh 1987, Reve 1989, Haugland & Reve 1993) and high and balanced power-dependence structures (Heide 1994) seem to foster relational exchange.

(v) The dimensions of relational exchange.

According to Macneil (1980), exchange relations are embedded in norms of exchange. A norm can be defined as an expectation about behaviour (partially) shared by members of a social unit (Thibaut & Kelley 1959, Mitchell & Larson 1987, Heide & John 1992). In that way, behaviour is coordinated in an informal manner. Deviations from accepted (expected) behaviour are met by various types of sanctions. Norms of exchange vary in a discrete - relational continuum. Discrete norms are best illustrated in a pure market situation, exemplified in its extreme by Dwyer, Schurr & Oh (1987) as "a one-time purchase of unbranded gasoline out-of-town at an independent station paid for with cash". Relational norms are best illustrated in its extreme by close social units like families and close friendships. The fundamental discrete norms are discreteness - "the separation of a transaction from all else between the participants at the same time and before and after" (Macneil 1980, p. 60) - and presentation - "the bringing of the future into the present" (p. 60). The fundamental relational norms are (i) role integrity, increasing in importance as the relationship extends and gets more complex, (ii) preservation of the relation (iii) harmonization of relational conflict, and (iv) what Macneil labels supracontract norms of justice, dignity, liberty etc. That is, the relationship develops characteristics of a society of its own.

These are the fundamental discrete and relational norms. Macneil discusses many relationship dimensions, some of them overlapping, where the norms can vary in the discrete - relational continuum. Several authors have made attempts to reduce and clarify these dimensions, e.g. Palay (1984), Kaufmann & Stern (1988), Haugland & Reve (1993), Noordewier, John & Nevin (1990), Rognes (1991), Heide & John (1992) and Kaufmann & Dant (1992). For specification of dimensions, I will build on the work of Kaufmann & Dant (1992), for three reasons: (i) They have explicitly tried to reduce and clarify dimensions (ii) The dimensions used by them are supposed to be highly generalizable (context - neutral) (iii) The dimensions are tested for validity and reliability, and measures are reported.

According to Kaufmann & Dant (1992, pp 3-4), the seven central relationship dimensions are:

1. Relational Focus: The commercial exchange process is compromised of both the individual discrete transactions and the relationship which encompasses them. Relational focus reflects the extent to which the exchange relationship is perceived as relatively more important to the parties than the individual transactions.

2. Solidarity: Solidarity refers to the process by which an exchange relationship (as distinct from a series of discrete transactions) is created and sustained. In the more discrete forms of governance, the parties rely on arms-length bargaining and legal enforcement to create and sustain each transaction. To accommodate more complex and indefinite relational forms, however, the parties rely on trust and other internal processes.

3. Mutuality. Mutuality implies the requirement of a positive incentive to exchange for both parties. Under discrete governance, the parties require positive outcomes from each discrete transaction and envision the monitoring of each transaction as if it were the last, and therefore the only event capable of delivering the desired outcomes. Under relational exchange, the parties expect generalized reciprocity emanating from the ongoing and indeterminate relationship.

4. Flexibility: If change is to occur in the relationship between parties in order to respond to changes in the environment, it must either be envisioned and permitted within the existing relationship, or it must be possible for the outdated transactional specifications (relational exchange) to be terminated, and new, appropriate ones created (discrete transacting).

5. Role Integrity. To provide the necessary predictability for contracting relationships, the roles of the parties must remain relatively stable. The more discrete the transaction, the more simplistic become the roles to be maintained by the parties. By contrast, relational exchange requires the parties to maintain highly complex and multi-dimensional roles.

6. Restraint: Contracts can be seen as the mutual creation of rights and obligations limited only by their specification. Under discrete governance structures, those rights will be exercised subject only to limitation by the law. This is the neutral corollary of the arms-length bargaining which produces those rights. While recognizing that such legitimate power exists, more relational governance structures create expectations that its use will be voluntarily limited. This dimension reflects the degree to which the parties restrain their use of legitimate power.

7. Conflict Resolution: Contracts reflect the social context in which they are created and executed. The more relational an exchange becomes, the more a separate and distinct social order is created within the relationship itself. In discrete transacting, conflict resolution is a formal external process (e.g. litigation). In relational exchange, conflict resolution is informal and internal.

Even though the seven dimensions above have their distinct elements, they are rooted in one, higher-order construct (Noordwier, John & Nevin 1990, Heide & John 1992). This implies that we can talk about a "relational syndrom", and that the various dimensions are expected to be positively correlated (Kaufmann & Dant 1992).

2.3. Empirical studies on preconditions for and effects of relationalism in IORs

In this section, I will briefly review empirical studies on preconditions for and effects of relationalism in IORs, to be able to position myself within the nomological network of the subject. As I in the theoretical discussion so far have discussed most of these studies and implications of their findings, I will not comment on them in any detail, except when needed. Consider table 2.2 below:

TABLE 2.2: RELATIONAL CONTRACTUAL NORMS IN IORs: IMPORTANT EMPIRICAL STUDIES

A. Studies focusing on conditions facilitating relational contractual norms/trust:

(+) and (-) means that the referred to condition was reported to have positive vs. negative effect or association to the contractual norms, positive meaning "more relational", and vica verca.

Within one IOR

(1) Dwyer & Oh (1987) (2) Haugland & Reve (1993)

Participation (+) Formalization (+)

Formalization (+) Centralization (-)

Centralization (-)

(3) Reve (1989) (4) Heide (1994)

Vertical interaction (-) High mutual dependence (+)

Vertical centralization (-) Imbalanced dependence (-)

Horizontal formalization. (+)

TABLE 2.2: RELATIONAL CONTRACTUAL NORMS IN IORS: IMPORTANT EMPIRICAL STUDIES (cont.)

A. Studies focusing on conditions facilitating relational contractual norms/trust:

(+) and (-) means that the referred to condition was reported to have positive vs. negative effect or association to the contractual norms, positive meaning "more relational", and vice versa.

(5) Boyle et.al. (1992)

(6) Haugland & Reve(1994)

"Unfriendly" (-)

Product specificity (+)

vs. "friendly" (+)

Frequency (+)

types of influence

Relational investments (+)

Interaction effects of two IORs

(5) Reve (1989)

Vertical centralization had a negative effect on horizontal trust and information sharing

Horizontal interaction had a negative effect on vertical trust, and a positive effect on vertical conflict

TABLE 2.2: RELATIONAL CONTRACTUAL NORMS IN IORS: IMPORTANT EMPIRICAL STUDIES (cont.)

B. Studies focusing on effects of relational norms/trust

(+) and (-) means that the referred to variable was reported to be positively vs. negatively affected by or association to relational (vs. discrete) contractual norms.

(1) Kaufmann & Stern (1988)

Degree to which parties in an exchange judge other party to act unfair in manifest disputes (-)

Degree to which parties in an exchange judge other party to act unfair in manifest disputes, when uncooperative behaviour is attributed to other party's will and not uncontrollable circumstances (+)

(2) Noordwier, John & Nevin (1990)

Amount of transaction costs in high uncertainty situations (-)

(Amount of transaction costs in low uncertainty situations: No effect)

(3) Heide & John (1992)

Need to control exchange partners decisions when transaction-sp. investments are made (-)

(4) Haugland & Reve (1993)

Converging perceptions (of product and channel structure) (+)

Studies focusing on conditions facilitating relational contractual norms/trust: The main focus (Dwyer & Oh 1987, Reve 1989, Haugland & Reve 1993) here has been on (the divergent) effects of unilateral influence (centralization) vs. authority based on rules and regulations (formalization), as already discussed. Boyle et.al. (1992), within about the same type of reasoning (legitimacy and types of power), is about diverging effects of "unfriendly" (use of promises, threats, legalistic pleas, requests) vs. "friendly" (use of information exchange and recommendations) types of influences on relationalism. The study of Heide (1994) is about the effect of (power)dependence structures, also discussed in previous parts. Haugland & Reve (1994) is a somewhat explorative study of effects of transactional characteristics on relationalism. This study, testing for preconditions for price vs authority vs. trust, found that conditions that we would expect to lead to governance by authority mechanisms, actually led to governance by trust. The exploratory nature of the study considered, more research is needed to confirm these findings. Note that all these studies focus on conditions fostering/hampering development of relationalism within the boundaries of one IOR. Clearly there has also been a focus on power effects (with some exception for the study of Heide (1994)).

The exception from this picture is the study of Reve (1989). I would therefore like to discuss his study in some more detail, as his research problem is clearly related to the research problem of this dissertation. In Reve's study, interaction effects of two IOR systems within the oil industry were explored: Horizontal alliances between vendors, and vertical alliances between vendors and oil companies. The findings - roughly summarized - was that (i) tight coordination in horizontal/vertical alliance was positively correlated with an unfavorable transaction climate (low trust,high conflict) in vertical/horizontal alliance, and (ii) that there was a positive correlation between degree of coordination in the two types of alliances. It is important to realize the following characteristics of the study: First, and indeed most important, the level of analysis in Reve's study was company to company dyads. Alternatively, the focus could have been on joint venture - (oil) company interaction effects - that is exactly the problem structure of this study. Next, the relationship between coordination in one IOR system and transaction climate in another is studied using crude correlates. Hence, a lot more could potentially be said about the causal mechanisms generating the empirical observations made. As an example, why is it so that there is a negative relation between

degree of coordination in one IOR system on transaction climate in another, and at the same time a positive correlation between degree of coordination in the two types of systems? Third, and related, such kind of correlational data can be analyzed using regression analysis of various kinds, hence doing us able to say more about causal relations. And finally, interaction effects between various IORs - or any other phenomena - should be tested within various contexts and situations to enhance our understanding of them, and make conclusions more valide (cf. Calder et.al. 1981, 1982). Reve suggested the following possible explanation of his findings, somewhat similar to the main idea of this dissertation: The negative associations found between coordination in one IOR and transaction climate in another was a result of resources committed in one IOR system created some sort of friction (lack of autonomy) when trying to commit them in another (hence the coordination - climate interaction effects), on the other hand also access to resources of the IOR system as such (hence the vertical/horizontal interaction effects).

Studies of effects of relational exchange: As with the previous paragraph, I will not make a lot of comments. Focus has been on relational exchange as a mean of redusing transactional difficulties (Noordwier et.al. 1990, Heide & John 1992, Haugland & Reve 1993). Hence, effects of relationalism on various dimensions of output quality within IORs seem to be somewhat underinvestigated, compared to the emphasis on this in the theoretical literature. Remember however that output quality is somewhat intertwined with transaction-specific investments in IORs, as such investments very often are means of such improvements. The study of Kaufmann & Stern (1988) points at some of the difficulties of relationalism, as they in some situations might fuel conflicts.

2.4 Theory and empirical research on relational contracting: Critique and concluding comments

Although the role of relational exchange in IORs has triggered increasing interest the last decade or so, several important questions within the subject area remain underinvestigated. I have identified three important elements (preconditions) of relationalism development, commitment of resources, ability to deliver/keep promises, and power-dependence effects. Of these, the focus within IOR research so far has been on the third of these subject. Hence, in this study I will focus on the two first questions.

This lack of empirical testing of argued-for important aspects of the phenomena, raises some serious questions about its validity. Critical tests in the way recommended by e.g. Lave & March (1975), are somewhat missing: Further, there are major measurement problems connected to the focused variable itself (contractual norms) (Kaufmann & Stern 1988, Heide & John 1991). Most notably, there is a lack of convergence regarding actor's perceptions about contractual norms in the relations studied. Third, whether relationalism has any effect on the effectiveness (or any other result dimension) of IORs is uncertain, most notably as a result of problematic - that is perceptual - result measures. It should be noted that there are few if any indications about contractaul norms (or any other "social" aspects of interorganizational relations) having an effect on relationship results when these are measured using "hard" data like productivity or the like (e.g. Reve 1980). The exception is the study of Noordwier, John & Nevin (1990). As a result, the possibility of measures of contractual norms being confounded with various different climate variables (like satisfaction), as well as performance (using perceptual data), cannot be ruled out. Hence, critical tests are called for, and this study is attempt to do so, both theoretically as well as empirically.

A core feature of relational exchange is the existence of contractual norms enhancing and securing such transactions - relational contractual norms. Hence, dimensions of such contractual norms - building on Macneil (1980) and Kaufmann & Dant (1992) - are the central feature used to discriminate relational and discrete exchange relations. Finally, relational exchange has been almost exclusively studied within single IORs, with the exception of Reve (1989). Thus, the development of relational exchange as an interaction phenomena

of several IORs is chosen as the specific research problem of this dissertation (cf. ch. 1).

CHAPTER 3: THE POLITICAL ECONOMY PARADIGM: AN ASSESMENT AND REVIEW

The objective of chapter 3 is to review and critically evaluate the political economy - paradigm (PE) (Stern & Reve 1980, Arndt 1981, 1983, Achrol, Reve & Stern 1983). This review connects to the research problem of the study in two ways: First, the research problem can be positioned within this tradition, as it deals with external relations of IORs, and conditions facilitating effective handling of such relations. Another way to formulate this, is by saying that the research problem connects to interaction of two interorganizational systems (two political economies), the chain system and the chain - vendor relation. This is a phenomena that has received little attention within the political - economy tradition (except Shoostari et.al 1988, and Reve 1989). Second, the analytical model of this study is a political - economy kind of model, building on insights from collective action theory, political economy studies, agency theory/game theory - as well as relational contracting theory. Hence, insights from these previous studies are of interest to an analytical model of chain - vendor interactions.

I argue that a review of political economy should emphasize the empirical studies done within the tradition. The reason for that is simply that (as stated in chapter 1) political economy is neither a (in a strict sense of the word) model nor a theory about interorganizational relations, but a framework mapping relevant dimensions and variables of such systems, building on TCA, resource - dependence, power - conflict theory etc. Hence, theoretical insights from political economy should be based on empirical findings of studies within the tradition, as well as the substantial theory behind them.

The main elements of the political-economy model is summarized in Figure 2.1. PE is an attempt to integrate economic and sosio-political theories of distribution channels. To do that, what in 1980 was emerging institutional theories of economic organization - TCA and resource-dependence theory - was introduced into the study of IORs within marketing system/distribution channels, in combination with the existing behavioural research tradition. In addition, the framework made an explicit call for knowledge about economic consequences of behavioural characteristics of IOR systems.

The most important relationships in the political-economy model are the following: First, the governance structure (also called the internal economic processes) is assumed to have a direct effect on the performance of the interorganizational system (relationship results), as well as an effect on the transaction climate of the relationship (also called internal socio-political processes). In addition, the transaction climate is assumed to have an effect on performance. Second, the governance structure of the IOR is assumed to be affected by economic and socio-political characteristics of the system itself, as well as being affected by such characteristics of the context of the relationship. Hence, the governance structure of the IOR (degree of centralization, formalization and interaction) is assumed to be related to the institutional arrangement of the system (also called the internal economic structure), to the power-dependence structure of the relation (also called the internal socio-political structure), to the transactional characteristics of the relation, as well as various characteristics of the relationship context.

As with TCA and resource-dependence theory, PE meshes intentional and functional types of explanations (cf. Pfeffer 1982). On the one hand, (bounded) rational actors thriving for access to resources and efficiency are assumed, on the other hand, some sort of selection based on the same criteria is also ipso facto assumed. Parallel to this, various levels of analysis are used. Stern & Reve (1980) based their analysis on dyadic relations. Hence, both when analysing (i) the relations between governance structure, transaction climate and results, and (ii) some of the factors affecting efficient governance structures (transactional characteristics, power-dependence structures), the dyad could be used as level of analysis. According to Achrol, Reve & Stern (1983) however, various levels of analysis (characteristics of the dyad/transaction, primary task environment, secondary task environment, macro environment) should be applied to understand dyadic interactions. (In addition, various sectors could be used to identify factors influencing channel structure and behaviour; input, output, regulatory and competitive sector). If we use level of analysis, dyadic properties and interactions on the one hand, and extradyadic properties and influences on the other, to discriminate between "internal" and "external" political economy studies, we get a fairly precise way of describing the field.

The various empirical studies within the political economy tradition are summarized in Table 3.1. Although some of the studies belong to more than one category, the four following categories are identified: 1. Internal political economy studies: a. Governance structure - transaction climate - performance studies b. Governance structure - transaction climate studies c. Studies of conditions facilitating tight vs. loose governance structure 2. External political economy studies. Consider Table 3.1 (next page):

**TABLE 3.1: THE POLITICAL ECONOMY FRAMEWORK:
EMPIRICAL STUDIES**

1. INTERNAL POLITICAL ECONOMY STUDIES

a. Governance structure - transaction climate - performance

Author/ year	Variables	Main findings
Etgar (1976)	Vertical integration Activities, communication, risk, technology, productivity	
Reve & Stern (1986)	Interaction, centrali- zation, formalization Transaction climate Productivity	Systems with high degree of integration and coordination more productive
Ytreberg & Reve (1989)	Vertical integration and control Productivity Price margins	

**TABLE 3.1: THE POLITICAL ECONOMY FRAMEWORK:
EMPIRICAL STUDIES (continued)**

b. Governance structure - transaction climate

Author/ year	Variables	Main findings
John (1984)	Centralization, formalization, control Opportunism, attitudes Perception of power sources	
Reve & Stern (1986)	see a.	
Schul & Babacus (1988)	Power sources Centralization, formalization Conflict	Centralization has a negative, and formalization a positive, effect on transaction climate (trust/relationalism, conflict etc)
Reve (1989)	Formalization, centralization, interaction in horizontal and vertical IORs Information sharing, trust, conflict in horizontal and vertical IORs	Exception: John (1984)
Boyle et.al. (1992)	Institutional arrangement (degree of integration) Use of promises, threats, legalistic pleas, requests Use of information exchange and recommondations Relationalism	
Haugland & Reve (1994a)	Formalization, centralization Contractual norms Channel cohesion and satisfaction	

**TABLE 3.1: THE POLITICAL ECONOMY FRAMEWORK:
EMPIRICAL STUDIES (continued)**

c. Conditions facilitating tight vs. loose governance structure

Author/ year	Variables	Main findings
Brown (1981)	Resources involved, degree of interaction Formalization, standardization, participation, cooperation	
Rosson & Ford (1982)	IOR member characteristics Formalization, standardization, participation, intensity Conflict Outcomes	Predictions from RD and TCA supported; transaction-specific investments and resource-dependence, uncertainty, risk-aversion etc. foster IOR integration and tight coordination
Etgar & Valency (1983)	Risk attitude, subjective uncertainty, degree of reciprocal dependence Use of contract	
Bello & Williamson (1985)	Vertical integration Characteristics of IOR members, degree of reciprocal investments Governance structure, power-dependence structure and transaction climate	
Dwyer & Oh (1988)	Vertical integration Formalization, centralization, participation Channel strategy.	

**TABLE 3.1: THE POLITICAL ECONOMY FRAMEWORK:
EMPIRICAL STUDIES (continued)**

c. Conditions facilitating tight vs. loose governance structure (cont.)

Author/ year	Variables	Main findings
Heide & John (1988)	Transaction-specific investments and "offsetting investments" Replaceability Performance	
Heide & John (1990)	Dimensions of joint action Uncertainty Transaction-specific investments	
Heide (1994)	High/low and balanced/imbalanced dependence Contractual norms	
Haugland & Reve (1994)	Product specificity, frequency, relational investments, uncertainty, opportunism Governance by authority vs. price.	

Conceptual articles by Mohr & Nevin (1990) and Goldman (1991) can also be positioned within the internal political economy - tradition(s).

**TABLE 3.1: THE POLITICAL ECONOMY FRAMEWORK:
EMPIRICAL STUDIES (continued)**

2. EXTERNAL POLITICAL ECONOMY STUDIES

Author/ year	Variables	Main findings
Etgar (1977)	Vendors control Environment and technology characteristics	
Dannheuser (1984)	Demand characteristics Network characteristics Vertical integration	
Dwyer & Welsh (1985)	Environment heterogeneity and volatility Degree of vertical integration Centralization, formalization, participation, specialization, influence pattern	General predictions of e.g. Thompson (1967) and Pfeffer & Salancik (1978) supported: Resource scarcity (e.g. decreasing output demand and heavy competition) and uncertainty/unpredictability lead to higher levels of (vertical) integration.
Dwyer & Oh (1987)	Level of output sector resources Formalization, centralization, participation Transaction climate	On the other hand seems heterogeneity to foster (vertical) disintegration.
Achrol & Stern (1988)	Environmental determinants of decision uncertainty: Consumer diversity, dynamism, concentration, capacity	

**TABLE 3.1: THE POLITICAL ECONOMY FRAMEWORK:
EMPIRICAL STUDIES (continued)**

2. EXTERNAL POLITICAL ECONOMY STUDIES (cont.)

Author/ year	Variables	Main findings
Shoostari et.al (1988)	Horizontal retail associations as a mean of increased power in relations with vendors, dependent on: Degree of competition, homogeneity, vendors power a priori.	

Conceptual articles by Krapfel (1982), Flipo (1986), Hutt (1986) and Achrol (1991) can also be positioned within the external political economy - framework.

3.1 Comments on the studies: 1. Internal political economy studies:

a. Governance structure - transaction climate - performance studies

The studies by Etgar (1977), Reve & Stern (1986) and Ytreberg & Reve (1989) all supported the proposition that tighter integrated (ownership structure) and coordinated (governance structure) IOR systems have better performance than more loosely coupled systems. These observations are also supported by the increased market shares of more integrated systems within the context of Ytreberg & Reve's study. Some problematic aspects of these findings should be noted. First, very crude indicators of performance (gross sale/employee etc) are used. Second, the potential spuriousity of these findings cannot be excluded: A standard prediction of TCA (and related management theories or practices like Total Quality Management and "Just-in-Time"- systems) is that in order to increase effectiveness of the system, specific investments are needed. Hence, a safeguarding problem is created, leading to tighter integration and control. Whether the higher productivity of the tighter systems is due to specific investments, tighter coordination, or some combinations of these two, is not known. Third, the political economy proposition of a positive effect of a favorable transaction climate on performance, is generally little tested, and has minimal empirical support (Reve & Stern 1986, p. 95), although Rosson & Ford (1982) found such a relation.

b. Governance structure - transaction climate studies

Several studies have focused on the relationship between governance structure (degree of centralization, formalization, interaction etc) and transaction climate (conflict, level of trust etc) (John 1984, Schul & Babacus 1988, Haugland & Reve 1994a), and such relations are also included in more "broadened" political economy models (e.g. Reve & Stern 1986, Dwyer & Oh 1987, Reve 1989). These studies all (except John 1984) indicate that centralization has a negative, and formalization a positive, effect on transaction climate. Such findings are by and large in line with sociological propositions about diverging effects of legitimate vs. non-legitimate influence (Weber 1947, French & Raven 1959, Raven & Kruglanski 1970). The results of Boyle et.al.'s study (1992), testing for the effects of "hostile" (promises, threats, legalistic pleas, requests) versus "friendly" (information exchange and use of

recommndations) types of influence bases, are basically in the same line of reasoning.

There are two major problems with these political-economy studies: First, and most important, a paradigmatic objection is that without testing for performance results of variance in transaction climate, and when doing so little empirical evidence for a climate-performance relationship is found, such political-economy studies boil down to studies within the behavioural research tradition. To label centralization and formalization "economic" processes, does not make them less political or sociological in kind. Second, although the empirical evidence of a different effect of formalization and centralization on transaction climate at first inspection seems beyond discussion, the difference is somewhat dubious. To see that, measures used should be inspected (see also ch. 7): Formalization is fairly consistently measured as the existence of rules and regulations governing IOR members behaviour. Centralization, on the other hand, has sometimes been measured as the degree of influence that channel leader has regarding various types of decisions regarding local behaviour (e.g. Reve & Stern 1986, Haugland & Reve 1994a), sometimes as the right or power to take decisions (Dwyer & Welsh 1985, Dwyer & Oh 1987). It might be questioned whether the divergent effects of centralization and formalization is due to (a) a "legitimacy" effect, centralization and formalization as different means of influence, or (b) reactions to "actual" influence, regardless of the mechanisms used. But here it is important to note that there is consistency across various measurement approaches, e.g. Reve & Stern (1986) (influence approach) on the one hand, Dwyer & Oh (1987) (decision right approach) on the other. It might be interesting to explore the subject in some kind of a comparative test.

c. Studies of conditions facilitating tight vs. loose institutional arrangements and governance structures

As I have already indicated, conditions facilitating tight vs. loose institutional arrangements and governance structures within IORs are explored from two different angles within political economy. On the one hand, by focusing on dyadic properties, and on the other hand by explaining such variance by extradyadic properties. The latter type of studies could be categorized as studies of external political economies.

The major conclusion regarding internal political economy - studies of conditions facilitating tight vs. loose institutional arrangements and governance structures, is that general predictions from TCA and RD are supported, that is that transaction-specific investments, resource dependence, uncertainty, risk-aversion etc. foster IOR integration and coordination. Brown (1981) found that higher levels of resources involved in IOR were associated with increasing degrees of formalization and interaction. Rosson and Ford (1982) found uncertainty to have a positive, and experience a negative, effect on degree of formalization and standardization. Etgar & Valency (1983) found perceived uncertainty, risk aversion and reciprocal dependence to be associated with use of contract (vs. market relations), and John (1994) unilateral dependence to be related to relational norms. The study of Bello & Williamson (1985) is also in line with the kind of arguments above, although they only tested for the existence of differences regarding the kinds of factors mentioned above (without specifying positive or negative associations between variables). Finally, the study of Heide & John (1988) demonstrated the positive effects - on replaceability and performance - of creating dependencies (retailers binding customers, hence making vendors access to them dependent on the retailer) to balance a priori dependence on vendors due to transaction-specific investments made by retailers.

3.2. External political economy studies.

External political economy studies are most notably about extradyadic forces explaining institutional form and degree of coordination in IORs. In broad these studies support general predictions of e.g., Thompson (1967) and resource-dependence theory (Pfeffer & Salancik 1978). On the one hand, tighter IOR forms and high levels of coordination are fostered by resource scarcity (due to e.g. decreasing output demand and keen competition), uncertainty and unpredictability (cf., Pfeffer & Salancik 1978). Heterogeneity, on the other hand, seem to hamper integration (cf., Thompson 1967).

Hence, Etgar (1977) observed a positive association between "hostile" environments (decreasing demand, increasing competition, uncertainty) and vertical control, parallel to Dwyer & Oh's (1987) observation of resource scarcity leading to tighter channel coordination. Dwyer & Welsh (1985) found heterogeneity (number and diversity of environmental elements) to be

negatively, and variability (intense competition, resource scarcity, fluctuations in demand) to be positive associated with tighter forms of IOR coordination. The heterogeneity argument was also supported by Dannheuser (1984), focusing on cultural heterogeneity in a comparative case-study of economic activity in an town in India (high heterogeneity) and the Phillipines (low heterogeneity).

3.3 Conclusion: The paradigmatic success and failure of political economy.

A central idea of the political-economy framework was that in order to enhance understanding of IOR systems, integration of economic and sociopolitical variables was called for: "A premise of the framework as initially formulated is that complex socioeconomic interrelations involve multilateral interactions as opposed to "simple" cause-effect mechanisms, such as those between power use and conflict or between channel design and costs" (Stern & Reve 1980, p. 53). In light of such an objective, the output of 15 years of political economy research seems fairly disappointing: As demonstrated in this chapter, political economy studies can be positioned within related theoretical traditions, like TCA, resource-dependence theory and the behavioural research tradition.

The success story of political economy has been to set agenda and organize insights from sociology and institutional economics into interorganizational theory and the marketing field. The state of in particular distribution channel research about 1980 should be considered (cf. ch. 2): Political economy has contributed to a richer understanding of the preconditions and functions of interorganizational systems.

I will argue that political economy has the potential of playing an paradigmatic role within IOR and distribution channel research if (i) the interplay of sociopolitical and economic processes are (really) considered, e.g. by including incentive-like variables in the model. In this respect, ideas from e.g. the principal-agency literature (e.g. Eisenhardt 1989) would be useful. (ii) relationship results in various dimensions (e.g. economic results, system ability to effectively cope with third-party actors, legitimacy, power in third-party relations) are considered, and (iii) IOR system - environment and inter-IOR system relations are considered. Hopefully, the model of this dissertation is able to satisfy these recommendations.

CHAPTER 4: RELATIONALISM DEVELOPMENT AS A PROBLEM OF COLLECTIVE ACTION

The aim of this chapter is to identify theoretical constructs and mechanisms that enables modeling of the research problem defined. Referring to chapter 1 and 2, the overall perspective is about mobilization of resources (ability to commit resources, and to keep promises inherent in these commitments) in the voluntary chain in order to handle relational exchange with vendors. In this chapter, this problem of resource mobilization in the chain is analysed as a problem of collective action. The chapter has three major parts: First, various perspectives on problems of collective action are discussed. The parallelity between definitions of (level of) collective action (Hechter 1987, Elster 1983), and the perspective on relational exchange of this study, is demonstrated. Second, I make a brief discussion of conditions reducing and mechanisms of overcoming problems of collective action, in order to isolate mechanisms that can be used to overcome problems of collective action. Third, by connecting collective action theory with political economy, game theory and principal agency theory, the general mechanisms identified are "translated" into chain variables. The discussion is summarized into an analytical model.

4.1. Perspectives on problems of collective action.

A collective action problem is about non-rationality at system level. Let us start with rationality at the individual level. Rationality at this level implies that: (i) The actor has preferences that are clear (can always make a judgement, like $a > b$, $a = b$, $a < c$), stable (no contextual or time effects) and consistent (e.g. if $a > b > c$, then $c > a$ is inconsistent). (ii) The preferences of the actor are autonomous (iii) The actor chooses - according to his/her knowledge - the best available alternative, that is the alternative with the best consequences given his/her preferences (Elster 1983).

Indeed, whatever perspective used to transfer rationality from micro to macro level, major analytical problems exist. This is so, even when autonomy is excluded as a criterion defining rationality (and in that way, only treating what Elster (1983) calls the "thin" theory of rationality). As Kenneth Arrow has demonstrated in his well-known "impossibility theorem", any preference function at some collective level is imperfect. The standard criterion

of economic theory - Pareto optimality - is obviously a very weak one.

The precision of any definition of collective rationality (I will usually refer to this later as collective action) is a function of (at least) two dimensions: First, there is the preference structure of the actors within the collective unit. A definition of "the optimal" output is dependent on the mix of individual preferences. As demonstrated by Elster (1989, pp 202-206), there might exist extremely complex mixtures of motivations in situations of social interaction, making them uneasy or impossible to model in any strict sense. Second, there is the "technology" of collective action, that is variables like collective benefit functions, collective cost functions, dominant individual strategies, threshold values, knowledge, etc.

As a starting point, I define a problem of collective action as a situation where there is a discrepancy between preferences at micro and macro level. If members of a social unit behave according to isolated individual preferences, the group as a whole is worse off in some aggregated sense. Consider the various possible definitions below:

"I begin with a survey of various ways of defining a collective action problem:

1. We may define it very broadly, as any binary choice situation in which it is better for all if some make one choice - the cooperative choice - than if all make the other choice, although better for each to make the latter.

2. We may define it more narrowly, as an n-person Prisoner's Dilemma in which it is better for all if all cooperate than if nobody does so, yet better for each not to do so.

3. We may define it even more narrowly, as an n-person Prisoner's Dilemma in which it is best for all if all cooperate, yet better for each not to do so.

4. One might weaken the condition that there exists a level of (possibly universal) cooperation that makes everybody better off. As an example, consider corruption.....

5. Next, we could relax the condition that noncooperation be a dominant individual strategy. This condition would not be appropriate, for instance, when only cooperators benefited from cooperation....The condition that noncooperation be dominant is also inappropriate when one or more of the actors would be willing to provide the good single-handedly....

6. Finally, there can be collective action problems even if nobody is made worse off by

defection...." (Elster 1989, pp.25-27):

Of these definitions, I will use the weakest one, that is the first. That definition is fairly consistent with the definition suggested by Elster in "Sour Grapes":

"The economic notion of collective rationality implies that people, by individually rational actions, bring about an outcome that is good for all, or at least not bad for all. (Failure of such collective rationality may occur in one of the three ways just described; by isolation, by perverse interaction structures, and by lack of information...) The political notion of collective rationality implies that people by concerted action are able to overcome these contradictions." (1983, p. 29).

Such a way of defining collective action is defensible when we consider the structure of the cooperative arrangement, and the dependent variable: The focus is on some kind of goal achievement (effective handling of vendor relations) of the voluntary chain organization, not on some kind of aggregated output compared to some kind of collective preference function. Then the reader might question: "Well, why bother about collective action anyway?" The answer to that is simply that it is still a problem of collective action, as the chain organization is a coordinator and agent of the collective interests of the member units.

Hence, the chain organization is an agent for the collective interests of its members. I build on Hechter's (1987, p. 18) definition of collective action, or what he calls group solidarity, here defined as follows:

The level of collective action is defined as the average proportion of each member's private resources contributed to collective ends.

That means that I as a starting point do not consider variations (e.g. in number of contributors or individual levels of contributions) in pro-collective action, only averages. As to be discussed however, two important subdimensions of collective action still exist; existence of obligations for collective action and the degree to which such obligations are fulfilled.

4.2. Conditions reducing and mechanisms of overcoming problems of collective action.

Problems of collective action are analyzed within various academic disciplines, like economics, game theory, sociology, political science and organization theory. Discussing such factors in a more general manner, I will use two dimensions to categorize factors: First, I will discriminate between conditions fostering or hampering collective action on one hand, and mechanisms of bringing about collective action on the other. That is, if a model of collective action within voluntary chains is to say something about what decision makers can do to improve the effectiveness of the system, the degree to which factors - that can explain collective action - can be manipulated, is important. The clivage between "conditions" and "mechanisms" is surely neither perfectly discriminating nor dichotomous in kind, but I think more than just illustrative. Second, the various factors can be traced back to various theoretical traditions, although some of them indeed belong to more than one tradition. Of more illustrative reasons, I discriminate between economic theory and game theory on one hand, and sociology, political science and ("non-economic") organization theory on the other. Consider table 4.1 below:

TABLE 4.1: FACTORS EXPLAINING COLLECTIVE ACTION

	Conditions	Mechanisms
Sociology/ Political science/ Organization theory	Normativist perspective Structuralist perspective Selection	Authority
Economic theory/ Game theory	Size effects Time horizon	Incentives Information

(A) Conditions fostering or hampering collective action

(1) **Within sociology**, three distinct traditions can be identified (cf. Hechter 1987). These are the normativist perspective, the structuralist perspective, and the functionalist perspective:

(a) The normativist perspective (also important within organization theory) focus on collective action as a function of normative internalization. To the degree that members identify with group norms, they can be expected to engage in the appropriate behaviors without sanctioning. Indeed, the role of norms (and related concepts such as trust and culture) as mechanisms of governing IORs has attained increased attention during the last 10-15 years (e.g. Macneil 1980, Ouchi 1980, Bradach & Eccles 1989). However, as discussed in previous chapters, I argue that norms hardly can be regarded as primary instruments of overcoming problems of collective action. Norms can not be directly manipulated, relational (prosocial) norms are "states that are essentially by-products" (Elster 1983). Stated differently, they come about as a result of other factors, e.g. the way the group members are governed.

(b) Within the structuralist perspective, patterns of stratification are held to be the basic cause of group solidarity: Individuals are seen to coalesce into solidarity groups by virtue of sharing common material interest. They learn of this commonality of interest as they interact with one another. Indeed, such processes - and the various common interests initiating them (Arndt 1979, Galaskiewicz 1985, Oliver 1990) are extensively studied regarding IORs (Van de Ven 1976).

(c) Within the functionalist perspective, (an important perspective in sociology as well as economic theory and game theory) group solidarity is explained by natural selection. If groups with high degree of solidarity are more effective than groups with low degree of solidarity, they will survive the competition for resources (Axelrod 1984). There are at least two problems with this argument: First, the usefulness of functional explanations in the social sciences is dubious, due to the problems of specifying natural selection mechanisms in social systems (Child 1972, Elster 1982). Second, functional explanations give no answer to the question of how group solidarity can be brought about by intention.

2. Within economic theory and game theory, two important conditions of collective action are group size and expectations of repeated interaction.

(a) First, we have the problem of group size (Olson 1965): The larger the group, Olson argues, the more problematic is collective action. This is so, due to (i) increased incentives for free-riding (ii) increased costs of coordination. However, these arguments are problematic in several respects (cf. Hardin 1982). The main problem of the argument is that there may be threshold values for groups being able to produce collective goods for their members, where smaller groups are incapable of giving their members access to benefits whatsoever. In addition, the relative costs of coordination are not necessarily increasing with group size. Larger groups may be more capable of establishing cost-effective ways of coordination and control.

(b) Second, we have the effects of expectations of repeated interaction (Axelrod 1984), or what Heide & Miner (1988) called "the shadow of the future". If the parties in a group or a business relationship expect repeated interaction, this will discipline their behaviour, thus resulting in a more cooperative mode of behaviour. The existence of transaction - specific investments is a factor that can explain such expectations (Palay 1984).

(B) Mechanisms of bringing about collective action

Mechanisms for bringing about collective action can be divided into two broad classes (cf. Hechter 1987, and also Hardin 1982). According to Hechter (1987), the level of collective action is dependent on two conditions, the existence of obligations for collective action, and mechanisms ensuring that these obligations will be fulfilled. I will label these mechanisms according to the intellectual tradition they come from; the sociological (sociology, political science and organization theory) and the economic approach (economic theory, e.g. principal-agent theory, and game theory) to problems of collective action.

(a) With political science I here mean nothing more than the study of acquisition, maintenance and use of power within social systems. The field is indeed very old, and includes classical writers like Machiavelli (1532; see Ehnmark 1987) and Hobbes (1651/1968). However, I will focus on more modern formulations, for example within what is known as "political organization theory" (e.g., Pfeffer & Salancik 1978, March 1988a, 1988b, Pfeffer 1981, 1992).

A central idea of political science regarding problems of collective action, is the need for a strong power holder that can coordinate action of the various actors in the society, and if necessary by force hinder action damaging to the society as a whole (Hernes 1975, Hardin 1982). In a voluntary chain, this can come about if the members agree to give away local autonomy (decision authority) to the central chain organization. It is important to note that for the individual member of the chain, this can be regarded as a process of voluntary exchange: The individual member gives away local autonomy, in return for increased effectiveness of the system as a whole, thus enlarging the benefits of the membership.

(b) Mechanisms ensuring fulfilment of obligations are analyzed within several writings on problems of collective action (e.g., Olson 1965, Hernes 1975, Hechter 1987), and can be understood using constructs from most notably principal-agency theory (e.g., Jensen & Meckling 1976, Fama & Jensen 1983, Eisenhardt 1989, Bergen et.al 1992) and game-theory (e.g., Hardin 1982, Axelrod 1984). Two mechanisms of controlling behaviour seem to be important, selective incentives and information about behaviour. As it is a premise for the discussion, the distinction between public goods and collective goods is important (Hardin 1982), described in the following way by Hechter:

"While private goods are fully excludable, collective goods have positive, but varying, amounts of excludability. To the degree that collective goods are excludable, they can be produced for the sole consumption of members. Since noncontributors can be kept from consuming these goods, the threat of expulsion from the group is a selective incentive in and of itself; it may be one that is sufficient to deter free riders". (1987, pp. 36-37):

Since exclusion is possible in a voluntary chain, I will argue that the benefits that the chain is able to produce for its members, can be regarded basically as a collective (vs. public) good. That means that threat of exclusion might discipline behaviour, as membership could be assumed to have a positive value (if not, firms could usually be assumed to exit from the system).

Such sanction mechanisms used to ensure fulfilment of obligations are negative incentives in kind. The use of positive incentives - paying actors for behaving according to obligations - is surely also a possibility. It should be realized that the funding of such positive inducements will represent a problem of collective action in itself (e.g., Elster 1989, p. 40) and hence is somewhat secondary to sanction mechanisms. I will not discuss this possibility any further.

Next, consider information. The ability of the collective unit to sanction non-conformers is dependent on information about behaviour. At the same time, asymmetric information can be assumed: That is, the individual member of the chain knows more about local behaviour than the central unit.

Agency theory (e.g., Jensen & Meckling 1976, Fama & Jensen 1983, Eisenhardt 1989, Bergen et.al 1992) is relevant for such a problem. The theory deals with situations where a principal (the chain) is dependent on the behaviour of an agent (the individual member of the chain), and where there is a discrepancy in goals between those two (collective vs. individual goals). Central concepts of agency theory are optimal incentive schemes (e.g., choices between outcome-based and behaviour-based incentives), risk, and information/information systems. These are unique contributions to organizational theory:

"Agency theory also makes two specific contributions to organizational thinking. The first is the treatment of information. In agency theory, information is regarded as a commodity: It has a cost, and it can be purchased. This gives an important role to formal information systems, such as budgeting, MBO, and boards of directors, and informal ones, such as managerial supervision, which is unique in organizational research. The implication is that organizations can invest in information systems in order to control agent opportunism" (Eisenhardt 1989, p. 64).

At the same time, both Eisenhardt (1989) and Bergen et.al. (1992) indicate that the role of monitoring and information systems has received little attention within empirical research.

4.3. A theory of collective action in voluntary chains

Referring back to the discussion in the former paragraph, a theory of collective action in chains can be based on the following elements: First, the level of collective action is defined as the average proportion of each member's private resources contributed to collective ends. Second, collective action is assumed to be a function of the existence of obligations for collective action, and mechanisms ensuring that these obligations will be fulfilled. Third, two generic mechanisms of bringing about collective action was identified, authority mechanisms and incentive mechanisms (incentives and information about agent behaviour). These various notions are applied in the following way: Obligations for collective action are analyzed as a function of existence of authority mechanisms - centralization, formalization, and standardization - within chains. Fulfilment (or non-fulfilment) of obligations - or what I, using TCA, call opportunistic behaviour - is analyzed based on the argument that non-confirming behaviour probably is a function of two elements: First, the expected net benefit of acting opportunistically. This dimension is argued to be related to the use of incentive mechanisms. Second, the behavioural tendency to act opportunistically. That dimension is argued to be related to the types of authority mechanisms used in the system.

a. Existence of obligations for collective action: Authority mechanisms.

Obligations for collective action can be a function of at least two major types of variables. In Michael Hechter' s analysis, the major interest was on existence of obligations for collective action as a function of member's dependence on the group, as being dependent on factors like value of collective good, supply of close substitutes, lack of information about alternatives, costs of moving and strength of personal ties. An alternative way of analyzing obligations for collective action is to consider the use of authority-based coordination mechanisms in the system. Surely, dependence and authority are related theoretical concepts. Dependence levels in IORs are probably defining limits to the use of authority-based coordination in the IOR systems (e.g., Stern & Reve 1980). Although related, I focus on

authority-based coordination mechanisms of the following reasons: First, it has to be realized that there is a non-negligible element of voluntary choice regarding coordinative mechanisms: For the individual member of the system, there is a trade-off between, on the one hand the negative consequences related to the non-effectiveness of a loosely coordinated system (inability to collective action), on the other hand to giving away autonomy to collective bodies of the system (Hernes 1975). Hence, dependencies can be created by investing in a well-functioning collective system. Coordinative mechanisms may be established by organizational design. Second, I think it is fair to say that by focusing on the use of coordinative decision mechanisms, we can get a more precise description of the existence of obligations in the type of collective system we are analysing, namely an organization-like cooperative system as a chain. And third, by using well-established constructs of (inter)organizational coordination, I can build on theoretical as well as empirical studies within e.g. PE and the behavioural research tradition to analyze dependencies between existence and fulfilment of obligations.

Hence, based on previous theoretical and empirical studies of interorganizational coordination, the following two coordinative mechanisms are selected: Centralization (cf. Stern & Reve 1980, John 1984, Dwyer & Welsh 1985, Reve & Stern 1986, Schul & Babacus 1988, Dwyer & Oh 1987, 1988, Reve 1989, Haugland & Reve 1994a), and formalization (cf. Stern & Reve 1980, Brown 1981, Rosson & Ford 1982, John 1984, Dwyer & Welsh 1985, Reve & Stern 1986, Schul & Babacus 1988, Dwyer & Oh 1987, 1988, Reve 1989, Haugland & Reve 1994a). These variables can be defined as follows:

Centralization (def): Centralization refers to the locus of decision making in a collectivity. The centralization of a voluntary chain's decision making can be defined as the extent to which power to make decisions is consentrated in the collective bodies of the system.

Formalization (def): Formalization refers to the degree to which rules, procedures and fixed policies govern the interorganizational exchange and activities.

Centralization and formalization are standard elements of bureaucratic governance (e.g., Child 1972). As used here and in other IOR studies, they are somewhat "transformed" from models of intraorganizational theory to interorganizational relations. Within an organization, there is a system of hierarchical levels, from the CEO, via divisions and departments and down to the various operational units. Centralization then refers to the degree to which decisions are taken in higher levels of the system. Within IORs in general, it refers to the degree to which decision right is concentrated with one of the actors (e.g. the wholesaler in wholesaler-retailer dyads). The unit of analysis being voluntary chains, I then refer to collective bodies as locus of decision making. Formalization might be regarded as an alternative way of coordinating IOR systems (Child 1972). Instead of concentrated decision power with one actor in the system, coordination is achieved by agreed-upon rules, procedures and fixed policies.

Centralization and formalization as used within IOR studies in general, and in this study as well, refer to coordination of interorganizational flows and activities, that is by and large the "behaviour" of the actors of the system. I therefore argue for the inclusion of a third coordinative mechanism, related to whether the resources of the members in the system are coordinated, that is standardized:

Standardization (def): Standardization refers to the degree to which there are rules, contractual arrangements and fixed policies regulating the level and configuration of member resources.

Standardization is a governance mechanism with important similarities to formalization. Let me illustrate this with some aspects of governing an airline company: Formalization is predetermined decisions embedded in rules, SOPs etc. In an airline company, there is a huge amount of such rules and regulations, specifying what actions that are to be taken by take off, landing, emergency, etc. There are also rules specifying what the resources available should be like, the best example being that the pilots must have licences of a certain kind to get hired by the company. Thus, formalization is coordination of activities embedded in rules, standardization is coordination of the resources of the members (reducing the variance), embedded in rules.

Centralization, formalization and standardization are means of establishing obligations for collective action by moving - with the important differences discussed above - decisions from local to central level in the chain system. Ceteris paribus - most importantly given any level of fulfilment of obligations - higher levels of these variables are argued to increase the level of collective action in the system. Next then, consider fulfilment of obligations (opportunistic behaviour).

b. Non-fulfilment of obligations: Opportunistic behaviour

The degree of collective action in a chain is a function of two dimensions; the existence of obligations that chain members have towards the chain, and mechanisms available for ensuring the fulfilment of these obligations.

In spite of established obligations, the members can still act in a way that is harmful to the common good, due to non-fulfilment of obligations. I will label such behavior opportunistic behaviour (Williamson 1975, 1985, John 1984). Based on John (1984), I define the construct as follows:

Opportunistic behaviour (def): Opportunistic behaviour is defined as the degree to which members of the chain violate implicit or explicit promises about appropriate or required role behaviour.

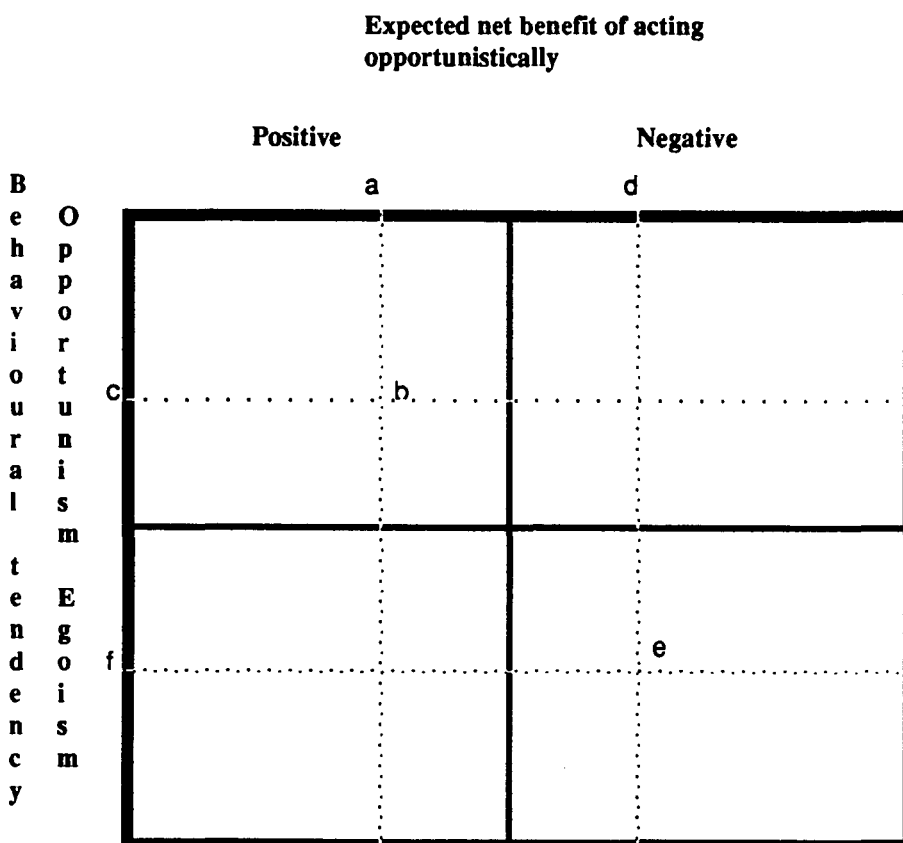
It is important to note that opportunistic behavior here means the extent to which the members of the chain violate established obligations due to centralization, formalization or standardization. It should also be noted that the concept of opportunistic behaviour here is relative to the amount of obligations given.

It is also important to note that the definition used here (from John 1984), is somewhat different from the way opportunistic behaviour (or "opportunism") is defined by Oliver Williamson. Within TCA, intentional opportunistic action is assumed; opportunistic behaviour is about bad guys acting badly. Hence, the focus is on more explicit forms of non-social behaviour, like holding back information, lying, etc. John's definition - the one used here -

has a considerably less explicit intentional basis: Violation of promises/non-fulfilment of obligations might be a result of intentional opportunistic action - and this is a central aspect of the construct - but clearly also other factors, e.g. that commitments are not fully understood or communicated. To sum up, the definition used does not stress opportunistic intentions in the same way as within TCA: The intentionality of non-fulfilment of obligations simply cannot be known with certainty, but an assumption about such intentions being an element of violations of promises/non-fulfilment of obligations can nevertheless be used when modeling variance in the phenomena:

I argue that the degree of opportunistic behaviour is a function of two dimensions (Figure 4.1): (i) behavioural tendency to act opportunistically and (ii) expected net benefit of acting opportunistically:

Figure 4.1: Opportunistic behaviour as a function of behavioural tendency to, and expected net benefit of, acting opportunistically



First, contradictory to TCA (but parallel to John 1984) I argue that the behavioural tendency to act opportunistically can vary. In particular, I argue - on the basis of the political-economy paradigm (Stern & Reve 1980) - that this behavioural tendency will vary with the form of the authority mechanisms used in the system (centralization vs. formalization and standardization). Second, even pure opportunists will act egoistically (that is, fulfill obligations but with no extra-role behaviour) if the expected costs of acting opportunistically exceed the expected benefits, due to incentive structures. I will analyze how the expected net benefit of acting opportunistically can be manipulated, by using agency theory (Jensen & Meckling 1976, Fama & Jensen 1983, Eisenhardt 1989, Bergen et.al. 1992) and game theory (Hardin 1982).

(1) Behavioural tendency to act opportunistically:

An important insight from empirical research within the political economy tradition, is the difference regarding behavioural reactions¹ towards different types of authority mechanisms used within IOR systems. Focus has been on effects of centralization vs formalization. While centralization hampers the development of a positive transaction climate between IOR partners, formalization seems to foster it (Brown 1981, Reve & Stern 1986, Dwyer & Oh 1987, Schul & Babakus 1988, Reve 1989, Haugland & Reve 1993). As discussed in chapter 3, such findings are in line with sociological propositions about diverging effects of legitimate vs. non-legitimate influence (Weber 1947, French & Raven 1959, Raven & Kruglanski 1970). And as discussed in previous parts of this chapter, standardization and formalization are coordinative mechanisms with important similarities, the difference being that while formalization is about regulating ongoing activities and behaviour, standardization is about regulating resource levels and configurations. Hence, I argue theoretically that these two coordinative mechanisms should be expected to have a somewhat parallel effect on transaction climate/opportunistic behaviour.

¹Within the PE framework, this is called "transaction climate" and includes various behavioural, affective and cognitive concepts like opportunistic behaviour, conflictual behaviour, norms, convergent perceptions, and the like.

To understand the different effects of centralization and formalization/standardization on the transaction climate in the chain, the content of them must be considered. Both implies coordinated decision processes. However, they differ in at least two respects: First: The formalized/standardized rules and procedures represent - in contrast to centralized decision power - a stable framework for the relationship between the partners. In this way, it fosters stable and predictable conditions for the parties involved. Second, and related to this, is the effect on the power balance in the relationship of the form of coordination. Centralization means that the party with the decision rights can change the content of the coordinative mechanism without the participation of the other actor. In contrast, with formalization/standardization the content of the coordinative mechanism is given, and often specified in contract. In this way, with centralization the possibility that the receiving party feels that (s)he is losing autonomy is much greater than with formalization. This will influence transaction climate in a negative way.

In sum, I argue that centralization will increase, and formalization/standardization decrease, the level of opportunistic behaviour in the chain.

(2) Expected net benefit of acting opportunistically: As analyzed, the members of a chain will have incentives to free-ride on the cooperation in the system. Opportunistic behaviour is a "strong form" of free-riding, since it implies such behaviour even after obligations to act in a more cooperative or prosocial way have been established.

However, as discussed in part c, the incentives for free-riding can be manipulated by the design of incentive structures. The arguments are straight-forward: By creating incentives reducing the expected net benefit of acting opportunistically, such behaviour should decrease. And as demonstrated, two types of incentive mechanisms are of particular interest: First, the possibility of exclusion from the chain should reduce the level of opportunistic behaviour, as the access to the collective goods produced by the system would be blocked. In addition, other types of sanctions, like financial penalties, can have a similar effect. Hence, use of sanctions - defined below - are proposed to reduce the level of opportunistic behaviour:

Use of sanctions (def): Use of sanctions is defined as the degree to which the chain is taking action with negative consequences towards members of the system acting opportunistically.

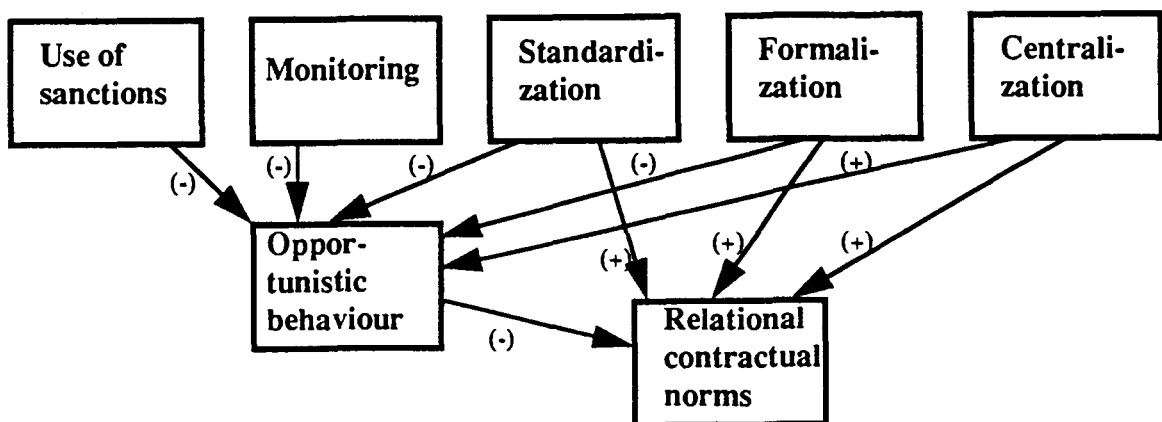
Second, based on an assumption of asymmetric information in the chain system, that is members of the system knowing more about local conditions and own behaviour than the central chain organization, monitoring (defined below) is argued to reduce the level of opportunistic behaviour in the chain system, as it reduces the information asymmetry, hence reduces the probability of opportunistic behaviour of a member being unknown to the central chain organization:

Monitoring (def): Monitoring refers to the aggregated flow of information about the members of the chain, from the members and other network actors to the central chain organization.

4.4. A model of governancial preconditions for relational exchange in chain's vendor relations.

The discussion in chapter 2 of mobilization of resources as an important aspect of relational exchange, and in this chapter of mechanisms of bringing about collective action - that is mobilization of resources - can be summarized in the model below:

Figure 4.2: Model



The model summarizes the discussed elements in the following way: First, mobilization of chain resources as a precondition of relational exchange has two subdimensions, commitment of resources and ability to deliver. Hence, coordination of chain member activities and resources are assumed to have a positive effect on chain - vendor relational exchange. This means that the central chain organization - the collective unit of the chain system - is in control of a larger resource base that can be employed in the vendor relation. Increased levels of coordination thus means that the chain's ability to commit resources in the vendor relation is enhanced. Note that this is a *ceteris paribus* clause, given any level of opportunistic behaviour, increased levels of coordination implies more resources available for the central chain unit (resources meaning more coordinated activities and physical resources). Next, opportunistic behaviour in the chain, that is members non-fulfilment of obligations towards the central chain organization, is assumed to have a negative effect on chain - vendor relational exchange, as it means that the central chain organization - the collective unit of the chain system - is in control of less resources that can be employed in vendor relation. That is, increased levels of opportunistic behaviour in the chain means that the chain's ability to deliver/keep promises in vendor relation is reduced. Note that this is a *ceteris paribus* clause, given any level of coordination, increased levels of opportunistic behaviour implies less resources available, and reduced ability to keep promises, for the central chain unit. Third, the level of opportunistic behaviour in the chain is argued to have two dimensions, expected net benefit of acting opportunistically, and behavioural tendency to act opportunistically. Hence, incentives to fulfill obligations due to sanctions of non-conformers and monitoring are argued to reduce the level of opportunistic behaviour (reduced expected net benefit of acting opportunistically). Centralization is expected to increase the level of opportunistic behaviour (increased behavioural tendency to act opportunistically), whereas formalization and standardization is expected to decrease the level of opportunistic behaviour (increased behavioural tendency to act opportunistically). These relations between variables are discussed in further detail, and formalized into empirically testable hypotheses, in chapter 5.

CHAPTER 5: HYPOTHESES

In this chapter, empirically testable proposition - hypotheses - deduced from the analytical model presented in chapter 4, are presented and discussed. These hypotheses are next empirically tested in the study presented in chapters 6 - 9.

The analytical model presented in chapter 4 is a comprehensive and systematic abstraction of the way governance and behaviour in the voluntary chain can be expected to affect chain - vendor relational vs. discrete exchange. The overall perspective is mobilization of resources in the chain system as a precondition for the existence of relational exchange in vendor relation. This overall perspective can be further reduced into three groups of relations: (i) Commitment of resources; chain coordination - vendor relation ("direct") effects (ii) Ability to deliver; opportunistic behaviour in chain - vendor relation ("indirect") effect (iii) Determinants of opportunistic behaviour; incentive effects (use of sanctions/monitoring - opportunistic behaviour relation) and behavioural effects (centralization-formalization-standardization - opportunistic behaviour relations).

5.1 Dependent variable

The dependent variable(s) are contractual norms (Macneil 1980, Kaufmann & Dant 1992) of central chain organization - vendor dyad. These contractual norms are argued to vary in a discrete - relational continuum. Contractual norms are - according to Kaufmann & Dant (1992, see ch. 2) - argued to have seven dimensions; relational focus, solidarity, mutuality, flexibility, role integrity, restraint and conflict resolution.

It is important to note that these dimensions of relational (vs. discrete) exchange are stemming from one, higher-order construct (degrees of relationalism, cf. Heide & John 1991). Hence, there is no theoretical reasons to expect that the various dimensions will differ regarding effects of independent variables. Consequently, hypotheses are not reduced into the specific dimensions.

The development and maintenance of relational contractual norms - that is a cooperative transaction climate in the central chain organization - vendor dyad - is analyzed with chain characteristics as focused explanatory variables. Based on various theoretical contributions on relational exchange (Thibaut & Kelley 1959, Frazier 1983, Dwyer et.al. 1987, Ring & Van de Ven 1994), relational exchange is argued to be dependent on the level of resources invested in a relation. This basic resource dependence perspective of relationalism development can be subdivided into two dimension; commitment of resources and ability to deliver, that is to keep promises.

5.2 Mobilization of resources in IOR as a problem of collective action

The voluntary chain is a weak IOR form, a weak institutional form (compared to e.g. franchise arrangements or integrated firms). Hence, as discussed in chapter 1, the ability to mobilize resources in order to handle external relations (or in order to achieve any other strategic goal) can be expected to be highly variabel. As a consequence, chain characteristics can be assumed to have a lot to say about chain - vendor relationships.

The chain's investment of resources to develop and maintain relational exchange with vendors is argued to be a function of the degree to which such resources are mobilized in the chain. Such mobilization of resources in the chain is argued to be a problem of collective action. That is, based on the various positive outcomes related to relational exchange (most notably increased marketing effectiveness in input and output sector), the chains ability to handle such relations will have a positive, or at least not a negative, value for all members. At the same time, all members will have an individual interest in minimizing own contribution to the production of this collective good. Hence, the degree to which resources are mobilized is defined as the level of collective action in the chain, that is the average proportion of each member's private resources contributed to collective ends (cf. Hechter 1987).

It is important to realize that collective action is a way of "seeing" the phenomena, a theoretical perspective. The definition of collective action choosen does not, however, presume a specific form of collective benefit function: All that matters, it the central chain organizations access to member resources. Wheter the central chain organization is capable

of producing individual benefits out of these resources, is hence actually outside the problem defined.

The level of collective action is higher, *ceteris paribus* (i) the more extensive the obligations for collective action are (ii) the more these obligations are fulfilled

5.3 Obligations for collective action: Authority mechanisms

Obligations for collective action can have various forms (cf. ch. 3c). Considered here is obligations for collective action due to authority-like coordinative mechanisms: By moving decisions from local to central level in the chain, obligations for collective action are created. Three types of authority-like coordination are considered (cf ch. 4): Centralization (cf. Stern & Reve 1980, John 1984, Dwyer & Welsh 1985, Reve & Stern 1986, Schul & Babacus 1988, Dwyer & Oh 1987, 1988, Reve 1989, Haugland & Reve 1993) refers to the degree to which power to make decisions is concentrated in the collective bodies of the system. Formalization (cf. Stern & Reve 1980, Brown 1981, Rosson & Ford 1982, John 1984, Dwyer & Welsh 1985, Reve & Stern 1986, Schul & Babacus 1988, Dwyer & Oh 1987, 1988, Reve 1989, Haugland & Reve 1993). refers to the degree to which rules, procedures and fixed policies govern activities in the chain. Both centralization and formalization refers to coordination of interorganizational flows and activities, that is behaviour in the chain system. Finally, standardization refers to which there are rules, contractual arrangements and fixed policies regulating the level and configuration of member resources.

Given any level of fulfilment of obligations in the chain (except 100% non-fulfilment), higher levels of centralization, formalization and standardization is argued to have a positive effect on the transaction climate in chain - vendor dyad, that is to lead to more relational exchange (more relational vs. discrete norms of exchange), as more resources are available for development and maintenance of such exchange relations. Note that this argument, in addition to the general resource argument, is closely related to the first resource dimension of relational exchange; commitment of resources:

H1: Centralization in the chain has a positive effect on the development and maintenance of relational (vs. discrete) contractual norms in the chain's vendor relations.

H2: Formalization in the chain has a positive effect on the development and maintenance of relational (vs. discrete) contractual norms in the chain's vendor relations.

H3: Standardization in the chain has a positive effect on the development and maintenance of relational (vs. discrete) contractual norms in the chain's vendor relations.

Some comments on H1 - H3: (i) The three hypotheses assume paralelity in the effects on chain - vendor relationship of the various coordinative mechanisms. There are two aspects of this: First, centralization, formalization and standardization are three different mechanisms of coordination. There is no reason to expect that these differences should make any difference (regarding effect on chain - vendor contractual norms) - they are all mechanisms of mobilizing resources in the chain system - when the *ceteris paribus* clause of the hypotheses are considered. I do however expect them to have different effects on opportunistic behaviour, and hence "indirectly" to have varying effectiveness. Second, although this is an empirical aspect more than a theoretical aspect of the model, it should be noted that the various mechanisms can be expected to be applied in varying degrees to coordinate various substantive or functional areas of the chain system. I do not, however, expect this to have a substantive impact on effects in chain - vendor relation. This is so because when building vendor relations, and probably all types of relations, an extensive relation will mean that the total activities and resources of the chain has to be considered. Various functions and activities like procurement, marketing (towards end-users) and design of outlets are all examples of resources/activities with interest for the vendor.

5.4 Non-fulfilment of obligations: Opportunistic behaviour.

In spite of established obligations, the members can still act in a way that is harmful to the common good, due to non-fulfilment of obligations. I will label such behaviour opportunistic behaviour (Williamson 1975, 1985, John 1984). Based on John (1984), I define the construct as the degree to which members of the IOR violate implicit or explicit promises about appropriate or required role behaviour.

The expected effect of opportunistic behaviour on vendor relations is straightforward: Opportunistic behaviour is argued to have a negative effect on the transaction climate of chain - vendor dyad, that is to lead to less relational exchange (less relational vs. discrete norms of exchange), as less resources are available for development and maintenance of such exchange relations: If members of the chain non-fulfill obligations towards the central chain organization, it makes it harder for the central chain organization to fulfill promises towards its vendors. This can be expected to have a significant negative effect on level of relationalism (cf. also experimental studies on individuals, e.g. Perlman & Cozby 1983). Note that this argument, in addition to the general resource argument, is closely related to the second resource dimension of relational exchange; ability to deliver (keep promises). In that way, it relates to a distinct dimension of the overall resource argument

H4: Opportunistic behaviour in the chain has a negative effect on the development and maintenance of relational (vs. discrete) contractual norms in the chain's vendor relations.

In H4, a linear *ceteris paribus* relationship between the variables is assumed. Surely, there are arguments in favor of modeling interaction effects between commitment of resources (H1 - H3) and opportunistic behaviour on vendor relation. As an example, Kaufmann & Stern (1988) found that the more relational the contract was ex ante, the more negative effects of conflict behaviour on relationalism ex post. Considering model complexity however, this is not considered in this model.

5.5 Determinants of opportunistic behaviour

I argue that the degree of opportunistic behaviour is a function of two dimensions (Figure 4.1): (i) behavioural tendency to act opportunistically and (ii) expected net benefit of acting opportunistically:

First, I argue that the behavioural tendency to act opportunistically can vary. In particular, I argue - on the basis of empirical findings within the political economy - tradition - that this behavioural tendency will vary with the form of the authority mechanisms used in the system. That is, centralization is expected to increase, and formalization and standardization expected to decrease, the behavioural tendency to act opportunistically (Brown 1981, Reve & Stern 1986, Dwyer & Oh 1987, Schul & Babakus 1988, Reve 1989, Haugland & Reve 1993).. The arguments are that centralization, by representing unilateral decision power in the system, potentially increase conflict levels and decrease relationship satisfaction of depowered actors, hence increase the tendency to act opposite to obligations and common moral standards (that is opportunistically). Formalization and standardization, on the other hand, are argued to have an opposite effect: Stable and predictable exchange conditions are fostered, hence setting limits to unilateral influence attempts of most powerful actor. As pointed out in chapter 3, this arguments are also in line with arguments from sociological theory regarding the impact of legitimacy when power - conflict relations are considered (e.g. Raven & Kruglanski 1970). Thus, I expect

H5: Centralization has a positive effect on the level of opportunistic behaviour in the chain.

H6: Formalization has a negative effect on the level of opportunistic behaviour in the chain.

H7: Standardization has a negative effect on the level of opportunistic behaviour in the chain.

The definition of opportunistic behaviour is important to the content of H5 -H7; it refers to the degree of non - fulfilment of obligations. Hence, opportunistic behaviour refers to the level of opportunistic behaviour relative to the level of obligations, and not the level of opportunistic behaviour in any "nominal" sense. Hence, opportunistic behaviour is about (inversly) paralell to the degree to which the chain system is able to implement decisions at it 's local level.

Second, even pure opportunists will act egoistically (that is, fulfill obligations but with no extra-role behaviour) if the expected costs of acting opportunistically exceed the expected benefits, due to incentive structures. The argument is simple; an opportunist is an egoist (hence trying to maximize his own outcome), even if he or she has to behave contrary to common moral standards, existing obligations etc. Then, mechanisms increasing the costs of such behaviour can be expected to reduce the amount of such behaviour.

Based on arguments from collective action theory (e.g. Hernes 1975, Hechter 1987), game theory (e.g. Axelrod 1982, Hardin 1982) and agency theory (e.g. Jensen & Meckling 1976, Fama & Jensen 1983, Eisenhardt 1989). two types of incentive mechanisms are of particular interest: First, there is the use of sanctions, defined as the degree to which the chain is taking action with negative consequences towards members of the system acting opportunistically. Most notably, the possibility of exclusion from the chain should reduce the level of opportunistic behaviour, as the access to the collective goods produced by the system would be blocked. In addition, other types of sanctions, like financial penalties, can have a similar effect.

H8: Use of sanctions has a negative effect on the level of opportunistic behaviour in the chain.

Second, monitoring - defined as the aggregated flow of information about the members of the system to central chain organization - is argued to reduce the level of opportunistic behaviour in the chain system, as it reduces the information asymmetry, hence reduces the probability of opportunistic behaviour of a member being unknown to the central IOR organization:

H9. Monitoring has a negative effect on the level of opportunistic behaviour in the chain.

As with all of the hypotheses, H8-H9 is *ceteris paribus* expectations. Opportunistic behaviour (of course) still refers to the relative, and not the nominal, level of non-fulfilment of obligations. Hence, the relative amount of non - fulfilment (degree of implementation) is expected to be reduced (increased) the higher the levels of use of sanction and monitoring.

5.6 Summing up:

In this chapter, 9 hypotheses were derived from the analytical model. H1 - H3 postulates *ceteris paribus* positive effects of coordination (centralization-formalization-standardization) in the chain system (chain - member relation) on chain - vendor relation, as resources are mobilized in the chain system that the central chain unit can use to build vendor relations. Most importantly, the three hypotheses postulates such a relation given certain levels of opportunistic behaviour (levels of implementation) in chain system. H4 postulates *ceteris paribus* a negative effect of opportunistic behaviour in the chain system (chain - member relation) on chain - vendor relation, as members non-fulfilment of obligations will make it harder for the central chain unit to fulfill obligations in it's vendor relation. Most importantly, H4 postulates such a relation given certain levels of coordination (centralization-formalization-standardization) in chain system. H5 - H7 postulates that centralization will have a positive (increase), and formalization and standardization a negative (decrease), the level of opportunistic behaviour in the chain system. What this means, is that the type of mechanism used to coordinate behaviour and local resource base will have an effect on the degree to which such obligations are non-fulfilled. H5 - H7 are all *ceteris paribus* clauses. We can also refer to this as the level of implementation in the chain system (chain - member relations). Finally, H8 - H9 postulates *ceteris paribus* negative effects of monitoring and use of sanctions on the level of opportunistic behaviour in the chain system. As these mechanisms increase the costs of non-fulfilment of obligations, such behaviour is expected to decrease.

In the following chapters (6-9), the empirical study undertaken in order to test the model is presented. This presentation starts with a presentation of the design of the study (chapter 6).

CHAPTER 6: RESEARCH DESIGN AND METHODOLOGY

In this chapter, the design and methodology of the empirical study will be presented and discussed. First, I discuss design requirements for testing causal models, and present the chosen cross-sectional design of this dissertation. I also discuss the limitations of a cross-sectional design. Second, I present and analyze the chain system - vendor structure, and unit of analysis. Third, I present empirical setting, population and sample of the study. Finally, I describe the data collection approach of the study; the use of key informants and questionnaires.

6.1. Requirements of causal designs, limitations of a chosen cross-sectional design

The overall design of a research project can be defined as the procedures used for getting access to data needed to test a model (Grønhaug 1985). The relevance of various design alternatives is a function of the properties of the model and propositions under investigation. A central property of my model is that it is a causal model. First, some notes on the concept of causality is then needed.

According to Cook & Campbell (1979), classical formulations of the causality concept were concerned about necessary, sufficient, and necessary and sufficient conditions (Xs) for Y to happen. However, there has been a move towards the use of the causality concept meaning multiple causation: *"If one is going to adapt the word "cause" and "effect" so as to incorporate them sensible into the social sciences, the notion of multiple causation must be built into the explication"* (Blalock 1986).

Thus, the variance of one dependent variable Y is explained by several independent variables (Xs)

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_jX_j + U$$

where a is a constant value of Y, and U is unexplained variance of Y.

This concept of causality rests on certain assumptions: (i) The relation between Y and X is probabilistic. (ii) The impact on Y of X_i (the b's) is estimated ceteris paribus. (iii) The variables covary (positively or negatively). (iv) Pseudoisolation is assumed (Bollen 1989, p. 46), meaning that the unexplained variance (U) is not correlated with any of the X's. If this condition does not hold, important "independent" variables (X) are probably excluded from the model.

With these restrictions in mind, the concept of causality is based on three conditions (John Stuart Mill, cf., Cook & Campbell 1979, ch. 1): (i) Temporal asymmetry, meaning that the cause must precede its effect, (ii) covariation of cause and effect, and (iii) control for "other factors" (spurious relation between X and Y).

The ability of a research design to highlight causal propositions is linked to various forms of validity. The most important forms of validity are (Cook & Campbell 1979, Pedersen 1989):

(i) Statistical conclusion validity, is defined by Cook & Campbell (1979, p. 41) as "...whether it is reasonable to presume covariation given a specified (significance) level and the obtained variances".

(ii) Internal validity is related to the basis for claiming that (a change in) X actually produces (a change in) Y. This is closely linked to the "other factor" problem.

(iii) Construct validity is linked to the "confounding" problem; the "*possibility that the operations which are meant to represent a particular cause or effect construct can be construed in terms of more than one construct, each of which is stated at the same level of reduction*" (Cook & Campbell 1979, p. 59). Precise theoretical definitions and operationalizations of the theoretical constructs are central in this respect.

(iv) External validity refers to whether findings from one study and social context can be generalized to other social contexts.

Within social science research, design requirements connected to the various forms of validity often conflict (McGrath 1982). Regarding the question about the relative importance of the various types of validity, I will argue - following Calder et.al. (1981) - that the research goal of a study must be considered when the priority of the various forms of validity is set: When the research goal - as in my study - is testing of theory (vs. effects application), the importance of external validity is "low", meaning it is established only through several studies in various contexts. Thus, the three other forms of validity have priority.

Research designs available can be divided into three broad categories, the classical experiment, the quasi - experiment, and the non - experimental field study:

The **classical experiment** has three central features: (i) Subjects are divided into an experimental group and a control group, where the former is confronted with the independent variable, the latter not. (ii) Controlled introduction of independent variable. This is related to the temporal asymmetry of the design (iii) Control for other factors: Non-relevant experimental conditions are held constant, and/or randomized selection of subjects into experimental group and control group.

These features of the classical experiment makes it - regarding a broad range of research problems - superior for testing of causal relationships. However, there are problems as well: (i) Complex social contexts (e.g., chains) are uneasy to reproduce with realism in an experimental setting. (ii) The problem of test effects, e.g. the "Guinea Pig Effect". One can for example expect that subjects will behave non-opportunistically in an experimental setting (although not in the real world), due to this. (iii) The most severe problem of using an experimental design is, considering the model I want to test, that certain social phenomenas (like relational norms) only develop slowly. Being realistic, experimental settings normally have a limited time frame. Due to the problems indicated, I conclude that experimental testing of the model is not an available option.

The fundamental idea of the **quasi - experiment**, is to study causality in natural settings. Subjects confronted with the independent variable are compared with subjects not confronted with it. The division of subjects into experimental vs. control groups is ideally randomized.

The basic problem of this design alternative for the study of VCs, is that access is not very probable. Using the quasi - experiment would mean either (i) that I was allowed to manipulate the governance mechanisms in a subset of randomly chosen VCs, then comparing with another subset of VCs not changing their governance mechanisms, or (ii) that such processes occurred naturally. None of these options are very realistic.

Thus, the non - experimental field study seems to be the only realistic design alternative in my case. When the aim of the study is theory testing, variation of the independent variables is important (Calder et.al. 1981, 1982). Internal validity is increased by (i) holding "other factors" as constant as possible, and by (ii) statistical control of the effect of such factors (Blalock 1986). Being realistic, cross-sectional data have to be used. System equilibrium is then assumed.

The non - experimental field study is a weak design when testing causal models; "correlation does not demonstrate causation" (Kidder & Judd 1986, p. 132). There is no temporal asymmetry, and the possibility of spurious relations cannot be ruled out. However, if such a design alternative is the only feasible, at least an indication of causation can be achieved, thus giving the theory some "money in the bank" (Meehl 1990): To some degree, spurious relations can be ruled out by the use of constant design parameters and/or control variables, and the most probable causal relationship between variables can be indicated on statistical grounds using multiple regression, path-analysis, LISREL, and the like.

6.2. Voluntary chains, chain vendor relations, and unit of analysis

In this study, I focus on a particular kind of interorganizational cooperative system - the voluntary chain. Such a chain is composed of (i) The local units, which are independent companies (no cross-ownership vertically or horizontally). (ii) The central chain organization, which - to varying degrees - is performing and coordinating common value-creating activities, like most important marketing activities in the input ("procurement") and output ("marketing") sector. When performing these activities, the central chain organization establishes exchange relations with external actors, like vendors, marketing agencies, larger customers, etc.

Unit of analysis refers to the "...entities to which our concepts pertain and which influence subsequent research design, data collection, and data analysis decisions." (Nachmias & Nachmias, 1981 p. 54). In this study, we have two such units of analysis. The dependent variables are about attributes of chain - vendor dyad. The independent variables, and the intermediate variable, are about attributes of the chain system, that is the totality of chain-member relations.

6.3. Empirical setting, population and sample

When doing empirical testing of a model with derived hypotheses, we are seldom in a position enabling us to include all the units that the theory refers to. Hence, a sample of units relevant to the theory has to be selected. The overall criterion of sample selection is that the theory is tested in the best possible way available.

We can discriminate between two kinds of empirical studies, effects application vs. theory application (theory testing):

"Effects application is based on a desire for knowledge about the events and relationships in a particular real-world situation. The primary goal of this type of research (hereafter referred to as "effects research") is to obtain findings that can be applied directly to the situation of interest.....Application of effects calls for correspondence procedures.

...In contrast, theory application is based on a desire for scientific knowledge about events and relationships that occur in a variety of real-world situations. The primary goal of such research (hereafter referred to as "theory research") is to identify scientific theories that provide a general understanding of the real world. Theory applications call for falsification test procedures. These procedures are used to test a theory by creating a context and measuring effects within that context that have the potential to disprove or refute the theory. The research context and effects are not of interest in their own right" (Calder et.al. 1981, p. 118)

My interest is clearly theory testing. Then, it is important to have a research setting and a sample that is relevant for the theory. Further, the chosen setting and sample should have variation of the independent variable(s), and should be as homogenous as possible for other non-relevant factors. Finally, although it cannot be specified precisely in advance, the setting (the population size of the setting) must make it possible to get a sample size that makes statistical testing possible.

Voluntary chains are an important kind of interorganizational arrangement within distribution channels, at least within the Scandinavian countries. A voluntary chain is a "large size" type of joint venture, meaning that there is a relatively high number of companies (retailers) connected to the central joint venture (chain) organization, in contrast to "bilateral" joint ventures of two or a few companies. The retailing sector in Scandinavia is characterized by a shift towards more complex marketing practices. In particular, franchise arrangements have increased compared to loosely coupled systems. Hence, there is a move towards closer cooperation between the various actors in the sector. At the same time, the level of coordination within the voluntary chains has high variance. Finally, the small size of the Scandinavian economies considered, the number of chain arrangements are relatively high. In this way, I argue that voluntary chains within retailing is a setting enabling testing of the model.

Within Scandinavia, a study was conducted in Norway and Sweden. The differences between the two countries are quite small: Both countries are characterized by having highly developed economies, high levels of education, large public sectors and extensive welfare arrangements, egalitarian traditions and more. Cultural differences within and between the two countries are small (Hofstede 1980), e.g. the two countries have the same religion and language. There are some differences however, most notably (i) at the time of the study, Sweden (but not Norway) had severe economic problems, most notably in the public sector (large budget deficiencies). (ii) Sweden has a somewhat more centralistic tradition, and probably (although not reported by Hofstede) a higher power distance. By and large, these differences are negligible, but country is easily included as a dichotomous control variable.

The total population of voluntary chains in Norway is reported by the Norwegian consulting company F.Andhøy (Andhøy-rapport nr. 28: "Kjederapporten 1992). In Sweden, we used an extensive report on retailing chains in the business magazine "Supermarket" (ICA, 1994, no. 6-7). For Sweden, further information was gathered using a report from "Handelens Utredningsinstitut" (Swedish Centre for Research in Retailing") (1992). For Norway, the total population (modified by own information about changes, misclassified chains etc) of voluntary chains - regardless of sector - reported by Andhøy was app. 106. For Sweden, this number is not known. I will discuss this later.

However, as stressed by Calder et.al. (1981), the population should be as homogenous as possible. Hence, a relevant and much more homogenous population was defined by doing the following limitations:

- Exclusion of chains within service sector (e.g. hotel chains). The major share of the chains are found within various types of retailing. Hence, including services into the sample, would potentially increase the nonrelevant variance.
- Exclusion of chains within the foodstuffs/groceries sector. This is a large sector regarding voluntary chain arrangements. The problems with this sector, is that the structural arrangements of chains are highly divergent from those found within other sectors: Within the groceries sector, there are several levels of chain organization, and overlapping boundaries between various chains. In addition, there is an extremely high level of turbulence in the sector, with reorganizations, takeovers, and the like
- Exclusion of pure wholesaler chain arrangements.
- Exclusion of pure producer chain arrangements.
- Exclusion of one chain that was a pure agent for an international trade-mark company (and established as such).

Given these limitations, the relevant or target population in Norway had a total size of 67 chains. That is, by excluding app. 1/3 of the total population, an arguably much more homogenous target population was created.

The relationship between the total population of voluntary chains on the one hand, and the target population on the other, is illustrated in Figure 6.1 (below)

Figure 6.1: Target population of the study

	SECTOR	
	Products	Services
		groceries
Chains composed of retailers	Target population	
Chains composed of wholesalers		
Chains composed of producers		

Total population Norway: N = 106 (app.)
 Target population Norway: N = 67 (app.)
 Sample Norway: n = 59
 Total population Sweden: N = ?
 Target population Sweden: N = 50 (app.)
 Sample Sweden: n = 29

Given the same type of restrictions, the target population of the Swedish chains was app. 50. The two reports used for Sweden was - with the exception of 3 chains reported by HUI but not by ICA - identical (that is, they reported the same population). Note that as they both reported on retail chains, the total population is unknown. Note also that they - when I excluded groceries chains - was based on the same criteria as the one used in Norway. That is, all types of services, wholesaler and producer arrangements, were excluded from the list.

The target population consists of chains within many product/market - categories, like sanatarian equipment, flowers & garden equipment, home improvement, books, paint, gold & diamonds, electric equipment, shoes/clothes/sportswear, optic shops, automotive supplies, hard - ware stores, camera/photo, newspapers & candy (kiosks), decorative items, furnitures, parfume, and toys.

The data collection was based on a key-informant approach with mail questionnaires (see next paragraph). Perceptions of relationships may vary among the various actors in a chain system. Hence, it was important for me to cross-validate reports from the various actors in the system. Given the research problem, perceptions of three groups of actors are of interest: Decision makers of the central chain organization, of member units, and of vendors.

Hence, with central chain organization and members reporting on characteristics of internal coordination and behaviour, and chain organization and vendors reporting on contractual norms in external relation, the sample data base looks as follows:

TABLE 6.1: SAMPLE DATA BASE

	n/%	n/%	n/%
	Norway	Sweden	Total
Chain reports	59/88	29/58	88/75
Member reports	39 (53)/58	0/0	39(53)/33
Vendor reports	35 (35)/52	0/0	35(35)/30

To fully understand the table, see the explanation of the data collection procedure used (next paragraph). As an illustrative example, there were 53 chain members reporting on their membership in 39 chains (from 24 chains there were 1 member reporting, from 13 chains there were 2 members reporting, and from 1 chain there were 3 members reporting). Hence, out of the 67 chains within the target population in Norway, there is member reports from 58% (1, 2 or 3 members), etc.

6.4. Data collection procedure: Key informants and mail questionnaires

Data was collected by the use of key-informants reporting on structured mail questionnaires. Key-informants was used as source of information, as this arguably is the only realistic source of information that (i) can be used in the scale relevant here (observation of 88 chain systems with information from 176 chain/member/vendor units, and (ii) that can be thought of as having information about the various dimensions of governance, behaviour and social norms we are interested in.

The use of key-informants clearly relates to methodological problems (Phillips 1981, Heide & John 1991). The key-informant will potentially represent a major source of systematic error when reporting on characteristics of organizational governance, climate and behaviour. Factors like role occupation, age, education, sex etc. can have a systematic influence on reporting (Houston & Sudman 1975, Pennings 1979), although key-informant information is reported to have high validity on structural aspects of IORs (John & Reve 1982). Hence, it is recommended that sources of systematic error are (i) identified (Houston & Sudman 1975), (ii) triangulated (use of "multimethod") (McGrath 1982) in order to eventually being able to (iii) control for systematic error(s) by incorporating systematic error variable(s) into data analysis (e.g. by the use of LISREL.).

In studies of IORs, role or structural position is clearly a dominant source of key-informant systematic error. That is, key informants from members of chain, from central chain organization, and from vendors can be expected to have varying degrees of divergent perceptions of various dimensions of relationship. Hence, information on governance and behaviour in the chain system, and on contractual norms in chain-vendor relations, was

TABLE 6.2a. DATA COLLECTION PROCEDURE

	Norway	Sweden	Total
	Pos/tel	Pos/tel	Pos/tel
Chain reports	29/30	29/0	58/30
Member reports	53/0	No data	53/0
Vendor reports	10/25	No data	10/25

TABLE 6.2b. TIME FRAME

March - May 94	Central chain organizations Norway
May - June	Vendors Norway
August - September	Members Norway
September - November	Central chain organization Sweden

collected from all these groups of respondents (cf. table 6.2 above).

Data was collected in the following way: Norway: First I established contact with key-informant of central chain organization. Usually this was the CEO of the chain, but sometimes it was either the marketing director, or the chairman of the board. When the key-informant was not the CEO, usually it was because he or she felt that marketing director/chairman was in a better position to answer. It should be remembered that these chain organizations are relatively small, thus functions have a fairly low level of specialization. Hence, knowledge about internal as well as external relations seem fairly dispersed in the leader teams of central chain organizations. The key - informant was asked to participate in a "telephone interview", that is filling in the structured questionnaire received by mail during a phone call by the researcher. This procedure was chosen to increase response rate, as such an agreement is much more committing than just promising to answer it sometime. The approach was extremely successful, as can be seen from the chain response rate of 88% in Norway. As can be seen from Table 6.2a, about 50% (of the 85%) of the key-informants had already answered the questionnaire upon calling. The same procedure was used on vendors.

The key-informant of the chain was asked to give name/address to one of his/her most important vendors (one of top-three). Questions about contractual norms in vendor relation was embedded in this vendor relation. Sometimes, however, key-informant of chain did not want us to bother vendor, or wouldn't give adress etc. This, and non-response of vendor, gave us a response rate on vendors of 52% (52% of 67 chains).

The key-informant of the chain was also asked to give name/address to two "typical" members of the chain, or to send a list of members. Usually they reported two members, sometimes one member, none, or a list was mailed. Members was contacted, key-informant (always the owner) identified, and questionnaire sent in a "traditional" way. Use of telephone interview would make a lot of trouble, as such members almost always are small retailing companies.

In Sweden, the same approach was used as in Norway (phone to present study and identify key-informant, mail), but without the use of telephone interviews, due to money and time constrains. Of the same reason, only central chain organizations were contacted.

6.5 Summing up:

In this chapter I have discussed the research design and the methodology of the empirical study. A cross - sectional design is chosen to test the research problem, as it is the only realistic design alternative available. This is connected to most importantly two reasons: First, norms is a kind of social phenomenon that is argued to develop slowly. Experimental settings normally have a limited time frame, and is hence inadequate to test the research problem. Second, to get access to a quasi - experimental setting would mean either that I was allowed to manipulate the governance mechanisms of a larger number of chains, or that I had access to a group of chains where some were about changing their governance structures, and some not. Such options are not available.

Unfortunately, a cross - sectional design is a weak design when testing causal models. The design lacks temporal asymmetry, as well as well-established ceteris paribus conditions. Whatever is done in order to reduce these two problems, any claim about causal relation between variables is uncertain. One possible way of reducing this problem, is of course to set

forward hypotheses about covariation only. This is, I argue, no solution to the problem, as such expectations about covariation would be based on arguments about causal relations: We propose, for example, that A should covary positively with B, because we have theoretical arguments in support of A having a positive effect on B. I argue that this is a "hidden" causality claim. Then it is better to propose that A has a positive effect on B, test it, and to have in mind and critically discuss the uncertainty of the results of the test.

The empirical setting of the study is voluntary chains in Norway and Sweden. The setting is relevant to the theoretical model, it has a relatively large size (compared to the size of the Norwegian and Swedish economies), and variation on the independent variables. In order to reduce non-relevant variation, a target population of the study was defined. The overall idea of the procedure was that although the setting makes it impossible to avoid including many product/market categories in the study, it is important to keep the chain member - central chain organization - vendor structures as constant as possible. Only retailer chains within product markets were included. Hence, chains composed of wholesalers and producers, and chains within service sectors, were excluded. In addition, the fodstuffs/groceries sector was excluded because the chains in this sector deviate in their structure from chains in other sectors, and in addition because the sector has an extremely high turbulence.

Data was collected using key-informants and mail questionnaires. In addition to key-informants from the central chain organizations, data was also gathered by key-informants from the members and the vendors, in order to be able to control for systematic error. We received information about approximately 75% of the chains (chain-member and chain-vendor relations) within the defined target population.

CHAPTER 7: OPERATIONALIZATION OF VARIABLES

In this chapter, operationalization of the various variables are presented and discussed.. First, I briefly present the process of operationalization. Secondly, theoretical and operational definitions of the most important constructs are discussed, and the specific items used for operationalization of the various constructs are given a comprehensive presentation.

7.1 The process of operationalization

Operationalization of variables is the process of "translating" theoretical constructs to empirical indicators. Without "good" operationalizations (and clearly defined theoretical constructs), construct validity - which can be defined as ..."the extent to which an operationalization measures the concept it which it purports to measure" (Zaltman et.al. 1973, p. 44) - cannot be achieved. And without construct validity, no validity at all.

Construct validity has four subdimensions (Reve 1985), face validity (does the empirical indicators "seem right"?), convergent validity (does indicators intended to measure the same construct converge?), divergent validity (does indicators intended to measure different constructs diverge?), and finally nomological validity (does variables "behave" about as expected?). With a little simplifications, we can say that the question of face validity is discussed in this chapter, as the logical basis for operationalization is discussed, as well as indicators actually used. The answers to the questions about the other three forms of construct validity are empirical in kind, hence based on statistical methods applied on data, like e.g. coefficient alpha/reability analysis, factor analysis, etc.

A general framework for operationalization of variables is presented by Churchill (1979), see also Reve (1985). The following procedure is recommended: (i) Develop a pool of usable items for each construct, based on theory and operational definitions, previous empirical studies within the field, and the context-specific meaning and content of theoretical constructs and words. (ii) Test these items, using experts/colleagues and a pilot study (iii) Develop a multi-measure instrument (iv) Test the instrument within a validation-sample (reability, convergent and divergent validity) Develop a final multi-item instrument.

I followed this procedure, with the following applications and limitations: Three voluntary chains were contacted. I was interested in having the following variations. Two well-known tightly organized chains within two different retail sectors were contacted. The third chain was a loosely organized chain within the same sector as one of the two tightly organized ones, as illustrated below:

TABLE 7.1: DESIGN OF PILOT STUDY/VALIDATION SAMPLE

	Retail sector 1	Retail sector 2
Tightly organized chain	Chain A	Chain B
Loosely organized chain	Chain C	

Within these three chain systems, I had contact with: The CEO of the chain organization, 2 members of each chain, and 1 vendor of each chain. The design allowed me to (i) observe variations between tight and loose systems (ii) observe variations between the various actors in the system (iii) observe potential variations of various retail sectors.

I decided to use the same chains for measure development and validation. This is not an ideal approach. The limited population size, and time and money restrictions considered, this was the best strategy available. The pilot study was conducted in October 1993, and the validation study in February 1994. Hence, there were some time for my respondents to "forget", hence increasing the information quality of the validation. Due to the small number of units involved, it is impossible to validate measures statistically. But it was enough information to enable inspection of (i) content of items, (ii) items without any variation, (iii) convergent and divergent validity, by looking at (intraconstruct item variation)/(interconstruct mean variation) for close variables, e.g. centralization and formalization, dimensions of contractual norms etc, and (iv) if items "made sense" independent of retail sector. I would like to add that one of the CEO's had a research background, and was highly capable and willing to help me with difficult wordings, scales etc.

To describe this process in detail, is beyond the scope of this chapter. It holds to say that the validation study - given the criteria described above - gave highly satisfying results, with the following modifications: For the dimensions of contractual norms, ten of the original items (from Kaufmann & Dant 1992) were excluded due to non-variance, and replaced with items mainly from Haugland (1988). Centralization and formalization was (based on pilot study) operationalized with three formative subdimension (procurement, marketing, price policy). The latter dimension was excluded, due to non-variance (it should be noted that coordination of local price policy within voluntary chains by and large is illegal in Norway). The original one-dimensional reflective scale of monitoring had no variance (and "medium" scores), and was replaced with a three-dimensional formative scale. And finally there were some wording modifications when necessary.

7.2 Theoretical and operational definitions

I start this discussion with Table 7.2 summarizing the theoretical and operational definitions of the variables included in the model. Note that I do not include my dependent variables - contractual norms - in the table. The theoretical content, and operationalization, of these dimensions are completely based on the definitions and operationalizations made by Kaufmann & Dant (1992), with the exceptions referred to in former paragraph. Kaufmann & Dant's definitions of the seven dimensions of contractual norms are reported in chapter 2.

TABLE 7.2: THEORETICAL AND OPERATIONAL DEFINITIONS OF CONSTRUCTS

Construct	Theoretical definition	Operational definition
Centralization	Centralization refers to the locus of decision making in a collectivity. The centralization of a voluntary chain's decision making can be defined as the extent to which power to make decisions is concentrated in the collective bodies of the system	The perceived degree of concentrated decision power in the system, summarized over various value activities
Formalization	Formalization refers to the degree to which rules, procedures and fixed policies govern the interorganizational exchange and activities	The perceived degree of programming and routinization of functions and activities linking the central chain organization and the members of the chain
Standardization	Standardization refers to the degree to which there are rules, contractual arrangements and fixed policies regulating the level and configuration of member resources	Standardization is the perceived degree to which there are rules, contractual arrangements and fixed policies regulating the level and configuration of outlet resources of the members
Use of sanctions	Use of sanctions is defined as the degree to which the central chain organization is taking action with negative consequences towards members acting opportunistically.	The use of sanctions is the perceived probability of central chain organization taking action with negative consequences towards members of the chain acting opportunistically in various ways.
Monitoring	Monitoring refers to the aggregated flow of information about the members of the chain, from the members and other network actors to the central chain organization.	Monitoring is measured as the perceived flow of information, regarding fulfilment of obligations, transferred from the local level to the central chain organization.
Opportunistic behaviour	Opportunistic behaviour is defined as the degree to which members of the chain violate implicit and explicit promises about appropriate or required role behaviour	Opportunistic behaviour is measured as the degree to which members of the chain are perceived to violate promises.

7.3 Theoretical and operational definitions: A discussion.

Operationalization of the various constructs.

First, a general comment is needed. All constructs are measured using perceptual data (key - informants and mail questionnaires). Hence, all operational definitions are based on perceptions. Next, referring back to ch. 6, we received multiinformant (multimethod) data for all variables. Hence, I will not discuss such problems of systematic errors here, they are treated empirically in the next chapter.

Note also that the items reported here have been translated into English from the Norwegian questionnaires. As I am not a professional translator, some differences might exist. Original Norwegian and Swedish items are not reported. When not otherwise indicated, a 7-point Likert scale ranging from "very good description" to "very bad description" was applied.

Centralization

The concept of centralization is somewhat differently operationalized throughout the intra- and interorganizational literature. Most importantly, the construct has been operationalized (i) as degree of influence in various functional areas (Reve 1980, Nygaard 1992), e.g. wholesaler's influence on retailer's decision making, and (ii) as decision right (Van de Ven & Ferry 1979, Dwyer & Welsh 1985, Dwyer & Oh 1987), that is the extent to which decision making is concentrated with one of the actors, more than the degree to which this concentrated decision making actually changes behaviour of the agents. Of these, I prefer the latter approach. I argue both that this approach is closer to the theoretical definition of the construct, at least the way I have defined it, and related closer to structure of my model, as a mechanism of establishing obligations for collective action, effective to the degree that commitments are fulfilled (level of opportunistic behaviour). The theoretical and operational definition of the construct used are:

Theoretical definition:

Centralization refers to the locus of decision making in a collectivity. The centralization of a voluntary chain's decision making can be defined as the extent to which power to make decisions is concentrated in the collective bodies of the system

Operational definition:

The perceived degree of concentrated decision power in the system, summarized over various value activities

Formalization

Formalization is defined and operationalized quite consistently in the literature (e.g. Reve 1980, John & Martin 1984, John 1984, Haugland 1988, Nygaard 1992). This tradition is reflected in my operational definition. Minor differences exist due to contextual differences, and whether focus is on rules, procedures etc. Examples of operationalizations are

- "The relations between the supplier and our firm are governed by written contracts" (Reve 1980)
- "There is a clear agreement as to how much the importer must buy of the different sizes" (Haugland 1988)
- "My dealings with the supplier are subject to a lot of rules and procedures stating how various aspects of my job are to be done" (John 1984)
- "In general, the information routines of Shell are very unclear" (Nygaard 1992)

The exception from this picture, is operationalizations - few in numbers - where the influence of formalized elements are incorporated, e.g.

- "You have high regard for existing rules and procedures...
You follow strict operating procedures"(Dwyer & Welsh 1985)

Of the same theoretical reasons as discussed regarding centralization, I prefer the first approach.

The theoretical and operational definition of the construct used are:

Theoretical definition:

Formalization refers to the degree to which rules, procedures and fixed policies govern the interorganizational exchange and activities

Operational definition:

The perceived degree of programming and routinization of functions and activities linking the central chain organization and the members of the chain

Formative elements of centralization and formalization.

Throughout the interorganizational literature, the constructs of centralization and formalization have almost exclusively been treated as unidimensional constructs, and hence measured using reflective scales. I argue, however, that there are arguments in support of treating them as multidimensional constructs, to be measured using formative scales. That is, a chain system can be thought of as having high coordination in one functional area, and low level of coordination in another. Based on the pre-study, two such formative dimensions were identified; output sector marketing activities, and procurement/assortment. Hence, centralization and formalization of marketing activities and procurement activities, are the formative dimensions of centralization and formalization, respectively.

It might be that the two constructs turn out to be unidimensional for the population sample. Then, it should be no problem whatsoever in redefining the measurement model according to such an empirical result.

Operationalization of centralization and formalization

Centralization and formalization were both operationalized using (coordination of) procurement/assortment and marketing activities as formative dimensions. In the questionnaire questions were grouped as below based on functional area (formative dimensions), not on theoretical construct. Items measuring centralization and formalization are marked with "C" and "F", respectively. "CV" and "MV" are chain version and member version, respectively.

Centralization and formalization of procurement/assortment:

C: i1 CV: Our members are free to take any decisions regarding their procurement functions.(R)

MV: We are free to take any decisions regarding our procurement function.

C: i2 CV: Our members are free to make any decisions regarding their relationship to their vendors.(R)

MV: We are free to make any decisions regarding the relationship to our vendors.

C: i3 CV: Change of vendor(s) due to decisions taken by the chain has occurred.

MV: Change of vendors due to decisions taken by the chain has occurred.

C: i4 CV: In certain situations the chain can decide which products the members shall buy.

MV: In certain situations the chain can decide which products we shall buy.

C: i5 CV: The central chain administration and/or committees in the chain have the right to make decisions that influence the assortment of the members.

MV: The central chain administration and/or committees in the chain have the right to make decisions that influence our assortment.

F: i6 CV: Being a member of the chain means that the members are committed to keep a certain minimum assortment that is common to the members of the chain.

MV: Being a member of the chain means that we are committed to keep a certain standard assortment that is common to the members of the chain.

C: i7 CV: The chain (chain administration, board or committees) can unilaterally decide to make changes in this minimum assortment.

MV: The chain (chain administration, board or committees) can unilaterally decide to make changes in this standard assortment.

C: i8. CV: The chain can require that members make changes in their procurement routines.

MV: The chain can require us to make changes in our procurement routines.

F: i9. CV The procurement function of our members (what they buy, who they buy it from) is regulated by common rules within the chain.

MV: Being a member of the chain means that our procurement function (what we buy, who we buy it from) is regulated by common rules within the chain.

F: i10. CV: In the chain we have common procurement routines that our members are committed to.

MV: In the chain there are common procurement routines that we are committed to.

F: i11: CV: Common standards are decisive concerning what vendors our members buy from.

MV: Common standards are decisive concerning what vendors we buy from.

F: i12: CV: The common procurement standards that (eventually) exist in the chain are so liberal that they have a minor impact on the procurement function of our members (what they buy, who they buy it from).(R)

MV: The common procurement standards that (eventually) exist in the chain are so liberal that they have a minor impact on our procurement function (what we buy, who we buy it from).

Centralization and formalization of marketing activities

C: i1 CV: To some extent the chain has the right to take decisions that commit its members use of money, time or work-hours regarding marketing.

MV: To some extent the chain has the right to take decisions that commit our use of money, time or work-hours regarding marketing.

C: i2. CV: To the extent that the chain has campaigns to market and profile the chain concept/trade mark, these are carried out without any active participation of the members.(R)

MV: To the extent that the chain has campaigns to market and profile the chain concept/trade mark, these are carried out without any active participation of the members.

C: i3 CV: With the eventual exception of the commitment to include the chains trade mark in ads etc, we do not interfere with the marketing activities of our members.(R)

MV: With the eventual exception of the commitment to include the chains trade mark in ads etc, the chain doesn't interfere with our marketing activities.

C: i4 CV: It may happen that we require our members to advertise, distribute marketing materials - or the like.

MV: It may happen that we advertise, distribute marketing materials - or the like - because the chain has required us to do so.

F: i5 CV: There are clear standards in contract specifying how members are to perform their local marketing activities.

MV: There are clear standards in contract specifying how we are to perform our local marketing activities.

F: i6 CV: There are clear standards in contract specifying commitments of our members relating to marketing campaigns in the chain

MV: There are clear standards in contract specifying our commitments relating to marketing campaigns in the chain.

F: i7 CV: Our members use of resources on marketing are regulated by common standards in the chain

MV: Our local use of resources on marketing are regulated by common standards in the chain

F: i8 CV: The common marketing standards that (eventually) exist in the chain are so liberal that in reality our members are free to decide in these matters.(R)

MV: The common marketing standards that (eventually) exist in the chain are so liberal that in reality we are free to decide in these matters.

F: i9: CV: There are no common standards regulating our members use of marketing resources (time, money and work-hours).(R)

MV: There are no common standards regulating members use of marketing resources (time, money and work-hours).

F: i10: CV: Our members have no well-defined obligations related to the implementation of marketing campaigns in the chain (R)

MV: We have no well-defined obligations related to the implementation of marketing campaigns in the chain

C: i11 CV: The chain initiates campaigns to market the chain and build a trade-mark

MV: The chain initiates campaigns to market the chain and build a trade-mark

C: i12 CV: To what extent do these campaigns require activities and use of time, money or other resources from the members?

MV: To what extent do these campaigns require activities and use of time, money or other resources from the members?

Standardization

As discussed in chapter 4, standardization is a construct that is theoretically closely related to formalization. The difference is that standardization refers to coordination of member resources (level and configuration), on the other hand formalization refers to coordination of activities.

Within the context of voluntary chains in retailing, the prestudy clearly indicated standardization of outlets as being the indeed most important element of standardization within these systems. Hence, the operationalization refers to this dimension solely.

The theoretical and operational definition of the construct that I used are:

Theoretical definition

Standardization refers to the degree to which there are rules, contractual arrangements and fixed policies regulating the level and configuration of member resources

Operational definition:

Standardization is the perceived degree to which there are rules, contractual arrangements and fixed policies regulating the level and configuration of outlet resources of the members

Operationalization of standardization:

i1 CV: Our members are committed to clear standards for the outlets in the chain.

MV: As a member of the chain we are committed to clear standards for the outlets in the chain.

i2 CV: There are clear standards in the chain regarding what the exterior should look like.

MV: There are clear standards in the chain regarding what the exterior should look like.

i3 CV: The chain has clear standards regarding interior and use of floor space in the outlets.

MV: The chain has clear standards regarding interior and use of floor space in the outlets.

i4 CV: Standards of the chain affect our members use of floor space (total store space) for various purposes.

MV: Standards of the chain affect our use of floor space (total store space) for various purposes.

i5 CV: Our members have full freedom regarding design of their outlets.(R)

MV: We have full freedom regarding design of our outlet.

Use of sanctions

Use of sanctions is defined as follows:

Theoretical definition:

Use of sanctions is defined as the degree to which the central chain organization is taking action with negative consequences towards members acting opportunistically.

Operational definition

The use of sanctions is the perceived probability of central chain organization taking action with negative consequences towards members of the chain acting opportunistically in various ways.

The operational definition focuses on the probability (tendency, willingness) of central chain organization to take action towards opportunists, not the actual scale of such actions. The scale is reflective.

Operationalization of use of sanctions

(Chain and member versions are identical)

"Note that all three questions below are about reactions towards members of the chain eventually acting illoyal, not the actual scope of such reactions (the actual scope of reactions towards members acting illoyal will also be dependent on the degree to which the chain has such opportunistic actors)"

i1: To what degree is it likely that the central chain organization use sanctions - that is take action with negative consequences - towards members of the chain acting non-loyal relative to the commitments they have as chain members?

(7-point Likert scale, from "very likely" to "very unlikely")

i2: The possibility of the chain taking action with negative consequences is something that members acting non-loyal must take into consideration

(7-point Likert scale, from "very good description" to "very poor description")

i3: What kind of non-loyal behaviour of a member would make the central chain organization use strong sanctions against this member, like exclusion from the chain, financial penalties, or the like (we here assume that the use of such strong sanctions is unlikely without the member being warned first, and/or the subject matter being discussed with the member)

Choose one alternative:

- (1) Clear but limited non-fulfilment of commitments and chain activities as such.
- (2) Clear but limited continuing non-fulfilment of commitments and chain activities as such.
- (3) Significant and continuing non-fulfilment of commitments and chain activities.
- (4) Severe and continuing non-fulfilment of commitments and activities
- (5) Use of sanctions against members is highly unlikely.

Monitoring

Monitoring is defined as follows:

Theoretical definition:

Monitoring refers to the aggregated flow of information about the members of the chain, from the members and other network actors to the central chain organization.

Operational definition:

Monitoring is measured as the perceived flow of information, regarding fulfilment of obligations, transferred from the local level to the central chain organization.

Focus is on transfers of information about local conditions and behaviour from local to central chain level. Typical examples of information transfers are regular reports, inspections, requests for information etc. A formative scale was constructed, with (monitoring of) marketing activities, procurement behaviour and outlet quality and standard as subdimensions.

Operationalization of monitoring

Monitoring of marketing activities, monitoring of procurement behaviour

The scale used for monitoring of marketing activities is reported below. The scales used for monitoring of procurement behaviour is identical, except i4, and subject matter referred to.

i1: CV: The information about local marketing activities that we receive from our members is

(7-point likert scale, from very extensive to minimal)

MV: The information about our marketing activities that we transfer to the chain is

(7-point likert scale, from "very extensive" to "minimal")

i2: CV: The reports about local marketing activities that we receive from our members are

(7-point likert scale, from very extensive to minimal)

MV: The reports about local marketing activities that we give to the chain are

(7-point likert scale, from very extensive to minimal)

i3 CV: We emphasize that our members report to us about their marketing activities

(7-point Likert scale, from "in a very large extent" to "not at all")

MV: The chain emphasize that we should report to it about our marketing activities

(7-point Likert scale, from "in a very large extent" to "not at all")

i4 CV: We have no systematic control with the way our members perform their marketing activities (R)

(7-point Likert scale, from "very good description" to "very poor description")

MV: The chain has no systematic control with the way we perform our marketing activities

(7-point Likert scale, from "very good description" to "very poor description")

procurement. i4: CV: We receive no reports from our members regarding procurement

(7-point Likert scale, from "very good description" to "very poor description")

MV: The chain receives no reports from us regarding procurement

(7-point Likert scale, from "very good description" to "very poor description")

Monitoring of standard(ization) of outlets

i1 CV: We monitor standard and design of our members outlets

(7-point Likert scale, ranging from "tight control" to "no control")

MV: The chain monitor standard and design of members outlets

(7-point Likert scale, ranging from "tight control" to "no control")

i2 CV: We seek information about standard and design of our member's outlets, by visits/inspections or by other means

(7-point Likert scale, ranging from "tight control" to "no control")

MV: The chain seeks information about standard and design of it's member's outlets, by visits/inspections or by other means

(7-point Likert scale, ranging from "tight control" to "no control")

i3: CV: We are conserved of controlling the standard of our members outlets

(7-point Likert scale, ranging from "to a large extent" to "not at all")

MV: The chain is conserved of controlling the standard of member outlets

(7-point Likert scale, ranging from "to a large extent" to "not at all")

i4: CV: The standard of our member's outlets is something we monitor only very restrictedly (R)

(7-point Likert scale, from "very good description" to "very poor description")

CV: The standard of member outlets is something the chain monitor only very restrictedly (7-point Likert scale, from "very good description" to "very poor description")

Opportunistic behaviour

Opportunistic behaviour is defined as follows:

Theoretical definition:

Opportunistic behaviour is defined as the degree to which members of the chain violate implicit and explicit promises about appropriate or required role behaviour.

Operational definition:

Opportunistic behaviour is measured as the degree to which members of the chain are perceived to violate promises.

The scale used is reflective. By and large, the construct is operationalized using the same logic as e.g. John (1984), but the following two differences should be noted: First, we use perceptual data from both sides of the system (members and central chain organization). Second, the measures are global, that is that respondents are asked to give their judgement of overall member fulfilment of obligations in the system, and not to judge own behaviour.

Operationalization of opportunistic behaviour

(Chain and member versions are identical, except i5)

"Membership in a chain is related to certain obligations. Indicate below your judgment about the distribution of members in the following three groups; (i) very loyal members, that is members that fulfill all important obligations towards the chain system, (ii) modestly loyal members, that is members that fulfill most of their obligations towards the chain system, although not always very enthusiastically, (iii) members with low loyalty, and/or non-loyal members, that is members of the chain which on a regular basis non-fulfill some of their obligations as members.

Very loyal members	___ %
Modestly loyal members	___ %
Low/non-loyal members	___ %

Make a judgement of whether the following statements are good or bad descriptions of the referred subject matter: (7-point Likert scale, from "very good description" to "very poor description"):

i1: Members non-fulfilment of obligations towards the chain is a problem for the chain

i2: The members of the chain have high regard of the various activities initiated by the central chain organization (R)

i3. By and large the members of the chain keep their promises towards the central chain organization.(R)

i4: There is an excellent cooperation between the central chain administration and the members of the chain regarding chain functions and activities. (R)

i5: CV: We would like to see more of a "collective spirit" of our members.

MV: The chain would perform better if there were more of a "collective spirit" of its members.

Contractual norms

The operationalization of contractual norms was based on the reported scales of Kaufmann & Dant (1992). Hence, I made no operational definitions of the dimensions. Of the reasons described earlier, a few of the items (about ten) were deleted due to non-variance in pre-test. Further, a few (about five) were also deleted as they were perceived as being irrelevant to a Scandinavian context. Additional items were based on scales used by Haugland (1988, 1991), within the respective dimensions. Finally, minor wording modifications were done, by substituting references to "other party" in Kaufmann & Dant with "the vendor"/"the chain" in chain/vendor versions of the questionnaire. Except for such references, the two versions were identical. Hence, here I only report the chain version of the questionnaire.

(A) Relational Focus

Theoretical definition:

The commercial exchange process is compromised of both the individual discrete transactions and the relationship which encompasses them. Relational focus reflects the extent to which the exchange relationship is perceived as relatively more important to the parties than the individual transactions.

- (1) It is expected that the exchange relationship between us and the vendor should be more important and the individual transactions (the individual buy and sale operations) secondary.
- (2) The outcomes of individual transactions are less important than the exchange relationship with the vendor itself
- (3) It is expected that the individual transactions should be more important and the exchange relationship with the vendor secondary (R)
- (4) The exchange relationship with the vendor is only important to the extent it facilitates the individual transactions between the two organizations (R)
- (5) The exchange relationship with the vendor is only important as long as each individual transaction produces a positive outcome for our organization.(R)
- (6) Each new transaction with the vendor is merely another event in an ongoing exchange relationship.
- (7) The individual transactions are merely how the two organizations carry out their exchange relationship.

(B) Solidarity

Theoretical definition:

Solidarity refers to the process by which an exchange relationship (as distinct from a series of discrete transactions) is created and sustained. In the more discrete forms of governance, the parties rely on arms-length bargaining and legal enforcement to create and sustain each transaction. To accommodate more complex and indefinite relational forms, however, the parties rely on trust and other internal processes.

- (1) The exchange relationship our organization has with the vendor could better be described as a "series of one shot deals, entered into one at a time" than a "long term joint venture".(R)
- (2) Expectations of behaviour reflect the strong spirit of fairness which exists in the exchange relationship.
- (3) An important feature of our relation to the vendor is that neither party would do something damaging to the other party.
- (4) It is expected that if one party has information which would help the other organization in it's business, such information will be provided.
- (5) The vendor is just another supplier.(R)

(C) Restraint of power

Theoretical definition:

Contracts can be seen as the mutual creation of rights and obligations limited only by their specification. Under discrete governance structures, those rights will be exercised subject only to limitation by the law. This is the neutral corollary of the arms-length bargaining which produces those rights. While recognizing that such legitimate power exists, more relational governance structures create expectations that its use will be voluntarily limited. This dimension reflects the degree to which the parties restrain their use of legitimate power.

- (1) It is expected that the more powerful party should use whatever means necessary to get its own way.(R)
- (2) It is expected that each party if necessary should use what power they have over the other party. (R)
- (3) It is expected that each party should limit the use of power they have over the other party.
- (4) Both we and the vendor would avoid putting maximum pressure on other party in cases of conflicting interest, in order to preserve the overall atmosphere of the relationship.

(D) Role integrity

Theoretical definition:

To provide the necessary predictability for contracting relationships, the roles of the parties must remain relatively stable. The more discrete the transaction, the more simplistic become the roles to be maintained by the parties. By contrast, relational exchange requires the parties to maintain highly complex and multi-dimensional roles.

- (1) There are many expectations between the two organizations which go beyond the mere buying and selling of products.
- (2) The exchange relationship is a simple buy and sell arrangement and the roles the parties play are only those of individual buyer and seller. (R)
- (3) The exchange relationship with the other party creates a complex web of expectations between us over all kinds of issues.
- (4) The exchange relationship between our organization and the vendor is extremely complicated being compromised of many diverse expectations about each other's behaviour.
- (5) Our organization and the vendor expect a great deal of each other in our exchange relationship.
- (6) The exchange relationship with the other party involves expectations about many different areas of commercial activity beyond the buying and selling of products.
- (7) The expectations about the behaviour of both parties could be explained quickly to a third party. (R)

(E) Conflict resolution

Theoretical definition:

Contracts reflect the social context in which they are created and executed. The more relational an exchange becomes, the more a separate and distinct social order is created within the relationship itself. In discrete transacting, conflict resolution is a formal external process (e.g. litigation). In relational exchange, conflict resolution is informal and internal.

- (1) Our organization's procedures for dealing with disputes are formalized and it is expected that they should be followed rigidly. (R)
- (2) Vendor's procedures for dealing with disputes are formalized and it is expected that they should be followed rigidly. (R)
- (3) Both parties expect conflicts to be solved in a cooperative manner without the use of third parties or the juridical system.
- (4) In this relation conflicts are solved by both parties being constructive.

(F) Flexibility

Theoretical definition:

If change is to occur in the relationship between parties in order to respond to changes in the environment, it must either be envisioned and permitted within the existing relationship, or it must be possible for the outdated transactional specifications (relational exchange) to be terminated, and new, appropriate ones created (discrete transacting).

- (1) The terms of an ongoing transaction are not renegotiable under any circumstances.(R)
- (2) It is expected that changes in the terms of ongoing transactions would be allowed if unanticipated economic events occur.
- (3) The ability to react to a changing environment is provided by a flexible exchange relationship which recognizes the importance of change within the confines of the relationship itself.
- (4) It is expected that each party will live with the terms of each transaction, no matter what happens, until after its completion when they can negotiate new terms for the next transaction.(R)
- (5) The ability to react to a changing environment is provided by relatively short term transaction agreements which do not bind the organizations together for a long time.(R)

(G) Mutuality

Theoretical definition:

Mutuality implies the requirement of a positive incentive to exchange for both parties. Under discrete governance, the parties require positive outcomes from each discrete transaction and envision the monitoring of each transaction as if it were the last, and therefore the only event capable of delivering the desired outcomes. Under relational exchange, the parties expect generalized reciprocity emanating from the ongoing and indeterminate relationship.

- (1) Each transaction is expected to be reconciled completely and individually.(R)
- (2) Our organization assures itself that the vendor is acting as we expect by precisely monitoring it's performance on a transaction by transaction basis.(R)
- (3) We can accept unfavorable distribution of costs and benefits regarding isolated activities, as long as the distribution of cost and benefits for the total relation is perceived as being fair.
- (4) It is expected that all discrepancies in performance or payment, no matter how small, should be investigated. (R)

CONTROL VARIABLES

Several control variables were included in the questionnaire, both related to characteristics of the chain/chain-member relation, and to chain-vendor relation.

Chain/chain-member relation

1. Size (chain version only)

- Number of members
- Number of outlets
- Number of employees
- Total annual sale of members

2. Organizational form (chain version only)

a. Form

- Contract based
- Limited
- Other

b. Ownership

- Owned by retailers
- Owned by wholesaler

3. Number of chain profiles (outlet profiles) within the chain system (Chain version only)

4. Heterogeneity of chain members (chain and member version) were measured by two items (formative scale)

a. "Compared to the overall variation within this retail sector, there is little variation among our members regarding market profile, assortment and price policy (7-point Likert scale, from "very poor description" to "very good description")

b. Number of district areas (within Norway and Sweden, respectively) where the chain has members.

5. Relative benefits related to chain membership, variation in relative benefits related to chain membership (chain and chain member version). 3 items were used (formative scale)

a. "Indicate your judgement about total benefits of chain membership to the average member, relative to being independent"

(7-point Likert scale, from "very extensive benefits" to "few benefits")

b. "Indicate your judgement about whether total benefits of chain membership vary within the member population

(7-point Likert scale, from "very high variation" to "very small variation")

c. "To what extent do you think that the average member can achieve the same total benefit by being connected to another voluntary chain within this retail sector?"

(7-point Likert scale, from "to a little extent" to "to a large extent").

6. Member participation in chain strategic decision making. (Chain and chain member versions) 4 items, reflective scale. (7-point Likert scale, from "very good description" to "very poor description").

i1: Member-based committees are very active in the strategic decision processes of the chain

i2: Strategic decisions in the chain are never made without the subject being discussed in the chain system and among the chain's members.

i3: Member-based committees are basically "yea"-sayers in the strategic decision processes of the chain.

i4: The members of the chain have few opportunities to influence strategic decisions in the chain, except accepting or rejecting propositions made by the central chain administration.

Chain-vendor relation (chain and vendor versions)

Focus was on the relative power-dependence balance of the chain and the selected vendor. Three dimensions of this balance are (i) input-output ratio (ii) relative market positions (iii) asset specificity balance

(i) % annual chain procurement/% annual vendor sale

(ii) Chain and vendor position in respective output sector (market shares), with the following 5-point Likert scale used:

(1) weak position

(2) one of many

(3) strong position

(4) dominant position

(5) monopolist

(iii) asset specificity balance, two items (formative scale)

" To what extent has the chain/has the vendor made investments (money, time, work-hours or any other resources) that are lost or have little value if relationship to the vendor/the chain is terminated?" (7-point Likert scale, ranging from "to a large extent" to "in a very limited extent")

7.4 Summary

In this chapter I have presented the operationalizations of the variables. The procedure used is a traditional one, with reflective multi-item scales developed for the various constructs. In addition to theory and previous studies, the operationalization is based on a pre-study of three voluntary chains. The operationalizations of contractual norms are based on Kaufmann & Dant (1992). The operationalizations of centralization, formalization and opportunistic behaviour are by and large based on previous studies of the constructs. Centralization is operationalized as decision right of central chain organization (cf., Van de Ven & Ferry 1979, Dwyer & Welsh 1985, Dwyer & Oh 1987). Formalization is operationalized as programming and routinization of functions and activities (cf., Reve 1980). For the operationalization of centralization and formalization, I used marketing activities and procurement/assortment as formative dimensions. The measurement of the two dimensions is reflective. Opportunistic behaviour is operationalized according to the logic of John (1984), but with the important difference that the measures used are "global". This means that informants from central chain organization as well as from members is asked about an overall judgement about level of opportunistic behaviour, rather than about own behaviour (members), or judgement of specific members (chain organization). The operationalization of standardization, monitoring and use of sanctions is based on the theoretical and operational definitions developed in this study. Standardization focuses on standardization of member outlet resources. Monitoring is measured as information about fulfilment of obligations transferred from the members (local

level) to central chain organization. For the measurement of monitoring, three formative dimensions are used; (monitoring of) local marketing behaviour, local procurement/assortment behaviour, and local outlet resources. Finally, the operationalization of use of sanctions focuses on the perceived probability of central chain organization taking action with negative consequences towards members of the chain acting opportunistically.

CHAPTER 8. MEASURE VALIDATION

In this chapter, empirical analysis of the construct validity of the measures are presented and discussed. The approach used is quite traditional and straight-forward: Cronbach's Alpha is used to assess the reliability and convergent validity of measures, confirmatory factor analysis is used to assess the convergent and discriminant validity of measures. Finally, correlation analysis is used to inspect inter-respondent convergence (systematic error).

Empirical research is about confronting theory with observations of real-life objects the theory intends to say something about. A critical element of this process is measurement, which can be broadly defined as relating theoretical constructs with quantifiable observations ("numbers") in a meaningful way. This is not an easy task, as any measurement model in itself is a set of related hypotheses about construct - measure relationships. But it is indeed an important task, because without construct validity, there is no validity at all. Construct validity can be defined as the

"...correspondence between a construct which is at an unobservable, conceptual level and a purported measure of which is at an operational level. In an ideal sense, the term means that that a measure assesses the magnitude and direction of (1) all of the characteristics and (2) only the characteristics of the construct it is purported to assess...A less precise (but more realistic) definition of construct validity is that it is the degree to which a measure assesses the construct it is purported to assess" (Peter 1981, p.134).

Construct validity has several subdimensions (Reve 1985), face validity (does the empirical indicators "seem right"?), convergent validity (does indicators intended to measure the same construct converge?), divergent validity (does indicators intended to measure different constructs diverge?), and finally nomological validity (does variables "behave" about as expected?). The empirical analysis of this chapter focus on the second and third dimension, but conclusions will be based on the totality of them.

8.1 Reliability

Reliability can be defined broadly as the degree to which measures are free from error and therefore yield consistent results. If observed variance is composed of trait ("true") variance, systematic and random error, that is

$$X_o = X_t + X_s + e$$

then, a perfectly valid observation is when $X_o = X_t$. A perfectly reliable observation is when $X_o = X_t + X_s$. Hence, reliability is a necessary but not sufficient condition for construct validity.

According to Peter (1979), there are three basic methods for assessing the reliability of a measurement scale, test-retest, internal consistency, and alternative forms. Of these, I rely on the standard procedure of assessing internal consistency using Cronbach's Alpha. Cronbach's Alpha is based on split-halves in which item scores obtained from the administration of a scale are split in half and the resulting half scores are correlated, by determining the mean reliability coefficient for all possible ways of splitting a set of items in half. Cronbach's Alpha for the various constructs and formative sub-dimensions are reported in Table 8.1 (next page):

Comments and evaluation: All over, the analysis indicates satisfying reliability for the constructs. Traditional guidelines (Nunnally 1978) recommend that Cronbach's Alpha should be within the range of 0.5 to 0.95; 0.5-0.6 for early stages of research, 0.7-0.9 for basic research, and 0.9-0.95 for applied research. Hence, the coefficient should be within 0.7-0.9 for this study, as is also the case for all constructs except two: Poor reliability is indicated for solidarity and mutuality. Unfortunately, further analysis (not reported here) indicated that the reliability could not be improved by dropping items or the like for these constructs. On the other hand, as to be demonstrated in the next paragraph, the confirmatory factor analysis demonstrated satisfying convergent validity for these two constructs (satisfying factor loadings). The overall evaluation is then that they show satisfying construct validity. Finally, those items that is dropped from their respective constructs, is dropped both due to low item-to-total correlation (indicated in the Cronbach's Alpha analysis) as well as low factor loadings.

TABLE 8.1: RELIABILITY ANALYSIS¹

Dimension	Initial number of items	Revised number of items	Cronbach's Alpha
Centralization	13	13	0.90
C. of MA	6	6	0.84
C. of PA	7	7	0.88
Formalization	11	11	0.88
F. of MA	6	6	0.90
F. of PA	5	5	0.78
Standardization	5	5	0.91
Monitoring	12	12	0.87
M. of MA	4	4	0.88
M. of PA	4	4	0.83
M. of ST.	4	4	0.91
Sanctions	3	3	0.72
Opportunistic behaviour ²	5	5	0.82

¹ In order to reduce complexity, the measurement validation process is made as follows: Assessment of reliability and validity by Cronbach's Alpha and Factor analysis is based on central chain organization data only (88 observations) ("multi-trait"-analysis). Next, "multi-method"-analysis, that is the assessment of systematic respondent error, is based on convergence of chain-member/chain-vendor perceptions on construct level.

² Two alternative measures of opportunistic behaviour were used: A reflective 5-item scale, and an alternative scale where informants were asked to indicate the distribution of members that were very loyal, modestly loyal and little loyal. The latter scale had a highly skewed distribution, and was hence deleted from further analysis.

TABLE 8.1: RELIABILITY ANALYSIS (cont)

Contractual norms:

Relational focus	8	5	0.77
Solidarity	4	4	0.45
Restraint of power	4	4	0.84
Role integrity	7	6	0.83
Conflict resolution	4	2	0.86
Flexibility	5	4	0.72
Mutuality	4	3	0.52

8.2 Convergent and discriminant validity

Analysis of reliability using Cronbach's Alpha says something about item-of-same-construct convergence and reliability. Confirmatory factor analysis in addition says something about item-of-different-constructs divergence. Two such analysis were run, one for the independent variables, one for the dependent variables (see e.g. Kim and Mueller1978).

Independent variables. As a starting point, it should be remembered that the measurement model consists of a total of 5 variables and 9 exogeneous dimensions: 2 centralization dimensions (procurement and marketing), 2 formalization dimensions (procurement and marketing), standardization (of outlet resources), 3 monitoring dimensions (local procurement, local marketing activities, and member outlet resources), and finally use of sanctions. Hence, a 9-factor confirmatory analysis (not reported here) was conducted, without producing any interpretable factor solution. Based on the indications from this initial factor analysis, a 7-factor and finally a 6-factor confirmatory analysis were conducted. The 6-factor analysis (testing for a factor solution of centralization, formalization/standardization, 3 monitoring dimensions, and finally use of sanctions) also failed to produce an interpretable solution (not reported here). Hence, a 7-factor solution seems most appropriate, and is reported in table 8.2 below (oblim rotation).

TABLE 8.2: 7-FACTOR SOLUTION WITH OBLIM ROTATION**(independent variables)**

(Factor loadings about .30 and above are underlined. Factor interpretation, and variable (operationalization) list, at the end of the table)

Pattern Matrix:

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
S9V1	,24097	<u>.59645</u>	,24318	-,10975	-,20646
S9V2	,08478	<u>.73550</u>	,02171	-,23925	-,15535
S9V3	-,08131	<u>.66573</u>	,06490	-,12252	,21103
S9V4	,09672	<u>.75229</u>	-,03575	,11971	-,01594
S9V5	<u>.39447</u>	<u>.56687</u>	,06490	,07132	,15462
S9V6	,04752	<u>.56973</u>	<u>-.29736</u>	-,26277	-,02331
S9V7	,28162	<u>.58514</u>	-,14205	-,06187	,06354
S9V8	-,12093	<u>.87361</u>	,11752	,04258	,06977
S9V9	-,04698	<u>.75606</u>	,17450	,19859	-,01451
S9V10	-,09597	<u>.69546</u>	,10587	-,07703	-,09185
S9V11	,07743	<u>.63259</u>	,10587	-,02427	,08110
S9V12	<u>.50993</u>	<u>.37006</u>	,17675	,05431	-,06148
S10V1	<u>.53743</u>	<u>.31837</u>	,02918	-,15850	-,06074
S10V2	<u>.60615</u>	,09624	-,12846	,05207	,20219
S10V3	<u>.29802</u>	,11850	-,04404	<u>-.47576</u>	-,12051
S10V4	,21612	<u>.49408</u>	<u>-.44294</u>	,04939	,13020
S10V5	-,08547	,12717	-,07094	<u>-.35824</u>	-,06680
S10V6	<u>.32069</u>	<u>.39014</u>	-,15048	,06046	,17230
S10V7	<u>.38714</u>	-,00188	-,09069	<u>-.30947</u>	-,10936
S10V8	<u>.40807</u>	,22451	-,10403	<u>-.33828</u>	-,06259
S10V9	<u>.60597</u>	-,02475	,08217	-,20321	-,03776
S10V10	<u>.63739</u>	,15099	-,22863	-,14607	-,02038
S10V11	<u>.60280</u>	-,01157	-,00722	<u>-.32104</u>	-,03899
S10V12	<u>.82337</u>	-,07238	-,00996	,05817	,16950

TABLE 8.2: 7-FACTOR SOLUTION WITH OBLIM ROTATION
(independent variables) (cont.)

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
S11V1	-,01196	,01335	,14455	<u>-,83373</u>	,03590
S11V2	-,06254	,15544	-,16040	<u>-,55141</u>	,27668
S11V3	-,12372	-,01144	,05164	<u>-,86205</u>	,16049
S11V4	,09921	,00394	,14506	<u>-,78091</u>	,14075
S11V5	,06153	-,01450	,05853	<u>-,83285</u>	,08080
S12V1	<u>,31446</u>	-,17522	<u>,32004</u>	,05800	,13406
S12V2	,10028	-,05184	,17516	,07123	,21886
S12V3	<u>,51977</u>	-,18824	,19951	,03370	,24862
S12V4	,07234	,01984	,10761	-,06699	,04328
S12V5	-,14222	,24773	<u>,76767</u>	,02447	,19923
S12V6	-,10229	,13802	<u>,76729</u>	-,11659	,09224
S12V7	-,03011	,05321	<u>-,73713</u>	<u>-,34332</u>	-,00205
S12V8	,14548	,01049	<u>,84877</u>	-,00648	-,07955
S12V9	,05262	-,03690	,05736	<u>-,63538</u>	<u>,42726</u>
S12V10	,06011	,02681	-,11220	-,09125	<u>,86944</u>
S12V11	,00764	,00897	,09817	-,16474	<u>-,84745</u>
S12V12	,08754	-,02744	,06446	-,16349	<u>-,85602</u>
S14V1	-,14960	,15812	-,09743	,07664	,12806
S14V2	,02679	,13334	,12493	,13601	,06522
S14V3	,11628	-,19259	-,08016	-,12647	-,06888

TABLE 8.2: 7-FACTOR SOLUTION WITH OBLIM ROTATION
(independent variables) (cont.)

	Factor 6	Factor 7	Communality
S9V1	,10940	-,02954	,66384
S9V2	,00260	,18618	,68766
S9V3	-,06683	,19120	,53051
S9V4	-,04958	-,27974	,69790
S9V5	,00259	,09342	,63148
S9V6	-,05670	-,14511	,57378
S9V7	-,05769	,04469	,55241
S9V8	,01909	,00843	,75152
S9V9	,25305	-,15935	,74499
S9V10	,19016	-,18112	,62372
S9V11	,24122	,18477	,59385
S9V12	,04089	<u>,33267</u>	,52277
S10V1	-,12558	-,21921	,71205
S10V2	,09297	,06329	,48481
S10V3	,04321	-,19096	,53931
S10V4	-,08273	-,22336	,62935
S10V5	,08288	<u>-,68459</u>	,71282
S10V6	,00980	<u>-,45862</u>	,73271
S10V7	,19107	<u>-,33814</u>	,57532
S10V8	-,04672	<u>-,30823</u>	,70400
S10V9	,04140	-,21233	,60837
S10V10	,01802	-,14760	,70166
S10V11	-,08863	-,11809	,62554
S10V12	,00919	-,00716	,69996
S11V1	,05599	-,09029	,80941
S11V2	-,09162	<u>-,35012</u>	,74814

**TABLE 8.2: 7-FACTOR SOLUTION WITH OBLIM ROTATION
(independent variables) (cont.)**

	Factor 6	Factor 7	Communality
S11V3	-,08863	-,06460	,83656
S11V4	-,01897	,02881	,76650
S11V5	-,01746	,14139	,71658
S12V1	-,20518	<u>-,54588</u>	,66329
S12V2	-,08022	<u>-,73741</u>	,72663
S12V3	,10059	<u>-,33260</u>	,62266
S12V4	,10476	<u>-,65498</u>	,54964
S12V5	-,11179	-,11553	,77533
S12V6	,10502	-,23287	,79878
S12V7	,00141	-,00840	,71710
S12V8	-,04402	,01830	,72037
S12V9	,09030	,03521	,73594
S12V10	-,00152	-,07353	,85430
S12V11	,02825	-,03660	,86846
S12V12	,08480	,03382	,87215
S14V1	<u>,79643</u>	-,01231	,70776
S14V2	<u>,79565</u>	-,06372	,73679
S14V3	<u>,73029</u>	,03625	,54980

Variable list:

S9V1-S9V12: Coordination (centralization and formalization) of procurement activities

* S9V1-S9V5, S9V7-S9V8: Centralization items

* S9V6, S9V9-S9V12: Formalization items

S10V1-S10V12: Coordination (centralization and formalization) of marketing activities

* S10V1-S10V4, S10V11-S10V12: Centralization items

* S10V5-S10V10: Formalization items

S11V1-S11V5: Standardization of outlet resources

S12V1-S12V12: Monitoring

S12V1-S12V4: Monitoring of member procurement behaviour

S12V5-S12V8: Monitoring of member marketing activities

S12V9-S12V12: Monitoring of member outlet resources

S14V1-S14V3: Use of sanctions

Factor	Factor interpretation	% variance	Eigenvalue
Factor 1	Coordination of marketing	30,0	13,22
Factor 2	Coordination of procurement	11,4	5,00
Factor 3	Monitoring of marketing	8,5	3,75
Factor 4	Coordination of (outlet) standard	5,6	2,46
Factor 5	Monitoring of (outlet) standard	5,0	2,19
Factor 6	Use of sanctions	4,3	1,88
Factor 7	Monitoring of procurement	3,6	1,58

Comments and evaluation: Inspection of Table 8.2 demonstrates a 7-factor solution with coordination of marketing activities, coordination of procurement, coordination of member outlets, monitoring of marketing activities, monitoring of procurement behaviour, monitoring of outlet resources, and use of sanctions, as the seven dimensions. This is a satisfying result, with the important exception that the formative dimensions (functional areas; procurement and marketing) dominates coordination mechanisms (centralization and formalization). Hence, the discriminant validity of the two constructs is not confirmed in the factor analysis. However,

I decided to run the model tests with centralization and formalization, not coordination of procurement activities and marketing behaviour, as variables, due to the following validity arguments:

First, centralization and formalization, and related measures, have theoretical divergent validity. However, a plausible theoretical interpretation of the results of the factor analysis is that these constructs are - theoretically - "oblique" and not "orthogonal" constructs. That is, they are positively related by formalization being a basis for centralization. The positive association between "institutional form" (e.g. the range of chain arrangements from owner integrated, via franchise forms and voluntary chains, to independent systems) and level of coordination (like centralization and formalization) reported in the literature (e.g., Dwyer & Oh 1988), demonstrates this: Variance in institutional arrangement is to a high degree variance in contractual arrangements ("formalization"), as well as ownership structures. This give rise to problems of isolating them empirically. The idea of Political Economy is simply that a 1:1 relation cannot be assumed, and that the mixture will have effects on the transaction climate in the IOR. Secondly, the constructs have convergent validity (see former paragraph). Third, by keeping centralization and formalization as model constructs, we can test for nomological validity (and as we shall see, they have discriminant nomological validity). Finally, since we have a plausible explanation for the lack of empirical discriminant validity of the constructs (domination of functional areas), we should anyway be reluctant in considering it as a definite answer, without considering other dimensions of construct validity.

Dependent variables. The measurement, as well as the theoretical, model consists of 7 constructs; relational focus, solidarity, restraint of power, overlapping boundaries, conflict resolution, flexibility, and reciprocity. Hence, a 7-factor confirmatory analysis (not reported here) was conducted (with rotation allowing oblique factors), without producing any interpretable factor solution. Based on the indications from this initial factor analysis, a 5-factor and finally a 4-factor confirmatory analysis were run. The 5-factor analysis also failed to produce an interpretable solution (not reported here). Hence, a 4-factor solution seems most appropriate, and is reported in Table 8.3 (oblim rotation allowing oblique factors is used).

TABLE 8.3: 4-FACTOR SOLUTION WITH OBLIM ROTATION

(dependent variables)

(Factor loadings about .30 and above are underlined. Factor interpretation, and variable (operationalization) list, at the end of the table)

Pattern Matrix:

	Factor 1	Factor 2	Factor 3	Factor 4	Communality
S17V1	<u>.75858</u>	,16515	,14455	-,08704	,56372
S17V2	<u>.68438</u>	,20047	-,06642	-,20755	,50883
S17V3	<u>.81112</u>	-,01635	,11256	,10520	,65586
S17V4	<u>.60226</u>	-,11634	,05301	-,06554	,33690
S17V5	<u>.43801</u>	-,28475	,02155	-,12759	,45732
S17V9	,28352	<u>-,36686</u>	-,17980	-,03655	,38395
S17V10	<u>.34706</u>	<u>-,31193</u>	-,08565	,02261	,32863
S17V11	,11587	<u>-,40915</u>	-,00549	<u>-,33787</u>	,50114
S17V12	,20247	<u>-,35846</u>	,09760	,02447	,30133
S17V13	,02048	,04855	-,00667	<u>-,79918</u>	,62941
S17V14	,02811	,04483	-,10677	<u>-,83484</u>	,62561
S17V15	,07184	-,03659	-,11424	<u>-,70471</u>	,48727
S17V16	<u>.30143</u>	-,00250	-,17297	<u>-,58268</u>	,37250
S17V17	,06762	<u>-,84081</u>	-,10854	,00208	,67516
S17V18	-,09115	<u>-,75626</u>	,13415	-,06450	,76067
S17V19	,10131	<u>-,74242</u>	,06855	,11415	,55677
S17V20	-,02873	<u>-,56093</u>	,19353	,12176	,44465
S17V21	-,09855	<u>-,67514</u>	-,00239	,01515	,39083
S17V22	-,20914	<u>-,78429</u>	-,11598	,03204	,47015
S17V24	-,02463	,11793	<u>.39277</u>	<u>-,49403</u>	,46805
S17V25	-,03903	,17215	<u>.37955</u>	<u>-,57061</u>	,49583
S17V28	-,04703	,05975	<u>.75131</u>	,20316	,01433
S17V29	,27659	,01432	<u>.72879</u>	,26587	,22124
S17V30	,25115	-,10236	<u>.34944</u>	-,11193	,35666

TABLE 8.3: 4-FACTOR SOLUTION WITH OBLIM ROTATION**(dependent variables)(cont.)**

	Factor 1	Factor 2	Factor 3	Factor 4	Communality
S17V31	,24341	-,02192	<u>,72380</u>	-,05416	,34553
S17V33	-,06790	-,06668	<u>,37488</u>	<u>-,36629</u>	,45697
S17V34	-,10903	-,23054	<u>,38259</u>	-,19288	,28852
S17V36	-,25748	-,14461	<u>,45707</u>	-,20059	,44516

Variable list (after deletion of items):

CD1: Relational focus: S17V1-S17V5

CD2: Solidarity: S17V9-S17V12

CD3: Restraint of power: S17V13-S17V16

CD4: Complexity: S17V17-S17V22

CD5: Conflict resolution: S17V24-S17V25

CD6: Flexibility: S17V28-S17V31

CD7: Reciprocity: S17V33-S17V34, S17V36

Factor	Factor interpretation	% variance	Eigenvalue
Factor 1	Relational focus	15,7	5,19
Factor 2	Solidarity + complexity	11,7	3,87
Factor 3	Flexibility + reciprocity	8,2	2,70
Factor 4	Restraint of power + conflict resolution	6,7	2,20

The 4-factor solution were run 2 times, first with all 36 items related to the seven contractual dimensions, next with deletion of the 8 items that were indicated by the reliability analysis to have low item-to-total correlation. The latter procedure resulted in a much more interpretable solution, and is reported in table 8.3. The arguments for this procedure is that since the initial factor analysis indicates non-perfect discriminant validity of the seven dimensions, emphasis should be given to the convergent validity of the variables. In addition, the procedure contributed positively to the discriminant validity of the measures ("cleaner" factor solution).

Comments and evaluation: Four factors can be identified from table 8.3; focus, solidarity/complexity, flexibility/reciprocity, and restraint of power/conflict resolution. Instead of discussing the individual factors as such, I will focus on the factor solution in a more general way.

I will argue that the factor analysis demonstrates satisfying - although non-perfect - discriminant validity: The analysis does demonstrate discrimination between several of the dimensions. One should have two important factors in mind: First, theoretically the seven dimensions are argued to stem from one higher-order construct (e.g. Heide & John 1992), that is the dimensions are expected to be highly intercorrelated with a large common variance. That feature should expectedly make it harder to get clear-cut factors. Second, and related, one should have in mind the question made to the computer in a factor analysis, and hence the limitations of the technique: In the analysis, the first factor will maximize the amount of variance it is able to explain, the second will maximize the amount of variance that is left to be explained, etc. With a large common variance - as expected from the theory - the probability of there "being any variance left" for a sixth and seventh factor is low, without necessarily indicating lack of discriminant validity.

It is a question whether to continue the analysis with the seven original dimensions, or alternatively with the 4 aggregate variables indicated in the factor analysis. I can see arguments in support of both alternatives. Due to content validity, the uncertainty of factor analysis, as well as the loss of information connected to such an aggregating procedure, I finally chose to continue with the seven original dimensions.

8.3 Inspection of Multi-method validity: Inter-respondent convergence.

The use of key-informants as source of information has been criticized for lacking validity due to systematic respondent error (e.g. Phillips 1981). Few studies find converging perceptions of contractual norms in interorganizational studies (Heide & John 1991), and John & Reve (1982) reported diverging perceptions of non-structural features of interorganizational relations (e.g. degree of centralization), although also convergence on structural features (e.g. degree of formalization).

In order to assess systematic error, I conducted a simple correlation analysis of independent/mediate and dependent variables. In Table 8.4, chain respondents - member respondents reporting on independent/mediate variables are correlated. In the second one (Table 8.5), chain respondents - vendor respondents reporting on dependent variables (contractual norms) are correlated:

**TABLE 8.4: CHAIN - MEMBER RESPONDENT CORRELATION
ON INDEPENDENT AND MEDIATE VARIABLES
n = 53**

Dimension	Chain-member correlation	P-value (2-tailed)
Centralization	0.48	0.00
Formalization	0.45	0.00
Standardization	0.75	0.00
Monitoring	0.33	0.27
Use of sanctions	0.24	0.10
Opportunistic behaviour	0.28	0.05

TABLE 8.5: CHAIN - VENDOR RESPONDENT CORRELATION ON CONTRACTUAL NORM REPORTING

n = 35

Dimension	Chain-vendor correlation	P-value (2-tailed)
Relational focus	0.02	0.92
Solidarity	0.08	0.67
Restraint of power	- 0.20	0.25
Complexity	0.10	0.56
Conflict resolution	0.32	0.06
Flexibility	---	---
Reciprocity	0.46	0.01

Comments and evaluation: Table 8.4 demonstrates acceptable inter-respondent convergence for the independent variables: For all constructs chain-member reporting correlates positively, relatively high, and significantly with p-values on or below 0.05 , except use of sanctions (significant at 0.10) and monitoring (not significant). Based on these results, only central chain respondent information (88 observations) are used in later stages of data analysis. Table 8.5 reveals a high amount of systematic respondent error regarding dependent variables, except for the conflict resolution and reciprocity dimensions (adequately large positive correlation, significant at 0.05/0.10-level). For the remaining dimensions, inter-respondent correlations are small and insignificant, and even negative for the restraint-of-power - dimension. This lack of convergence is - as already mentioned - reported for other (but not all) studies within distribution channels, and may hence be characterized as not very surprising. But it must have consequences, both regarding model testing - where I will run seperate models for vendor and chain data - as well as theoretical conclusions to be drawn from the study (are we measuring norms or something else?). I refer the reader to chapter 9 and 10, respectively.

8.4 Summary and conclusions

The analysis of construct validity shows all over satisfying results.

Cronbach's Alpha was used to assess the reliability and convergent validity of the construct measures. The final analysis was conducted after deletion of 3 (of 8) items for the relational focus construct, 1 (of 7) item for the role integrity construct, 2 (of 4) items for the conflict resolution construct, 1 (of 5) item for the flexibility construct, and finally 1 (of 4) item for the mutuality construct. Deletion of items was based on low item-to-total correlation, and related, indications of increased Cronbach's Alpha after deletion. The results indicated high reliability and convergent validity for the final scales, except for the solidarity and mutuality dimensions, with Cronbach's Alpha of 0.45 and 0.52, respectively.

Discriminant validity was assessed using factor analysis. The analysis indicated satisfying discriminant validity, but with the following limitations:

First, the analysis demonstrated a lack of discriminant validity of the centralization and the formalization constructs. The analysis indicated the formative dimensions of these two constructs - (coordination of) procurement and marketing - as being the factor dimensions. In spite of this result, I argue that I better continue with centralization and formalization as model constructs, rather than coordination of marketing and procurement. The lack of discriminant validity has a plausible explanation; and it is that centralization and formalization are empirically "dominated" by the formative dimensions of the two constructs (marketing and procurement). Theoretically, centralization and formalization can be argued to be highly related, with formalization being a basis for centralization. This makes it more difficult to isolate them in a factor analysis. Finally, centralization and formalization are expected to have a different effect on opportunistic behaviour. Hence, if this expectation is confirmed in the model test, the discriminant validity of the two constructs is increased.

Second, the factor analysis of the seven dimensions of contractual norms failed to achieve a 7-factor solution. Instead, a 4-factor solution seemed most appropriate. The four factors identified were relational focus, solidarity + complexity, flexibility + reciprocity and restraint

of power + conflict resolution. As the seven dimensions are argued to be highly related - stemming from one, higher-order construct - this is a result demonstrating satisfying discriminant validity. Hence, the original dimensions will be used in later analyses.

Finally, I used simple correlation analysis to assess systematic error (inter-respondent convergence). The analysis demonstrated acceptable inter-respondent convergence for the independent variables (central chain respondent and member respondent information). Hence, only chain respondent information on the independent variables will be used in later analyses. The analysis further demonstrated low inter-respondent convergence for the dependent variables (central chain respondent and vendor respondent information). Hence, I argue that model test should be conducted in two separate analysis, one with chain respondents reporting on dependent variables, and another with vendor respondents reporting on dependent variables. The result should also have theoretical implications, to be discussed when conclusions based on the results of the model test are made.

CHAPTER 9: HYPOTHESES TESTING

In this chapter, the hypotheses are tested, using OLS regression and path-analysis. The structure of the chapter is as follows: First, I discuss briefly the degree to which significance tests of individual parameters are important when dealing with population (vs. sample) data. Second, hypotheses about contractual norms in chain-vendor relations (H1 -H4) are tested in separate analysis of central chain organization data (88 observations) and chain - vendor data (35 observations). Third, hypotheses about determinants of opportunistic behaviour (H5-H9) are tested using the data from the central chain organization informants (88 observations). The chapter closes with a discussion of the results of the analyses.

9.1 Population data and role of significance tests

Using statistical tools (coorelation/regression/path-analysis), the significance of estimates is traditionally considered to be an important feature of the estimated parameters. Significance says something about the degree to which relationships between variables in the sample can be generalized to the population itself, based on probability theory. In this study however, I have observations of about 75% of the targeted population (voluntary chains within retailing in Norway and Sweden). Hence, one can question the importance of significance tests, as th0e sample data is close to population data.

This question about the role of statistical significance has two dimensions. First, this study is theoretical research. That is, my primary objective is to say something about chain - vendor relationships and relational contracting that can be generalized beyond the targeted population. In order to do this, I have a specific research setting. This setting ("target population") is not directly representative of the larger universe of chain - vendor relationships: This setting/sample - global population generalizability problem is a theoretical, more than a statistical problem: Are there features of the context that make findings hard to generalize (Grønhaug 1989)? Hence, it is not an argument for referring to significance. Second however, one should consider the "technical" reasons for non-significance. As an illustration, OLS

regression (with e.g. one dependent and one independent variable) estimates a beta coefficient (regression line) which minimizes the squared observations/regression line differences. If observations are highly "scattered" around this line, the relation will be insignificant. Hence, non-significance indicates that the relationship between the variables is dubious even for the sample/population. For this reason I will refer to significance.

What I intend, however, is to use these statistical tools - significance test included - in a non-mechanical manner. It should be remembered that statistical tests - e.g., significance levels of 0.01, 0.05 and 0.10 - are socially constructed. Hence, "degrees" of insignificance, effect sizes, non-statistical validity evaluations, sample size etc, should all be considered when conclusions are made. The reader should also note that the analysis is run on the close-to-population-sample (chain reports, n=88) and a much smaller sample of vendor reports (n=35).

9.2 Inspection of variables: Mean, standard deviation, kurtosis and skewness of variables

The mean, standard deviation, kurtosis and skewness of the variables are reported in Table 9.1a and 9.1b. Note that in Table 9.1b, vendor information about contractual norms, and chain information about governance and behaviour for the restricted sample of chains for which vendor data is available, is reported (n=35). Table 9.1 is indicative of high data quality: First, regression analysis is based on a normality distribution of the variables used. Skewed variables (mean value far away from the mean value of the scale, which is 4 in a 7-point Likert scale), and/or distributions with too "thick" or "thin" tails (kurtosis), break the assumptions of such analysis. As rules of thumb, skewness indicators above 1.0, and kurtosis indicators above 2.0, are indicative of problematic variables. As can be seen from the table, such problems are only indicated for the solidarity variable (vendor data). Second, although not to such an extent that assumptions of regression analysis are broken, the dependent variables are all, except for the reciprocity dimension, skewed "to the left", that is, towards relationalism. This is in line with results of previous studies of relational exchange (Haugland 1988, 1991). Third, the results are indicative of convergence between the chain data base

TABLE 9.1a: MEAN, STANDARD DEVIATION, KURTOSIS AND SKEWNESS OF VARIABLES: CHAIN DATA

Variable	Mean	Std	Kurt.	Skewness
Centralization	2.97	1.31	0.81	1.03
Formalization	3.20	1.33	-0.16	0.70
Standardization	4.23	1.77	-1.13	0.04
Monitoring	3.83	1.19	-0.54	0.18
Use of sanctions	2.54	1.13	0.86	1.07
Opportunistic behaviour	4.93	1.11	-0.16	-0.38
Focus	3.22	1.20	-0.66	-0.03
Solidarity	2.50	0.81	0.53	0.48
Restraint of power	3.73	1.42	-0.75	0.24
Complexity	3.31	1.21	0.12	0.77
Conflict resolution	3.17	1.62	-0.66	0.60
Flexibility	2.90	1.24	0.60	0.78
Reciprocity	4.95	1.17	-0.78	-0.14

TABLE 9.1b: MEAN, STANDARD DEVIATION, KURTOSIS AND SKEWNESS OF VARIABLES: VENDOR DATA

Variable	Mean	Std	Kurt.	Skewness
Centralization	2.74	1.18	1.18	1.21
Formalization	3.16	1.36	-0.38	0.74
Standardization	4.63	1.58	-1.21	0.11
Opportunistic behaviour	4.90	0.90	-0.90	-0.27
Focus	2.98	1.11	1.65	1.13
Solidarity	2.44	0.96	7.34	2.20
Restraint of Power	3.26	1.20	-0.52	0.56
Complexity	3.28	1.16	0.46	0.71
Conflict resolution	2.03	0.82	-0.72	0.44
Flexibility	2.89	1.33	0.53	0.82
Reciprocity	4.65	1.21	0.80	-0.84

(n=88), and the chain - vendor data base (n=35): Both chain variables (governance mechanisms, opportunistic behaviour) and chain - vendor variables (contractual norms) have about the same mean and standard deviation. The results indicates that the restricted data base (n=35) is representative of the full data base (n=88). Remember also that the latter is close to population data (contains about 75% of the target population).

9.3 Inspection of bivariate correlations

I made an inspection of bivariate correlations for the independent and intermediate variables. This analysis is done in order to get a "feeling" for what the data look like, and hence being able to adjust the later analysis if necessary. Bivariate correlations are reported in Table 9.2:

TABLE 9.2. BIVARIATE CORRELATIONS OF INDEPENDENT AND MEDIATE VARIABLES

	SENTR	FORM	STAND	SANK	MON	OPB
SENTR	1.00					
FORM	0.83***	1.00				
STAND	0.44***	0.50***	1.00			
SANK	0.26**	0.22**	-0.04	1.00		
MON	0.43***	0.49***	0.61***	0.10	1.00	
OPPB	-0.01	-0.16	-0.10	0.04	-0.19*	1.00

*** P < 0.01 ** P < 0.05 * P < 0.10

(2 - tailed)

Comments and evaluation: First, and of little importance at this stage of the analysis, Table 9.2 indicates some support of the hypotheses about opportunistic behaviour: 3 of 5 bivariate correlation coefficients have the right direction, one of them significant at 0.10-level, and the coefficient size of these three are much larger than the two with coefficients opposite to the theoretical model. Second, and much more important, Table 9.2 indicates problems of multicollinearity, as several of the independent variables are highly intercorrelated. The following should be remembered about the subject (Berry & Feldman 1985, pp 37-50): First,

the question is seldom about whether there is or is not multicollinearity, but to what extent. It is a common problem. Second, multicollinearity does not - except for the case of perfect collinearity - violate the assumptions of regression analysis. The major effect of multicollinearity

"is on significance tests and confidence intervals for regression coefficients. When high multicollinearity is present, confidence intervals for coefficients tend to be very wide, and t-statistics for significance tests tend to be very small" (Berry & Feldman 1985, p. 41).

That is, unacceptable levels of collinearity will be indicated with insignificant regression parameters. However, in order to inspect the problem, Berry & Feldman recommend that a regression analysis for each independent variable is run, with one independent variable as dependent variable, and the other independent variables as independent variables. R-squares close to 1.00 for this models, indicate unacceptable levels of multicollinearity. The results of these tests are reported in Table 9.3. The test indicates satisfying levels of multicollinearity (R-squares far from 1.00). That conclusion is confirmed by the results of the model test of H5-H8.

TABLE 9.3. TEST OF MULTICOLLINEARITY USING REGRESSION ANALYSIS

Dependent variable	R-squared (adj)
Centralization	0.67
Formalization	0.70
Standardization	0.42
Monitoring	0.40
Sanctions	0.07

9.4 Model test: Effects of coordination and opportunistic behaviour in chain on contractual norms in chain - vendor relation (H1 - H4): Chain data/OLS regression

As a starting point, the reader should remember that the construct validation tests (cf., ch. 8) demonstrated a high amount of systematic error regarding dependent variable measures. Hence, hypotheses H1 - H4 were tested with separate analyses of chain and vendor data. This is a way of getting more information than possible with some kind of aggregate approach. The results can next be discussed the systematic error considered. I also decided to run separate models for each of the seven dependent variables. This is not an ideal approach, as these "submodels" are both theoretically as well as empirically related. It was chosen, however, as a compromise between ideal approach on the one hand, and the - relative to the full model - limited data bases on the other. Finally, the models were run using both OLS regression and path-analysis (LISREL 8 without measurement model).

Hypotheses H1 to H4 deal with the effect of coordination and opportunistic behaviour in the chain on contractual norms in chain - vendor relation. Centralization (cf., H1), formalization (cf., H2), and standardization (cf., H3) are expected to have a positive effect on the development and maintenance of relational (vs. discrete) contractual norms in the chain's vendor relations. Opportunistic behaviour in the chain, on the other hand, is expected to have a negative effect on the development and maintenance of relational (vs. discrete) contractual norms in the chain's vendor relations (cf., H4).

Initially, three control variables were specified, all related to the power-dependence balance of the chain - vendor relation: Input/output - ratio, market position (in respective output market) - ratio, and transaction - specific investments - ratio. Correlation analysis (not reported here) demonstrated no notable impact of any of these variables, and they were dropped from the final analysis. Next, I tested for effects of mutual input-output and investment - related dependence (cf. Heide 1994). An initial correlation analysis (not reported here) indicated impact of the latter, which was hence included into the regression analysis. The result of these regression analysis is reported in Table 9.4.

TABLE 9.4: DETERMINANTS OF CHAIN - VENDOR CONTRACTUAL NORMS: OLS REGRESSION ANALYSIS OF CHAIN DATA (n=88)

Independent variable:	Dependent variable						
	Focus Beta (Sig. T)	Solidarity Beta (Sig. T)	Restraint of power Beta (Sig. T)	Complexity Beta (Sig. T)	Conflict res. Beta (Sig. T)	Flexibility Beta (Sig. T)	Reciprocity Beta (Sig. T)
Centralization	0.15 (0.46)	0.08 (0.68)	-0.19 (0.32)	0.51(0.00)***	-0.04/0.86	0.12/0.56	-0.02/0.93
Formalization	-0.03 (0.87)	-0.07 (0.71)	0.27 (0.17)	-0.32 (0.08)*	-0.08 (0.72)	-0.06 (0.77)	-0.13 (0.53)
Standardization	0.01 (0.94)	0.15 (0.21)	-0.34 (0.01)***	0.18 (0.09)*	0.04 (0.73)	-0.04 (0.74)	-0.09 (0.46)
Opportunistic behaviour	-0.09 (0.43)	-0.02 (0.87)	-0.16 (0.13)	0.02 (0.81)	0.00 (0.99)	0.08 (0.47)	-0.20 (0.07)*
Mutual inv. dependence	0.19 (0.09)*	0.38(0.00)***	0.23 (0.03)**	0.32 (0.00)***	0.12 (0.27)	0.07 (0.54)	0.33 (0.00)***
*** p<0.01 ** p<0.05 * p<0.10							
R-squared	0.06	0.18	0.17	0.28	0.02	0.02	0.15
R-squared (adj)	0.01	0.13	0.12	0.24	-0.04	-0.04	0.09
F	1.09	3.49	3.24	6.36	0.34	0.33	2.78
Sig (F)	0.37	0.01	0.01	0.00	0.88	0.89	0.03

Comments and evaluation: The results give no support whatsoever for the hypotheses that coordination of activities and resource base in the chain have a positive effect on contractual norms in chain - vendor - relation, that is, making contractual norms more relational: For each dimension, there is a mixture of positive and negative effects. Further, there is no pattern of what coordination mechanism that have which sign, neither is there any size-of-effect pattern. Finally, of the four effect parameters that are statistically significant, two are positive, and two are negative. Hence, H1 (effect of centralization), H2 (effect of formalization) and H3 (effect of standardization) are rejected.

The analysis indicates some support, at least directional support, for the hypothesis (H4) that opportunistic behaviour leads to more discrete (less relational) contractual norms in chain - vendor relation. Surely, of the seven betas, four are negative (as expected) and two are positive (opposite to expectations), and one is zero. Further inspection shows that the two positive regression coefficients are both small and highly insignificant, whereas two of the four negative regression parameters have some size, and one of them is statistically significant at 0.10 - level (and the other one is close to significant at 0.10 - level).

Finally, the finding of Heide (1994) that reciprocal dependence leads to more relational norms, attained considerable support (5 of 7 dimensions). This finding is important, as such a replication increases the validity of the non-findings related to H1-H3.

9.5 Model test: Effects of coordination and opportunistic behaviour in chain on contractual norms in chain - vendor relation (H1 - H4): Vendor data/OLS regression.

As with the chain data base, H1 - H4 were also tested on the vendor data base: Central chain information on coordination and opportunistic behaviour is linked to related vendor information about contractual norms. The results are reported in Table 9.5:

TABLE 9.5: DETERMINANTS OF CHAIN - VENDOR CONTRACTUAL NORMS: OLS REGRESSION ANALYSIS OF VENDOR DATA (n=35)

Independent variable:	Dependent variable						
	Focus Beta (Sig. T)	Solidarity Beta (Sig. T)	Restraint of power Beta (Sig. T)	Complexity Beta (Sig. T)	Conflict res. Beta (Sig. T)	Flexibility Beta (Sig. T)	Reciprocity Beta (Sig. T)
Centralization	0.07 (0.79)	-0.49 (0.08)*	0.32 (0.27)	-0.39 (0.10)*	0.06 (0.83)	0.28 (0.37)	0.35 (0.24)
Formalization	0.49 (0.11)	0.64 (0.06)*	-0.48 (0.17)	0.12 (0.68)	0.03 (0.93)	-0.31 (0.40)	-0.40 (0.27)
Standardization	-0.21 (0.28)	-0.12 (0.58)	0.42 (0.06)*	-0.08 (0.67)	0.16 (0.47)	0.10 (0.66)	0.07 (0.76)
Opportunistic behaviour	-0.22 (0.23)	-0.25 (0.22)	-0.32 (0.12)	-0.10 (0.55)	-0.07 (0.75)	-0.16 (0.47)	-0.28 (0.18)
Mutual inv. dependence	0.21 (0.19)	0.25 (0.17)	0.002 (0.91)	0.65(0.00)***	-0.36 (0.05)**	-0.26 (0.19)	0.22 (0.23)
*** p<0.01 ** p<0.05 * p<0.10							
R-squared	0.39	0.25	0.22	0.48	0.21	0.10	0.18
R-squared (adj)	0.28	0.11	0.08	0.39	0.06	-0.06	0.03
F	3.36	0.83	1.52	4.94	1.36	0.60	1.15
Sig (F)	0.02	0.54	0.22	0.00	0.27	0.70	0.36

Comments and evaluation: First, the analysis of vendor data supports the conclusion based on analysis of chain data about there being no direct relation between chain coordination and contractual norms in chain - vendor relations: Coefficient sign are mixed, and with no systematic differences between the three coordination mechanisms. Second, leaving aside the problems concerning systematic error/construct validity, and also representativity (to be discussed in next paragraph) the results give clear directional support to the hypothesis (H4) that opportunistic behaviour in the chain has a negative effect on contractual norms in chain - vendor relations. For all seven dimensions of contractual norms, there is a negative association, with relatively large effect sizes. Leaving aside the problems indicated above, it is a fairly valid finding, of three reasons: First, and most importantly, it is a finding where the possibility of confounding can be ruled out, as it is based on independent reporting of the chain (reporting opportunistic behaviour) and the vendor (reporting on contractual norms). Second, although the indications in the chain data were considerably weaker, the results based on vendor data are supported by the analysis of chain data (see former paragraph). And third, although the effect parameters are insignificant in a statistical sense, there are good arguments for not putting too much emphasis on this; the sample size is small, the effect parameters are relatively large, and four of seven parameters are "not very far" from being significant at 0.10 - level (ranging from 0.12 to 0.23). Fourth, the findings regarding the effects of reciprocal investments are more mixed than was the case of chain data: Four coefficient sign are positive, two are negative, and one is (practically speaking) zero. All six relations have relative large effect sizes, and two - one positive and one negative - are statistically significant. Everything considered, I think it is fair to say that this study replicates previous findings: Of fourteen parameters (chain + vendor data base), eleven are positive (six of them significantly), one is zero, and two are negative (of which one is significant).

9.6 Path - analysis of chain and vendor data (n=88, n=35)

In addition to the regression analysis of the two data bases, path-models - using LISREL 8 - were run to inspect the "path-like" part of the model, that is the effect of centralization, formalization and standardization on contractual norms, with opportunistic behaviour as an intermediate variabel. The results are reported in Table 9.6 and Table 9.7.

The reason for doing this kind of analysis is the following: Consider the analytical model (cf., Figure 4.2): Centralization, formalization and standardization are expected to have a direct (H1 to H3), as well as an indirect (through opportunistic behaviour) (cf. H4, and H5 to H7), effect on chain - vendor contractual norms. The model is hence a path model. Such a theoretical structure can not be precisely tested for using regression analysis. Using regression analysis, determinants of contractual norms (H1 to H4) and determinants of opportunistic behaviour (H5 to H9) has to be analyzed in two seperate models. It is important to note, however, that usually these two techniques will give the same results. The path-analysis are hence done to check whether the results of the regression analysis of H1 to H4 have the expected robustness.

Comments and evaluation: The important feature of the analyses is that the overall results here are parallell to findings from the regression analysis. There is no support for H1 (centralization in chain has a positive effect on contractual norms in chain - vendor relations), H2 (formalization in chain has a positive effect on contractual norms in chain - vendor relations), or H3 (standardization in chain has a positive effect on contractual norms in chain - vendor relations). H4 attains directional support in vendor data. Note, however, that there is a change in the coefficient sign for a few of the parameters: For the chain data, the path-analysis shows positive effect of formalization on the focus, solidarity and conflict resolution dimensions. In the regression analysis, these coefficients were negative. Further, the path-analysis shows a negative effect of standardization on the focus dimension (positive effect in regression analysis), and finally a positive effect of standardization on flexibility (negative

TABLE 9.6: DETERMINANTS OF CHAIN - VENDOR CONTRACTUAL NORMS: PATH ANALYSIS OF CHAIN DATA (n=88)

	Dependent variable						
	Focus	Solidarity	Restraint of power	Complexity	Conflict res.	Flexibility	Reciprocity
	Beta (Sig. T)	Beta (Sig. T)	Beta (Sig. T)	Beta (Sig. T)	Beta (Sig. T)	Beta (Sig. T)	Beta (Sig. T)
Centralization	+ .12 (.18)	+ .01 (.12)	- .14 (.21)	+ .36 (.17)	- .13 (.25)	+ .10 (.19)	- .07 (.18)
Formalization	+ .07 (.19)	+ .06 (.13)	+ .29 (.22)	- .13 (.18)	+ .01 (.27)	- .08 (.20)	- .04 (.19)
Standard-ization	- .05 (.09)	+ .05 (.06)	- .27 (.10)	+ .15 (.08)	+ .08 (.12)	+ .05 (.09)	- .01 (.08)
Opportunistic behaviour	- .11 (.12)	+ .002 (.08)	- .21 (.13)	+ .08 (.11)	+ .01 (.16)	+ .10 (.12)	- .17 (.12)
Chi-square	1.59 (0.21)	0.89 (0.35)	8.17 (0.004)	0.01 (0.92)	2.13 (0.14)	0.84 (0.36)	4.59 (0.03)
AGFI	0.87	0.93	0.39	1.00	0.83	0.93	0.65
RMSEA	0.08 (0.25)	0.0 (0.39)	0.29 (0.008)	0.0 (0.93)	0.12 (0.18)	0.0 (0.41)	0.21 (0.05)

TABLE 9.7: DETERMINANTS OF CHAIN - VENDOR CONTRACTUAL NORMS: PATH ANALYSIS OF VENDOR DATA (n=35)

	Dependent variable						
	Focus	Solidarity	Restraint of power	Complexity	Conflict res.	Flexibility	Reciprocity
	Beta (Sig. T)	Beta (Sig. T)	Beta (Sig. T)	Beta (Sig. T)	Beta (Sig. T)	Beta (Sig. T)	Beta (Sig. T)
Centralization	+ .14 (.23)	-.16 (.24)	+ .33 (.27)	-.16 (.28)	-.05 (.20)	+ .21 (.33)	+ .44 (.28)
Formalization	+ .34 (.23)	+ .17 (.25)	-.43 (.28)	-.13 (.29)	+ .11 (.20)	-.20 (.34)	-.43 (.29)
Standard-ization	-.15 (.13)	-.08 (.13)	+ .32 (.15)	-.06 (.16)	+ .08 (.11)	+ .09 (.19)	+ .05 (.16)
Opportunistic behaviour	-.27 (.21)	-.22 (.22)	-.43 (.25)	-.15 (.27)	-.05 (.19)	-.23 (.31)	-.39 (.27)
Chi-square	0.29 (0.59)	0.50 (0.48)	2.46 (0.12)	2.78 (0.09)	0.07 (0.79)	0.97 (0.33)	1.08 (0.30)
AGFI	0.94	0.90	0.52	0.47	0.99	0.81	0.78
RMSEA	0.0 (0.60)	0.0 (0.50)	0.22 (0.13)	0.24 (0.11)	0.0 (0.80)	0.0 (0.34)	0.05 (0.32)

in the regression analysis). For the vendor data, the centralization - conflict resolution and the formalization - complexity relations are positive (negative in the regression analysis). The changes does not have any effect on the overall chain coordination - chain-vendor norm pattern (or lack of such).

9.7 Model test: Determinants of opportunistic behaviour (H5 - H9)

Hypotheses about determinants of opportunistic behaviour were tested using OLS regression. Centralization is expected to have a positive effect on the level of opportunistic behaviour in the chain (cf., H5). On the other hand, formalization (cf., H6), standardization (cf., H7), use of sanctions (cf., H8) and monitoring (cf., H9) are expected to have a negative effect on the level of opportunistic behaviour in the chain. The results are reported in Table 9.8:

Comments and evaluation: The analysis gives support to the hypotheses that centralization has a positive (cf H5), and formalization a negative (H6), effect on opportunistic behaviour (significant at 0.05 - level)¹. In addition, the hypothesis that monitoring has a negative effect on opportunistic behaviour (H9), attains directional support, as the beta-coefficient is as expected and relatively large, and the coefficient is not very far from significant. For the

¹ Although this was not the primary reason for running the path-analyses, this analysis also gave estimates on determinates of opportunistic behaviour. Inspecting the determinants of opportunistic behaviour, the pattern of the regression analysis (chain data, n = 88) is replicated. The individual parameters, however, are insignificant (although not highly insignificant). Centralization has a beta of + 0.32 (Sig. T: 0.17), formalization has a beta of - 0.36 (Sig. T: 0.18), standardization has a beta of +0.02 (Sig. T: 0.09), and monitoring has a beta of - 0.15 (Sig. T: 0.14) I have made several tests, without being able to find a definite answer to the problem. Note first that there is no theoretical or model-related reason for this change in significance level; this part of the model is specified in the same way using OLS regression and path-analysis. The best explanation I have to offer, is that the regression model and the path-model are estimated using ordinary least square and maximum likelihood, respectively. Assuming perfect normality distribution of variables, these two procedures will have identical estimates. When not so, estimates will differ, OLS regression being more robust against deviation from the condition. There might be other, more naive, reasons as well, related to e.g the transformation of data from data strings to covariance matrix (input to LISREL).

TABLE 9.8: DETERMINANTS OF OPPORTUNISTIC BEHAVIOUR: OLS REGRESSION ANALYSIS.

Independent variables	Dependent variable: Opportunistic behaviour
	Beta (Sig T)
Centralization	0.39 (0.049)***
Formalization	- 0.43 (0.036)***
Standardization	0.06 (0.658)
Monitoring	-0.20 (0.170)
Use of sanctions	0.05 (0.640)

*** Significant at 0.05 - level

Restricted model

R - squared (adj): 0.04

(centralization, formalization and monitoring as independent variables):

F 1.63

F 2.86

Sig (F) 0.16

Sig (F) 0.04

remaining two independent variables, coefficient signs are opposite of what was expected, however, both are small and highly insignificant. Hence, H7 (standardization has a negative effect on opportunistic behaviour) and H8 (use of sanctions has a negative effect on opportunistic behaviour) are rejected.

The R-squared (adj) - value is disappointing. The independent variables are not able to explain more than 4% of the variance in the dependent variable. However, the R-squared is 0.10. Consider the R-squared (adj) formula, which is

$$R\text{-squared (adj)} = (R\text{-squared} - k/n-1)(n-1/n-k-1)$$

where n is the number of observations, and k is the number of independent variables. Introducing more independent variables into an equation will always increase R -squared, but introducing independent variables with low or zero explanatory power will obviously reduce R -squared (adj). Hence, as an illustration, if the two variables with little and insignificant effect on opportunistic behaviour (use of sanctions and standardization) are deleted from the equation, R -squared (adj) increases to 0.062. As a further illustration, if we imagined that that the model was run on a sample of 200 (instead of 88), we would get a R -squared (adj) of about 0.082. Hence, when considering the low R -squared (adj), size effects and model complexity should be considered.

As can be seen from the table, the F -score is insignificant for the full model ($F = 1.63$, Sig (F) = 0.16). A more restricted model with only centralization, formalization and monitoring as independent variables, results in a F -score of 2.86 and Sig (F) of 0.04.

9.8 Summary of empirical results

Summing up the results presented in this chapter, we have the following pattern (Table 9.9)

TABLE 9.9: SUMMARY OF EMPIRICAL RESULTS

Hypothesis	Relationship	Results
H1	Centralization + C-V rel. norms (direct effect)	Not supported
H2	Formalization + C-V rel. norms (direct effect)	Not supported
H3	Standardization + C-V rel. norms (direct effect)	Not supported
H4	Opportunistic beh. + C-V rel. norm	Directional support vendor data
Control hypothesis	Reciprocal inv. based dependence	Support chain data Mixed result vendor data

TABLE 9.9: SUMMARY OF EMPIRICAL RESULTS (cont.)

H5	Centralization + opportunistic behaviour	Supported
H6	Formalization - opportunistic behaviour	Supported
H7	Standardization - opportunistic behaviour	Not supported
H8	Use of sanctions - opportunistic behaviour	Not supported
H9	Monitoring - opportunistic behaviour	Directional support

Comments and evaluation

Most important is the results of the tests of H1 to H4. The hypotheses that centralization (H1), formalization (H2) and standardization (H3) in the chain has a positive effect on the development and maintenance of relational norms in the chain-vendor relation, attain no support. This is the result regardless of chain or vendor respondent reporting on chain-vendor relation. The hypothesis that opportunistic behaviour in the chain system has a negative effect on chain-vendor relational norms, attains directional support using vendor data. This is so for all the seven dimensions of contractual norms. Although not statistically significant, the finding has a non-negligible validity, as it is based on separate information about opportunistic behaviour in chain (chain respondent) and chain-vendor contractual norms (chain respondent). Hence, the result can not be based on any kind of confounding of variables. Finally, Heide's (1994) finding that increasing levels of reciprocal investments is related to more relational norms of exchange, was replicated for the chain data base.

As I will discuss in more detail in chapter 10, it is difficult to make clear conclusions based on negative findings. Negative findings may be a result of improper deduction (from theory to model and hypotheses), methodological weaknesses (lack of ceteris paribus conditions, measurement), and a research setting to which the theory cannot be generalized - as well as the theory actually failing to achieve support in a critical test (Meehl 1990). The possible conclusions that we can make on the basis of the results of this study, vary in the following continuum: (i) Relational exchange theory, and the propositions about the importance of commitment of resources, are "basically true". If this is so: In this study, I have failed to test the proposition, most notably due to lack of ceteris paribus conditions. The contribution of the study to relational exchange theory is then two-fold: First, although not statistically significant, the study highlights the importance of ability to keep promises: If the chain is to have relational exchange in vendor relations, it should be able to control member opportunism. Second, the study replicates Heide's (1994) finding about the positive effect of mutual investments on relational exchange. (ii) Relational exchange theory, and the propositions about the importance of commitment of resources, are "partly true". Remember that the kind of

chain - vendor relations that the study deals with, are the chain's most important vendor relations (selection of vendor relation is based on this criterion). The model of chain coordination deals with ability to mobilize resources in the chain system in an "absolute" sense. It might be, however, that the effect on exchange of ability to commit resources is strictly relative to expectations stemming from the past, and the material content of it. That is, even very simple and loosely coupled relations may be "relational". If so, the ability to cope with relational exchange relations should be relatively independent on absolute levels of resources committed, and therefore I find no effects of centralization, formalization and standardization in the chain on chain - vendor relation. But this is, I think, in itself a contribution to the theory. (iii) Relational exchange theory, and the propositions about the importance of commitment of resources, are "basically flawed". It might also be that this study represents a critical test of the theory, a test which it fails to pass. I will discuss this possible interpretation in much more detail in chapter 10. Let me here just briefly mention some of the arguments in support of this possibility: First, it might be that the measures within IOR studies of what has been labeled "norms", are simply reflections of actor's satisfaction with the relation, or with the other party. Remember that few studies have been able to find any convergence in perceptions of norms. Hence, the relation between opportunistic behaviour in chain and vendor' s reporting on norms might simply be a reflection of dissatisfaction with chain' s inability to implement decisions and keep promises. The relation between power and norms reported in previous studies, may be interpreted within the same line of reasoning. If this is correct, theoretically one might argue that when the unit of analysis is interorganizational relations - exchange relations between organizations with some duration - some level of "relationalism" will always be present. That is, you do not have lasting relations with people you do not like, and whose performance you are not somewhat satisfied with.

Another potential problem with the relational exchange theory, to be discussed in much more detail in chapter 10, is that measures of "norms" merely are measures of actual behaviour. If this is the case, studies of relational exchange are capable of observing that "nice things" are happening, but without explaining why they happen - which is the central aspect of the

theory: Informal social control as a mean of enhancing efficiency and effectiveness. Empirically, the problem is connected to discriminating perceptions of actual behaviour (in the past and present) from expectations about behaviour (for today and tomorrow) when using perceptual data.

The results replicates previous findings about centralization and formalization having a different effect on the transaction climate in the relation. Although this is not a new finding, it is somewhat interesting, as centralization is measured as decision right of central chain organization, rather than central chain organization's level of influence on member's decisions. Hence, it increases the validity of the argument across various measurement approaches. Further, the principal-agency argument about monitoring controlling opportunistic behaviour, attains support, although not statistically significant. This give credit to including incentive-like variables in studies of IORs. Use of sanctions does not seem to have any effect on the level of opportunism in the chain system. Although there are good arguments in support of sanction mechanisms creating incentives for fulfilment of obligations, there is a reasonable explanation for it's lack of effectiveness: Punishment undermines the legitimacy of the system (French & Raven 1971). Finally, standardization does not seem any effect at all. I have no good explanation for this result.

CHAPTER 10: IMPLICATIONS

In this final chapter, theoretical, methodological as well as practical implications of the study are discussed. I start with a brief note about implications of negative findings and the concepts of falsification versus a theory's amount of "money in the bank" (Meehl 1990). Building on Meehl's ideas, I discuss alternative implications of the negative findings of this study, regarding issues like substantive theory, measurement approach, test (contextual) conditions and design. In order to do that, previous studies of relational contracting are discussed in relation to the negative findings of this study. Methodological and practical implications are also discussed.

In his excellent article in *Psychological Inquiry* (1990), Paul E. Meehl discusses several issues regarding testing of theories and interpretation of empirical results. One central idea of Meehl is that a "radical" Popperianism - that is to perceive theories as "falsified" (proved to be false) when they fail to achieve empirical support - is inadequate as the empirical rejection of a theory in itself has to be verified:

"In conducting an empirical test of a substantive theory T (which it is imperative to distinguish from a test of the statistical hypothesis H) the logical form is the following:

$$(T, At, Cp, Ai, Cn) \dashv\dashv (O1, O2)$$

where T is the theory of interest, At the conjunction of auxiliary theories needed to make the derivation to observations go through, Cp is a ceteris paribus clause ("all other things being equal"), Ai is an auxiliary theory regarding instrumentation, and Cn is a statement about experimentally realized conditions (particulars). The arrow denotes deduction (entailment), and on the right is a material conditional which says that if you observe O1 you will observe O2. so that what we have achieved by our laboratory or correlational "falsification" is a falsification of the combined claims T, At, Cp, Ai, Cn, which is not what we had in mind when we did the experiment. (Meehl 1990, p. 109).

The discussion of how the findings and the negative findings of this study can be interpreted is based on this statement of Meehl, and can be summarized as in Table 10.1 below:

TABLE 10.1: ALTERNATIVE INTERPRETATIONS AND IMPLICATIONS OF FINDINGS AND NEGATIVE FINDINGS OF THE STUDY: SUMMARY

RELATIONAL CONTRACTING THEORY:

"TRUE"	"PARTLY TRUE"	"FALSE"
Validity problem of study:		
Necessary but not sufficient conditions * <i>ceteris paribus</i> conditions:	<i>Deduction:</i> What matters is relative, not absolute, level of resources	
Mobilization of chain resources		
<i>Strategic intentions/sector variance</i>		
Commitment of resources		
Contribution of study to RCT:		
Importance of ability to implement decisions/keep promises	Importance of ability to implement decisions/keep promises	Critical test/ money in the bank:
	Substantive content of resource dimension	Problems related to RCT: - Measurement - Level of analysis/ "good-guys-network" - Norm as satisfaction - Norm as actual behaviour

10.1. Relational contracting theory basically true

It might be that relational contracting theory - including the proposition that if relational exchange is to develop, the parties involved have to commit higher levels of resources - is true, and that the negative findings of this study in this respect is a product of lack of ceteris paribus conditions in the design. This is linked to the structure of the model: The model - the variables included in the study - is about necessary but not sufficient conditions for relational exchange (as with most models) to develop: I argue that the model is able to grasp central aspects of the chain's mobilization of resources: Given certain levels of local fulfilment of obligations; coordinated local marketing activities and outlet resources in the chain enables it to push vendor's product in output sector, coordinated procurement functions enables the chain to offer the vendor higher volumes, more closely coordinated procurement routines, etc. And a deduction of relational contracting theory says that this ability to commit resources is important. It is very likely that other dimensions of chain resources not included in the model will covary positively, and not negatively, with the focused dimensions. And finally, it is also very plausible that resource characteristics of vendor will covary positively with chain resources, both according to relational contracting theory itself (relational exchange as a reciprocal process of commitments and fulfilment of commitments of the parties), as well as selection arguments (strong and cooperative - oriented chains selecting strong and cooperative - oriented vendors, and vica verca). All these factors can potentially produce spurious findings, but not non - findings.

Between these two conditions, however, is the question: What does the chain do with its resource base, that is, strategic intentions. This is non-explained variance ("noise") in the model: If the mobilized resources are used for other ends, it can explain the negative findings. This relates to sector-specific variance in the design, that is such strategic intentions can vary with the various product sectors included in the study (e.g. clothes vs. furnitures), hence producing negative findings.

If this is the case, the contribution of the study to RCT is the finding - with the limitations inherent in lack of statistical significanse - that to build relational exchange, the chain must be able to secure fulfilment of obligations internally, that is to control opportunistic behaviour.

This can then be linked to the choice of governance mechanisms most suited to secure such fulfilment in the chain (formalization vs. centralization, monitoring).

10.2. Relational contracting theory "partly true"

Although the problem discussed in paragraph 1 is a serious validity threat, there is some reason to argue that instead of strategic intentions being a potential "noise" factor (hence explaining negative findings), it is also reasonable to think of it as a variable with the potential of producing spurious (although spurious in a weak sense) chain coordination - chain/vendor relation effects: This might be so, because the variation in intention to build vendor relations (more complex vertical marketing arrangements) can force the chains to tighter coordination internally. Then, alternatively, the negative results of the study might be linked to the theoretical deduction inherent in the model, and to the substantive content of the term "resources": Remember first that the study focuses empirically on the most important vendor of the chain (or to select one of the most important vendors): The chain respondent is asked to give information about this particular relation. Even if the validity problems of former paragraph eventually are ignorable, the reason for the negative results might be as follows: Relationalism might be a product of relative, more than absolute, levels of resource commitments: Assume that weak chains have vendor relations characterized by low levels of resource commitments. These resource commitments might however be "high" relative to both the substantive content of the relation as well as the expectations of the parties (being a function of past interactions).

This explanation of negative findings is plausible, although of course uncertain. It has implications for relational contracting theory. A moderate interpretation is simply that relative resource commitments are what matters. The past of commercial relationships and related expectations of parties involved, substantive content of relationship etc, have to be considered if discrete versus relational contracting are to be understood. A more "radical" interpretation is that if commitments relative to past interactions and expectations are all that matters, contractual norms have not much to say about variations in the phenomena interorganizational relations, except the importance of ability to keep promises. I return to this in the discussion of the third alternative interpretation of the non-findings. First, however, consider the two

validity threats to negative findings indicated by Meehl:

10.3. Instrumentation (measurement)

My findings can be a product of instrumentation (measurement) (Ai). However, it is a fact that contractual norms are quite consistently measured across the various IOR - studies that have adressed with the phenomena. My measurement model was based on Kaufmann & Dant (1992), with the necessary context -specific modifications regarding wordings etc. The various measures of norms used are quite compatible, the most notable difference being the number of dimensions included. If the results of this study are a product of instrumentation, that problem relates to most other studies within the field as well. Hence, measurement is a weak "comparative" explanation to the negative results. What is possible, however, is that radically different measurement approaches can be able to grasp a realworld variance of social or contractual norms within inter - organizational relations. But this should imply or demand a completely new "contractaul norm" - paradigm within the field, methodologically (and probably) as well as theoretically.

10.4. Experimentally realized conditions

My findings can be a product of experimentally realized conditions (particulars) (Cn). As far as I can understand, this should most notably imply that the retail trade sector of Norway and Sweden due to some industryspecific conditions is outside the range to which relational contracting theory can be generalized. Of course, such an opportunity cannot be excluded with a 100 percent certainty. Except for this perfect condition, I am sure that the sector chosen is relevant to the theory, and also that it (with exception for the problems discussed in 1 and 2) is highly suited for testing implications of relational contracting theory. I base this argument on the fact that the sector in many ways is in a state of "transition", in a drive towards more complex and vertically integrated marketing practices, and has been so for some years. Surely, one can raise the principal question regarding whether effects are "stabilized" or not. But this is a common problem with a majority of settings having relevant variation, which is the primary requirement.

10.5. Relational contracting theory "false"

Although there are - as discussed in paragraph 1 and 2 - validity threats to the negative findings of this study, there are as well arguments in support of the following: First, the lack of *ceteris paribus* conditions in the design is potentially producing spurious effects, more than noise. Hence, we should expect to find a stronger positive relation between chain coordination and relational norms in vendor relations, rather than no relation. Second, if the negative findings are a result of the important thing being relation - relative, more than absolute, levels of resources committed to a relation, the negative findings raise some serious questions about the *de facto* validity of relational contracting theory, that is: What is it really all about?

An alternative interpretation of the findings and the negative findings of this study is simply that the level of relationalism is equally strong in loosely coupled market-based, as well as in closer coordinated cooperative - based, interorganizational relations. Norms are merely reflections of relationship satisfaction, or the like, based on e.g. power structures, legitimacy, and economic performance of actors involved.

Linked to such an opportunity, I will discuss four important problems of relational contracting theory:

1. The non-convergence problem
2. The level-of-analysis problem; and the "good-guys-networks"
3. The norm-as-satisfaction problem
4. The norms-as-actual-behaviour problem

1. The non-convergence problem: One important problem - and potential "warning sign" - with studies of relational contracting within IORs has been the lack of convergence in informants' perceptions of the norms¹. Heide & John note this problem, and argue that

"Conceivably, however, bilateral perceptions can be measured in a direct fashion, by asking one of the parties to indicate his perception of the extent to which expectations are shared... Under such an approach, however, it is necessary to explicitly word the survey questions in such a way that they describe a perception of bilateral expectation, as opposed to expectations held by an individual party (1991, pp 12-13).

This argument is dubious indeed. When we fail to achieve convergence in reporting of a construct that is about convergence (shared expectations of behaviour), we should instead question the theoretical content of our measures.

2. The level-of-analysis problem, and the "good-guys-networks". Assume that the way relational contracting has been explored within IOR studies is basically flawed. At first inspection, such an assumption is clearly counter-intuitive. If you ask a businessperson about doing business, he or she will probably tell you that trust and personal networks are highly important, or even what it is all about (cf. also Macaulay 1963). I have no strong reasons to believe this is not the case. If, however, the initial assumption of this paragraph is right, what it means is that trust and relational contracting are common characteristics of all inter-organizational transactions except pure spot-transactions. That is, you do not do business (except pure market transactions) with people you do not know and trust. If this is true, the problem with relational contracting theory is that it does not connect to the relevant variation of the phenomena investigated.

Assume once more that the way relational contracting has been explored within IOR studies is basically flawed. In building his theory, Ian Macneil (1980) starts with an exploration of the huge differences in the organization of economic activity in the primitive society on the

¹ Of the studies included in the review made in this dissertation, only Heide & John 1992/Heide 1994 - which are based on the same data base - report convergence in perceptions of norms. In this study, interinformant correlation was 0.50 (p<0.001)

one hand, and market contexts and industrial societies on the other. This might be a variation irrelevant to IORs (see former paragraph). But it may still be a variation relevant to the understanding of differences in the organization of economic activity in different cultures (e.g. the U.S.A vs. Japan) or regions (e.g. central vs. peripheral parts of a country).

3. The norm-as-satisfaction problem. Assume that the analysis so far is about correct. Then the following question requires an answer: What do previous findings about relational contracting really mean? Let me start the answer by stressing that the findings of this study both replicate previous findings (control variable), and find an effect (although not statistically significant) of opportunistic behaviour in chain on vendors reporting of norms (making them more discrete). My indicative answer is basically that measures of contractual norms lack discriminant validity, which indicates a confounding problem. I will discuss this possibility in this and the following paragraph.

Measures of contractual norms may not be anything else than measures of satisfaction with the relation, the perceived level of conflict, the perceived ease of doing transactions with the other party, or the like². Empirical tests indicative of discriminant validity of constructs do not exclude this possibility, as they may be indicative of nothing more than the various constructs tapping various dimensions of a common, higher-order syndrome. We can label such a common, higher-order syndrome the transaction climate of the relation. The fact that measures of contractual norms lack convergent validity when measured at both sides of the relation, and hence usually are being measured using the information from one side only, makes this interpretation even more plausible.

² As discussed in this chapter, contractual norms are quite consistently measured within the literature; they relates to expectations about behaviour. The differences between various studies relates most notably to what specific dimensions that are included, as well as the number of dimensions used. It should be noted, however, that in the study of Noordwier, John & Nevin (1990), the focus is on relational governance elements: Supplier flexibility, supplier assistances, information provided to the supplier, monitoring of supplier, and expectations of continuity. To put the argument simply, the items used (p. 92) relates to concrete behaviour and information routines, and not expectations about behaviour.

This alternative interpretation of previous findings relates most notably to the studies focusing on the relation between power/governance and relationalism: Findings indicative of centralization having a negative, and formalization a positive, effect on contractual norms (e.g. Dwyer & Oh 1987, Haugland & Reve 1994) are replications of other studies within political economy demonstrating the different effect of these coordinative mechanisms on the transaction climate in the relation (level of conflict, satisfaction with relation etc).

4. The norm-as-actual-behaviour problem.

Theoretically, contractual norms are about shared expectations of behaviour. The major argument of relational contracting theory is that relationalism is a flexible and cost-efficient governance mechanism, most notably in complex relations. In order to study the phenomenon empirically, key-informants are asked - quite naturally - about their expectations of behaviour. This is the approach used in this dissertation, as well as in most other studies of the phenomenon. As an illustration, I choose John & Heide's norm-of-flexibility scale (7-point Likert scale):

"Flexibility in response to requests for changes is a characteristic of this relationship.

The parties expect to be able to make adjustments in the ongoing relationship to cope with changing circumstances.

When some unexpected situation arises, the parties would rather work out a new deal than hold each other to the original terms." (1992, p. 37)

What is measured here? The authors claim that this is a measure of expected flexibility in response to changing circumstances (cf., Heide 1994, p. 79). If so, it is reasonable to believe that this expectation is a result of flexibility in actual behaviour. More important to my argument, however, is that I think it is fair to argue that the measures above are measures of actual behaviour. Expectations (for today and the future) about behaviour on the one hand, and actual behaviour in the past, are hard - or even impossible - to discriminate when using perceptual data. This will mean that, as an example, a positive effect of relationalism on performance is a result of the advantages of behaving in a flexible way etc, more than an effect of the expectations of such behaviour.

Conclusion:

In this paragraph, I have been speculating about potential deficiencies in relational contracting theory, and studies within the field. I would like to stress that I offer no clear answer to the questions I ask. The reader should also note that the potential interpretations of relational contracting theory discussed above are partly comparative, and partly competitive, explanations: The level of analysis/"good-guys-network"-interpretation, and the norms-as-satisfaction-interpretation, are comparative: The parties in an interorganizational relation will have a certain level of trust to each other, and a certain level of satisfaction with the relation. If not, the relation will be broken. In asymmetrical relations, however, the weaker party have few if any alternatives: Hence, the relation continues even if the weaker party is dissatisfied with the relation due to use of power of the stronger party. The norms-as-actual-behaviour explanation is clearly competitive to the former. There are no arguments for actual behaviour lacking variation within IORs, neither any reason to expect such behaviour to have no impact on relationship performance. As an illustration, I refer to the measures used by Noordwier, John & Nevin (1990, p. 92). Note, however, that if measures of contractual norms are in fact measures of actual behaviour, it probably raises other questions about the validity of the relational contracting paradigm: The core of the theory is that shared expectations about behaviour - that is, informal social control - matters: Informal social control make nice things happen. Further, these happenings have a positive effect on performance. If, however, measures of norms are measures of actual behaviour - that is, measures of the degree to which nice things are happening or not - the question about what make nice things happen is still open: Is it social control and shared expectation, self-interest, use of authority, or what?

Finally, note the following: The norms measures used in IOR studies are in varying degrees interpretable as reflections of satisfaction vs. actual behaviour. Usually, but not always, there is a mixture in every study. This is also the case with the measures used in this dissertation. If, however, the measures used in this dissertation basically reflect actual behaviour, it is an argument in support of design weaknesses being the reason for the negative findings regarding H1 to H3. On the other hand, if the measures used in this dissertation basically reflect satisfaction or the like, it is an argument in support of deficiencies in relational contracting theory being the reason for the negative findings.

10.6 Contribution, and implications of the study. Recommendations for future research

A. Theory

As there is uncertainty connected to the interpretation of negative findings of the study, there is some uncertainty connected to the contribution and implications of the study as well. The following discussion is briefly summarized in Table 10.2 below:

TABLE 10.2: CONTRIBUTION TO THEORY/IMPLICATIONS OF THE STUDY

Contribution to

Relational contracting theory

See Table 10.1

Collective action theory

Economical and
political mechanisms
within organizational
systems

Political Economy

Economical mechanisms
Interaction effects
Centralization vs.
formalization:
Convergence across
measures

Contribution to relational contracting theory/implications: Contribution and implications for relational contracting theory of the study is dependent on the validity status of the study. I refer to the previous discussion.

Whatever the reason for the negative findings, I think we should stop a second and consider the question: What is relational contracting really all about? That is, we should work harder to isolate the kind of effects on outcomes that transaction climate dimensions like contractual norms eventually have. This may include outcome dimensions like company performance, productivity and the like, but also more macrolevel outcomes like environmental uncertainty and competitive pressure.

Further research within the existing relational contracting paradigm should be much more emphasized on critical tests, that is situations and contexts (i) where the types of norms surrounding the relation should be expected to vary considerably, or (ii) where variation in contractual norms should be expected to really matter, e.g. by studying IORs in situations of heavy pressure and crisis. Further, variation in macrolevel norms as a factor explaining variations in efficiency and organization of economic activities, should probably be a fruitful line of further research.

Contribution to political economy/implications: The study gives credit to the established view that formalization and centralization are alternative ways of coordination, although I argue that they are highly intercorrelated, both theoretically and empirically. As in several other studies, I find that they have different effects on the transaction climate. As I have criticized the measure of perceived influence as an indicator of centralization (dubious content validity), the encouragement is that this study is indicative of convergence across measurement approaches.

There are few indications of any effect of transaction climate on performance. At least, there are few such indications without the probability of climate and performance being indicators of the same overall construct. Although not statistically significant, I find that opportunistic behaviour in the chain (that is, central chain respondent reporting on members fulfilment of commitments) has an effect on vendors reporting of contractual norms. The most plausible

explanation of this finding is that opportunistic behaviour in the chain reduces its ability to be effective in external relations. Hence, it can be interpreted as an outcome effect. Based on this, I argue that one should focus on actual behaviour more than sentiments when "transaction climate" is inspected. Once again, I only suggest this if valid (non-confounding) measures can be applied.

In my review chapter, I argued that political economy (the "internal" part of it) first and foremost has focused on the politics, rather than the economics, of IORs. I thus argued that one should include "economic" and incentive-like variables into these studies. Two such variables were included in the model, monitoring and use of sanctions. Although not statistically significant, there is directional support of monitoring being instrumental in enhancing the implementation of commitments, in line with arguments of both principal - agency theory and game theory. Use of sanctions, however, had no such effect. A reasonable theoretical explanation of this negative finding is that use of sanctions in some way undermines the legitimacy of the cooperative system. As one informant said to me: "Use of sanctions? No, then you are in a losing position". It may be that use of sanctions can work in social systems with a stronger authority base, but probably not in voluntary chains.

Finally, the study is one of the first focusing on interaction effects of several IOR systems. Interaction effects, and external political economy studies, are still research fields where much more is to be done - not primarily by more studies on relations between general environmental dimensions and IOR organization and outcome, but by focusing on environmental dimensions "closer" to the interorganizational unit. Meshing interorganizational theory with e.g. network theory is an example of a potential research agenda.

Contribution to collective action theory: The study is - at least theoretically - a potential contribution to collective action theory, by combining insights about problems of social action from collective action theory with socio-political and economic dimensions of organizational control.

The model is, as discussed in chapter 4, inspired by Hechter (1987). Hechter specifies two dimensions enhancing collective action, existence of obligations and mechanisms ensuring fulfilment of obligations. In his work, which is within the sociological tradition, the focus is on structural attributes of social systems. This study is within organization theory or "management". Traditionally, the focus within this tradition is more related to the effectiveness and efficiency of social and economic systems. Hence, there is a high interest in the question: What can be done? The independent variables of the model are dimensions of organizational design. Hence, they can be manipulated relatively easy. This is the potential contribution of the study to collective action theory.

In that way, a richer understanding of collective action problems in loosely coupled organizational systems is created. Note however that whatever the reason for the no-findings of this study, the study has failed to make a complete empirical test of this collective action model.

Chain-vendor relations as a problem of collective action: Can the problem be investigated from a different angle? Should it?

The study is based on a comprehensive model of collective action in voluntary chains. Then, surely it is not very satisfying to get negative findings on one of the two major dimensions argued to enhance collective action within the system, namely the establishment of obligations for collective action through centralization, formalization and standardization. The question is then: Can the principal collective action problem be investigated from a different angle?

Before answering this question, let me start with another question: Is it necessary to investigate the collective action problem from a different angle?

The answer to this rhetoric question is yes, of course. But I will like to point at the following: First, the effect on effectiveness of higher levels of coordination has already been demonstrated in IOR studies, e.g., Etgar (1977) and Reve (1980). What has not been demonstrated within the literature reviewed in this study, is effects in external exchange relations in general, or effect on the ability to cope with cooperative relations (the specific problem of this study).

Hence, I argue that the general logic of the model - including the direct effect of coordination by centralization, formalization and standardization on external relations - has "something to it". Assuming that, there are two major alternatives for further investigation of the problem: First, if the lack of direct empirical relation between chain coordination and chain-vendor exchange is a product of the design (lack of *ceteris paribus* conditions; relational contracting theory "basically true"), then various design improvements should be considered. As an example, one can imagine to do a replication of the cross-sectional design used in this study, but within one product/market category in a larger economy. Second, if the lack of direct empirical relation between chain coordination and chain-vendor exchange is a product of theoretical problems within relational contracting theory; (norms as satisfaction/level of analysis and "the good-guys-network"; relational contracting theory "basically false"), then one should consider to test the model with other variables as the dependent one. The logic of the model is that tightly organized chains, with higher levels of implementation of decisions, are able to cooperate more closely with its vendors. If the logic is correct, we should expect higher levels of common product development, more integrated information systems and logistical systems, higher levels of communication and personal interactions in central chain organization - vendor relations, etc. That is, we should expect more "overlapping boundaries". Investigation of such aspects would be highly interesting, in itself as well as a contribution to the interpretation of the non-findings of this study, and what they say about relational contracting theory.

B. Methodology

In large, the study has used a traditional methodology approach. Hence, implications for the methodology of studying interorganizational relations are limited. I will, however, comment on two aspects of the methodology used.

First, although it is a seemingly naive aspect of the study, I received information from a large proportion of the potential informants (e.g., 85% of the chain respondents). It is a well-known feature of the alternative data collection procedures, that mail surveys very often are unable to get response rates above 30 %. The reasons for the high response rates are several: Probably the study and the questions asked were of high interest to the decision makers involved in the study. But further, it seems that the technique of combining mail questionnaire with telephone into "telephone interviews" was successful in committing informants, hence increasing response rates, without the costs related to personal interviews (time, travel expenses). In fact, this is important to such studies, at least when we are dealing with small populations like in the Scandinavian countries.

Second, there is the problem of perceptual data and use of key-informants. The findings of this study is quite consistent with previous findings (e.g., John & Reve 1982): Perceptual data is connected to increasing validity problems, the more constructs measured are about social processes or "relational aspects" (e.g., influence, trust, contractual norms) rather than structural attributes (e.g., formalization). In this study, there is a high degree of convergence on perceptions of chain coordination and behaviour (central chain organization and member informants), but also a high degree of divergence in perceptions of contractual norms (central chain organization and vendor informants). In order to explain the high degree of convergence on chain variables, note the following: First, opposite to John & Reve (1982), there is high central chain organization/member informant convergence in perceptions of level of centralization. Measuring centralization as decision right (rather than influence) should expectedly make the construct more "structural" in kind, hence reducing the problem of systematic error. Second, is it reasonable to expect opportunists to report about own opportunistic behaviour? Measuring opportunistic behaviour by "global" measures (rather than linking it to the behaviour of one identified actor) probably makes the construct less sensitive.

This may explain the high degree of chain-member informant convergence on the matter.

When dealing with relational data, I argue that it is very important to use a multi-informant approach ("triangulation"). This is not a new argument (e.g., Houston & Sudman 1975, McGrath 1982). Note, however, that the argumentation about triangulation is connected to "identifying" the amount of systematic error, and hence be able to "clean it out" from the construct measure. Alternatively, it might be that systematic error is all that is to a construct, and that this in itself is what is interesting. An example: Assume that the most "radical" interpretation of the non-findings of this study ("relational contracting theory basically "false") is the true one. Then, the relation between opportunistic behaviour in the chain and vendor perception of norms found in this study is (as discussed) nothing more than a measure of some kind of vendor satisfaction with the relation. This kind of new theoretical insight (if valid) would be impossible without triangulation.

Finally, I would like to comment on the use of formative dimensions to measure centralization, formalization and monitoring. The reason for doing this was that the level of coordination can be expected to vary considerably between various functional areas in the chain system. Further, this way of conceptualizing the constructs made them easier to operationalize. Unfortunately, it also made it harder to validate them empirically (see ch. 8). Of this reason, I will not recommend other researchers to use this procedure as directly as I have done in this study: The mail questionnaire was organized according to formative dimensions ("the following questions are about coordination of marketing activities", etc). It might simply be enough to organize the questionnaire in a different way? I am unable to give clear recommendations about the matter, but one should be aware of the problem connected to using such formative sub-dimensions.

C. Management

In order to discuss implications of the study for decision makers in voluntary chains, let me briefly repeat the propositions of the model. The model proposes that in order to build relational exchange with vendors, the chain system must be able to commit resources to vendor relations, and it must further be able to fulfill its commitments. In order to achieve this, the chain must establish mechanisms that commit member resources to the chain system (centralization, formalization, standardization). Further, it must be able to control opportunistic behaviour (the degree to which member commitments are fulfilled). The level of opportunistic behaviour in the chain is a function of (i) the type of mechanism used to establish commitments (centralization vs. formalization/standardization), and (ii) mechanisms ensuring fulfilment of obligations, by creating incentives for the members to fulfill obligations (use of sanctions, monitoring).

The empirical results of the study support, in varying degrees, three of the four major propositions: First, formalization is instrumental in establishing commitments with a high level of implementation (reduced level of opportunistic behaviour), on the other hand centralization increases the level of opportunistic behaviour. Theoretically, this is not a new finding. It can, however, be linked to the specific context and alternative institutional arrangements within retailing. Within retailing, loosely coupled systems as voluntary chains and independent systems have witnessed decreasing competitiveness and market shares the last two decades or so (Ytreberg & Reve 1988, Andhøy 1992). More tightly organized systems, most notably franchise arrangements, have been in the winning position. This study is focusing on the variation in levels of coordination within one of these alternative systems (voluntary chains). Hence, it does not connect to these observations directly. But then, remember that the difference between the various institutional arrangements most notably relates to differences in levels of formalization. The findings can, then, be interpreted as follows: Voluntary chains that "copy" franchise practises, have the highest levels of decision effectiveness, that is, they are most effective in implementing their decisions.

Second, although not statistically significant, monitoring is instrumental in ensuring the fulfilment of obligations, that is, in reducing the level of opportunistic behaviour. Theoretically, I have related this to the incentive for fulfilling obligations when the opportunities for hidden action is reduced. We can also relate the finding to a decision model: Effective decision processes and high levels of implementation are fostered by well-established feed-back mechanisms. In that way, the effect of monitoring can also be understood as the effect of "franchise-like" information routines within the chain system.

Use of sanctions seems to have no effectiveness in ensuring the fulfilment of obligations. For decision makers in the chains, probably this does not mean that no such mechanisms should be available: The chain must have a potential for defending itself against pure free-riders. What it probably does mean, however, is that such mechanisms should be kept at a minimum, that is that sanctions are used when no other alternative is left. If the use of sanctions exceeds this minimum level, the legitimacy of the system is in danger. In order to create incentives for fulfilment, it is probably more effective to use positive incentives, internal marketing practices, information, and the like.

The results discussed above can hence be related to the general question about ability to implement decisions within the chain system.

Third, opportunistic behaviour in the chain, that is member non-fulfilment of obligations towards the central chain organization, has a negative effect on vendors perception of the cooperative climate in the chain-vendor relation. That is, vendors report more discrete contractual norms the higher the level of opportunistic behaviour in the chain. The normative suggestion is then that in order to be effective in external relations, the chain must secure its ability to implement decisions. This ability is, as discussed, increased by governance by formalization (rules and regulations), rather than by centralization: Members obligations for collective action should be as clear, stable and predictable as possible. Further, this ability is enhanced by procedures enhancing member-chain information exchange (monitoring).

As I have discussed in the first part of this chapter, there is uncertainty related to the content validity of the norms measure. If relational exchange theory is "basically true" or "partly true", the opportunistic behaviour - contractual norms finding mean that flexible and cost-efficient governance of the chains relation to the vendor is enhanced by high implementation of decisions in the chain (low levels of opportunistic behaviour). If relational exchange theory is "basically false", the opportunistic behaviour - contractual norms finding most probably mean, as suggested, that vendors satisfaction with its relation to the chain is enhanced by high implementation of decisions in the chain (low levels of opportunistic behaviour). Little doubt, this is also a valuable outcome to the chain: Such partner satisfaction is an asset that the chain can transform into other types of resources, like influence (reward power), money (a satisfied exchange partner should be willing to pay more or receive less without breaking the relation), or simply a continuing business relation.

10.7 Summary and conclusion

In this study, variations in chain - vendor relational exchange were investigated by focusing on governance and behaviour in the chain as critical variables. The basic premises for the study are (i) that commitment of resources and ability to fulfill such commitments are a critical aspect of relational contracting, and (ii) that the capability to commit resources and fulfill commitments will vary drastically in loosely coupled systems such as voluntary chains. The theoretical perspective is about problems of collective action in such chains.

To be able to commit resources in vendor relations, the chain must mobilize resources by coordinative decision mechanisms (centralization, formalization and standardization). To be able to fulfill commitments in vendor relations, the chain must be able to implement decisions internally. That is, it must control member opportunistic behaviour. The level of opportunistic behaviour is further argued to be dependent on (i) the type of coordinative mechanisms used (centralization versus formalization and standardization), and (ii) the existence of mechanisms ensuring fulfilment of obligations (monitoring and use of sanction).

These four major relationships were empirically tested in the study, by a cross-sectional study of 88 chain systems in Norway and Sweden, with information from central chain organizations, chain members and vendors.

The propositions about a positive effect on chain-vendor relational exchange of tight coordination in the chain, received no empirical support. The interpretation of this negative finding is uncertain: It might simply be a product of lack of *ceteris paribus* conditions in the design. It might also, however, be valid. If so, relational exchange theory has failed to achieve empirical support in a kind of critical test that so far has been lacking (except Heide, 1994). I have also discussed some theoretical arguments supporting this interpretation: It might be that measures of norms merely reflect conflict levels or satisfaction with relation. It might also be that relationalism is a basic feature of all kinds of interorganizational relations, that is all kinds of organization-to-organization relations that have some duration, and which is not based on pure spot transactions. If further critical tests of the theory give credit to such a perspective, the lack of support for the proposed chain coordination - chain vendor relationalism relation may represent a major contribution to the field.

The proposition about a negative effect on chain - vendor relational exchange of high levels of opportunistic behaviour in the chain, received directional support in vendor data. The finding is highly interesting, although the interpretation is somewhat uncertain. Assume first that the negative findings regarding a direct effect of chain coordination on chain - vendor relation is a product of lack of *ceteris paribus* conditions, and hence that relational contracting theory is basically true. Then, this study show that in order to effectively handle relational exchange with vendor, the voluntary chain must be able to implement decisions and control opportunistic behaviour internally. Alternatively, if relational contracting theory is basically false, the norms measure is probably some kind of satisfaction measure. Hence, high implementation in the chain leads to more satisfied vendors. It might also be that the norms measure is a measure of actual cooperative behaviour. Then, implementation of decisions in the chain enhance cooperative behaviour in the chain-vendor relation. Whatever the interpretation, these are arguably valuable assets for the chain.

Formalization was found to have a negative (decrease), and centralization to have a positive (increase), effect on opportunistic behaviour in the chain. The finding is consistent with previous findings on the relation between governance mechanism and transaction climate. Note, however, that the finding can be linked to the empirical observation of franchise systems having higher effectiveness than alternative chain arrangements, and increasing market shares: With high levels of formalization, the voluntary chains get closer to the franchise form. High levels of formalization mean coordination with a high level of implementation.

Monitoring was found to be effective in controlling opportunistic behaviour, although the hypothesis received only directional support. To my knowledge, this effect has not been demonstrated before within interorganizational contexts (cf., Eisenhardt 1989, Bergen et.al. 1992). The finding demonstrates the potential for including incentive-like variables into the study of IORs.

Finally, use of sanctions demonstrated no effect on opportunistic behaviour in the chain. A plausible explanation is that when the legitimacy base in a social system is weak, use of sanctions is an instrument with low effectiveness.

The study represents a contribution to three theoretical traditions: The study is a contribution to relational contracting theory, by testing new aspects of the theory, although the interpretation of findings and negative findings is connected to uncertainty, as discussed. The study is a contribution to the political economy tradition, by demonstrating the potential of incentive-like variables, and by including inter-IOR phenomena to the research agenda of the tradition. Finally, the study is a theoretical contribution to collective action theory, most notably by meshing insights from this tradition with economic and socio-political variables of organizational theory.

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